Nothing happens until something moves:
Exploring the Kinetic Energy of Body, Sound and Space through Movement

Margaret Wiss

A Thesis
Presented to the Faculty of Mount Holyoke College in partial fulfillment of the requirements for the degree of Bachelor of Arts with Honors

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Technical Notes

This DVD contains a video recording of *Nothing happens until something moves*. The performance took place on Thursday and Friday, March 24 & 25, 2016 in the Studio Theater in the Kendall Sports & Dance Complex at Mount Holyoke College. This paper is a reflection on the investigative process that culminated in the performance.

Choreography Margaret Wiss

Featuring

Céline Barreau
Nora Buonagurio
Olivia Chandler
Emily Clark
Helena Kleinschmidt
Isoke Samuel
Margaret Wiss

Anna-Julia Plichta
Eileen O'Grady

Costume Design Margaret Wiss

Costume Construction Katie Meltzer (Labella Boutique Leotards)

Lighting Design Brenda Cortina in collaboration with Margaret Wiss

Music Compilation

"It's Just a Matter of Acceleration" original composition (commissioned) by Thomas Liao, "Lilies in the Valley" by Jun Miyake, musical collaboration/improvisation by Anna-Julia Plichta and Eileen O'Grady, "Glades" by Nicholas Williams, "Tied Down" by Thom Hanreich, "Helios" by Fourteen Drawings, "As Worldly Pleasures Wave Goodbye" by Two Lone Swordsmen, Various found sound samples arranged by Margaret Wiss

Artistic Advisor Teresa Freedman

Thesis Committee Members Rose Flachs
Sarah Bacon

Production Video Sean Kinlin

ABSTRACT

"Nothing happens until something moves."
— Albert Einstein

Nothing happens until something moves?

If nothing is happening where is the movement initiated from?

Life moves in a series of reactions and changes in energy. Movement is produced from the conversion of potential energy to kinetic energy. Potential energy is stored energy and depends on gravity, the mass and relative position of an object in space (Peterson). Kinetic energy is the work to accelerate a body (Peterson). Humans are perpetually in a state of kinetic energy; on the microscopic scale, charges equalize to activate ion channels and transport hormones and necessary molecules such as oxygen and glucose (Sherwood). Neurons constantly fire in the brain, playing a role in voluntary and involuntary behavior generating thoughts and emotions. Muscles pump the heart, circulate blood, and move the skeleton (Clippinger). Physical forces such as friction and gravity affect the efficiency of the system (Hinrichs *et al*.). These external forces determine the degree of movement a body can have, both on the microscopic and macroscopic scale. But the average individual is unaware of these forces. How and through what medium can these invisibilities be revealed?

Like scientists, I believe artists hold the tools to expose hidden forces. In my studies of dance kinesiology I have explored biomechanics, specifically the kinetic energy of the body, space, and sound and played with magnifying these concepts through movement for the stage. My research over the last four years culminated in the creation of a mini ballet: *Nothing happens until something moves.* This paper, presented as a laboratory report, analyzes each component of the creative process.

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To **my friends**

To **LYNK**

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INTRODUCTION

"If science breaks us apart, art puts us back together."
— Jonah Lehrer (188, Proust was a Neuroscientist)

We are physical bodies living in a physical world, controlled by the physics of force, motion and energy. The body navigates this system using biophysics. Oxygen is transported in the blood, sound is heard, and kinesthesia maintains a body's spatial awareness to navigate the world's force fields (Sherwood). But individuals are unaware of the science that controls them as they believe they have the most agency in choosing their movements. Instead, forces such as gravity, friction and momentum are in control, but are invisible to the unobservant eye (Kahn). When individuals become injured, they experience these forces to an extreme (Murphy). For instance, "one becomes aware of friction only at such times as when somebody slips on polished stairs or falls to the pavement having slipped on ice" (Hinrichs *et al*., 1). Even then, these examples are singular incidents that expose individuals to these forces although they are "abundant in nature, machines, structures, transportation systems and other processes" (Hinrichs *et al*., 1). Therefore the job of the scientist is to reveal and explain the surrounding environment, much like the artist. Therefore, I hypothesize that art can illustrate and demonstrate scientific concepts, specifically the confinement of physics that humans live in.

Experiments demonstrate concepts and research papers are published, but the general population rarely reads this literature. Only a select group of people in academia or interested in the research are knowledgeable about the world with which they interact. Individuals who feel the forces through injury gain an education about the surrounding world through verbal and physical information provided by their physical therapists ("The Value of Patient Education"). With physical rehabilitation, patients increase blood flow to injured areas and sustain their previous muscular strength and neuronal connections in the brain (Hansen). Ultimately, patients

increase their sensory awareness by understanding their thresholds for injury, as they become the scientists by testing their body's limits.

The ability to control movements comes from having control over the amount of energy exerted. Energy within the body comes from food sources, through digestion and absorption of macronutrients that contain carbon, such as carbohydrates, fats, and proteins (Sherwood). To access this energy the body converts the food sources to Adenosine Triphosphate and uses it as fuel to produce movement (Sherwood). In essence, the functional biophysics of metabolism controls the human body's energy level for movement. Energy is the ability to do work against force, and comes in many forms, such as kinetic energy and potential energy. Movement is the product of the change from potential to kinetic energy (Hatch). Potential energy relies on the mass and displacement of a body and its spatial relation to the ground (Peterson). Kinetic energy is work done to accelerate the body; it is the energy underlying movement (Peterson). The Conservation of Energy states that energy is always changing form but is never destroyed (College Physics). Therefore, the amount of potential energy in a body determines the intensity of kinetic energy it will have.

Kinetic Energy

What form of kinetic energy does a body have? There are mechanical, thermal, sound, and light kinetic energies ("Forms of Energy"). All these different forms of kinetic energy affect movement. To study the differences between the energies, we must investigate a body that is in constant motion—a dancer. Dancers have an innate sensory understanding of the surrounding world through a constant and rigorous testing, as dancers are scientists (Batson). Observations occur within their bodies and each new step is a trial. A dancer knows that "art is, the practice of

intense and disciplined noticing–of details, of life, of how the world works–and in that way at least it resembles science (Gabriel and Sullivan, 2). Therefore, dancers understand how to respond to external stimuli, maintain their spatial relationships, and adjust their bodies depending on the forces acting upon them.

The kinetic energy of the body is movement energy that affects the body internally and externally. Muscles, bones, and neurons control the individual's ability to voluntarily produce movement but forces such gravity and friction restrict an individual's autonomy (Clippinger). In 1878, Eadweard Muybridge proved galloping horses leave the floor momentarily using a series of photographs (Hill). He revealed a process invisible to the naked eye by building a camera that had a shutter speed fast enough to capture these invisible processes. Muybridge later investigated human subjects in motion and catalyzed future biomechanical investigations.

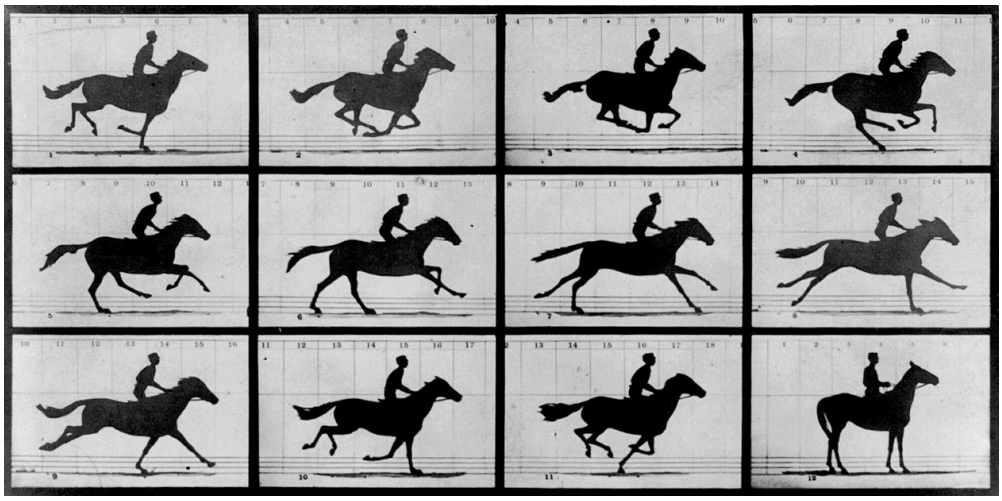


Figure 1: Sallie Gardner Galloping by Eadweard Muybridge in *The Attitudes of Animals in Motion* published in 1878.

Utilizing biomechanics to analyze dance was first researched in 1970 using video analysis to focus on specific muscles (Krasnow *et al.* 1). Current studies are equipped with 3D video analysis software and electrodes to record data of muscle activation and analyze a dance's ability to utilize space (Hopper and Weidemann). Muybridge's simple analysis can still be

performed today, using movement phrases to determine major muscle groups, type of contractions, and forces that act upon the body in motion.[1]

The kinetic energy of space can ultimately be described as temperature. The flow of heat and groups in society follow analogous patterns. Heat flows from high to low temperatures due to concentration gradients (Sherwood). Thermal equilibrium is established once all particles are vibrating with the same amount of kinetic energy as each other ("Temperature Systems"). Movement of groups in society follows a similar pattern. Society is egocentrically driven by status, which is a "phenomen[on] of the distribution of power within a community" (Weber). The use of the "royal we" generalizes the population and hides the expressive individual; "a consensus opinion is born", much like the process of thermal equilibrium (Gordon). Each particle or individual wants to conform and thus becomes a follower, through a passive process. Choreography brings the audiences attention to conformity with individual and group movements.

The kinetic energy of sound is the movement of air molecules to create a pressure wave (College Physics). Mechanical waves oscillate in elastic compressions until neighboring particles vibrate at the same frequency (Barry, 23). Potential and kinetic energies are stored to create the wave's movement. Human ears can detect frequencies that are 20-2,000Hz but they have a harder time picking up sounds at lower frequencies (Williams). Low frequency noises are inaudible but can have damaging effects similar to overstimulation of the cochlea by loud noises that produce hearing loss (Kugler *et al.*). In a 2014 study, subjects were exposed to low frequency noises (30Hz), such as the noise that an open car window produces when driving down the highway. The spontaneous otoacoustic emissions (SOAEs)—the sound ears emit after

[1] Materials, Figure 5

exposure to noise caused by excitation of the cochlea's sensory hair cells—from auditory stimulation were measured (Kemp). Subjects that were exposed to 30Hz frequencies for 90 seconds had irregular SOAEs, with varying oscillations, for three minutes after exposure (Kugler *et al.*). This indicates even though low frequency noises are painless and inaudible; they can have harmful long-term effects, indicated by the long recovery period of the SOAEs (Drexl *et al.)*.

To demonstrate the biofeedback of SOAEs, instruments can recreate whistling sounds through harmonics (Williams). Harmonics demonstrate standing waves. The fundamental harmonic is the lowest resonant frequency and other harmonics vibrate in increasing integral factors (Blitz, 10). Harmonics demonstrate the wave like quality of sound.

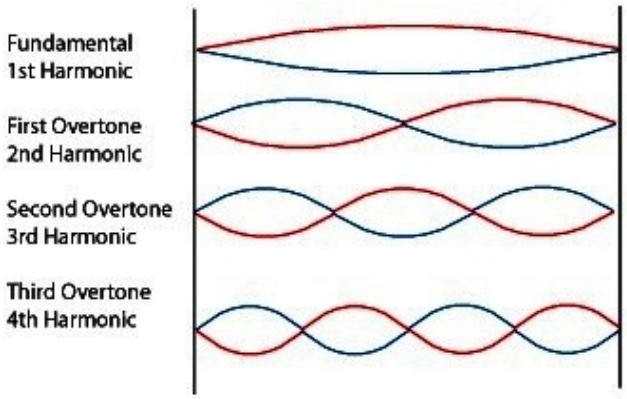
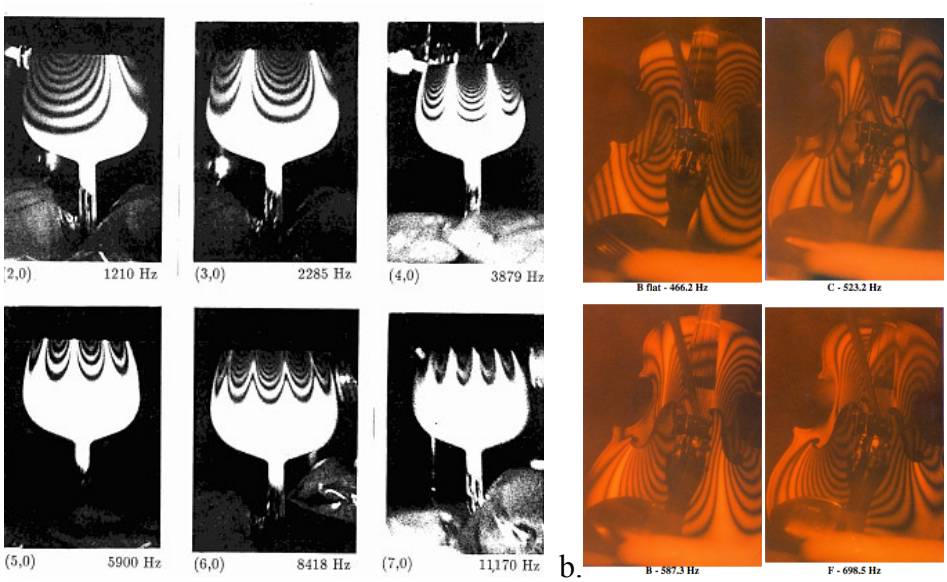


Figure 2: Closed standing waves harmonics

Many common instruments have harmonics, but wine glasses and violins produce the harmonics similar to the ones in your ear. Stick-slip oscillations demonstrate the unseen force of friction, as sound depends on the surface and forces acting on the system and are created on the violin and wine glasses (Bengisu and Akay). Wine glasses and violins can be examined through interferometry, which measures the change in waves directed at an object to analyze the harmonics produced at different frequencies (Lauterborn and Kurz, 135).



a. b.

Figure 3: (a) Holographic interferometry of stick-slip oscillations of singing wine glasses by Thomas D. Rossing. (b) Holographic interferometry of violin by Joshua Murphy and Craig Schmaus.

Interferometry can only be tested in a lab to demonstrate the invisible waves of harmonics, as they can only be perceived when the wave passes through the fundamental harmonic (Lauterborn and Kurtz, 140). But how can these concepts be demonstrated outside the laboratory? Art is one possible avenue. Like science, the purpose of art is to "impart the sensation of things as they are perceived and not as they are known" (Shklovsky). Compared to injuries, art is a noninvasive technique that exposes individuals to unseen forces. Art can also reach large populations depending on venues where it is shown (Kahn). Kinetic energy is the energy of movement; a choreographer can visually demonstrate the effects of the unseen world by analyzing a moving body such as a dancer.

The choreographer controls the dancers' levels of exertion and what the audience views. Choreographic choices direct the audience to question where the dancer's energy originates and how dancers move in space. Each audience member has unique experiences and perceives sensation, forces, and forms of energy in different ways. Artists unify the collective experience

by magnifying these concepts for the stage. My starting point for creating a dance about the kinetic energy of body, space and sound was to research physical concepts. According to Twyla Tharp, “before you can think out of the box, you have to start with a box.”

MATERIALS

"Everything is raw material. Everything is relevant. Everything is usable. Everything feeds into my creativity. But without proper preparation, I cannot see it, retain it, and use it."
— Twyla Tharp

Inspiration is everywhere — adventures, environments, colors, and sounds. Life introduces a constant flow of new information that filters through me as I develop interdisciplinary connections. After my initial pondering over a specific idea, my creative process usually begins with a title. I gather sound samples and mix them together as the dance unfolds. Lighting is an integral part of the spatial design to set the tone, create environments, and determine what to expose of the dancers' movement. Later in the process, costumes are designed so that they do not hinder movement range or distract the audience.

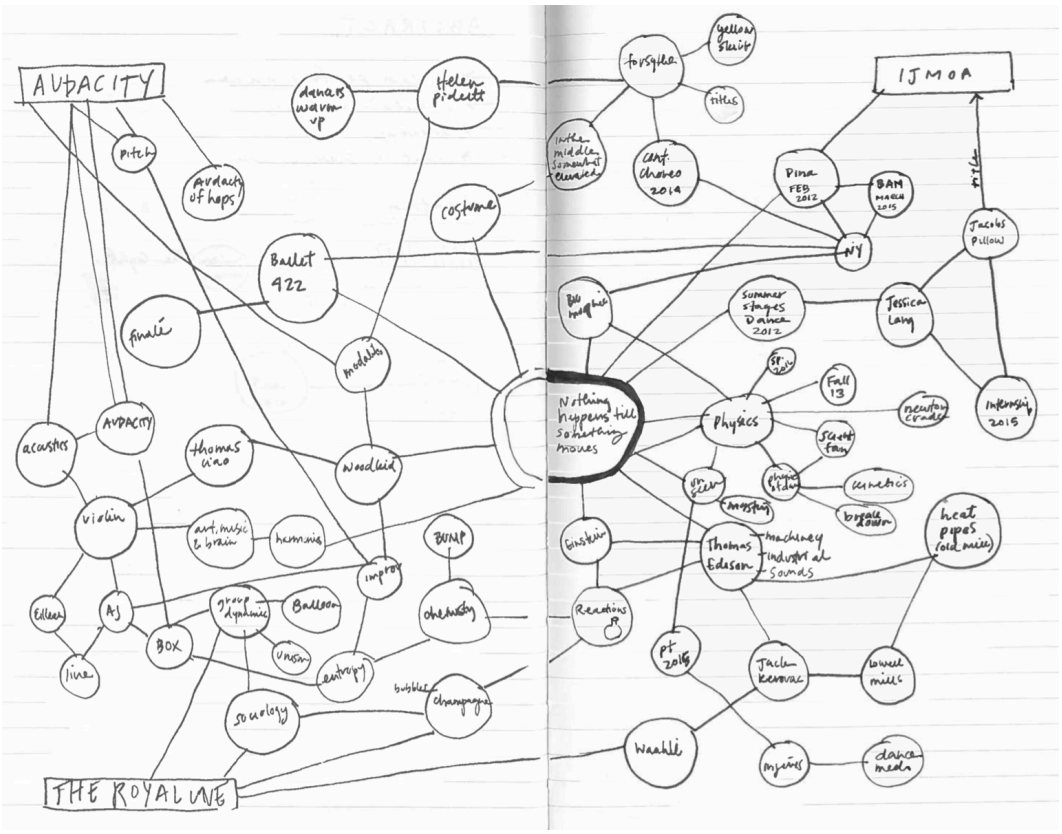


Figure 4: The interconnectivity of my personal inspiration in the creation of *Nothing happens until something moves.*

For this project, my process was segmented into three choreographic creations: *It's Just a Matter of Acceleration, The Royal We*, and *Audacity.* The final accumulation and collection of these works was titled *Nothing happens until something moves*.[2] For each aspect of the performance, I will outline the history of inspiration, sound score, lighting design, and costuming.

Inspiration

A number of influential choreographers have inspired my creative practices and methods of gathering materials. Notably, Adele Myers taught me that dance could be athletic. Pina Bausch introduced me to the concept of Dance Theater. Elizabeth Streb reassured me to challenge the limits of the world and that it is possible to be an action hero in dance. Justin Peck inspired me to create an alternative ballet with a classical structure. William Forsythe gave me tools for generating movement and reaching excellence in performance. Zoé Henrot gave me the courage to choreograph *en pointe*. Jessica Lang inspired me. Ohad Naharin gave me the tools to heal through movement. Jen Polins taught me how to use my spine. Jennifer Hart outlined the process of creating a mini ballet.

I used the tools I learned from these choreographers to explore my own ideas in the creation of my first piece, *It's Just a Matter of Acceleration*. In the summer of 2013, I took a trip to Jacob's Pillow Dance Festival with Helena Kleinschmidt to see Jessica Lang's Dance Company. This was the first time I had driven for an extended period of time and merging onto the highway was one of my biggest fears. At the time Kleinschmidt turned to me and said, "it's just a matter of acceleration." These simple words were the initial choreographic push and became the title of my first piece.

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[2] *Nothing happens until something moves.* is intentionally spelled like a sentence with lowercase letters and a period.

It's Just a Matter of Acceleration reflected the academic courses I took during my first and second year: *Dance 241: Scientific Foundations, Dance 252: Intermediate Composition* and *Physics 100*. During the process, I explored the relationship between physics and anatomy and the forces that act upon and inside the body. I utilized different subtopics of physics to inspire the sections of my piece. The dance was my first direct attempt at applying scientific concepts to dance.

During the spring, I examined a phrase of choreography from *It's Just a Matter of Acceleration* through a movement analysis technique that was similar to Muybridge's study of horses in 1878.[3]

Figure 5: Movement analysis sample phrase divided into seven phases. April 2014.

From this project, I gained insight and understanding into movement mechanisms of the phrase by examining the articulation of muscles being used and forces acting upon and inside the body in each phase.[4] This new knowledge about the phrase allowed me to teach the choreography to my dancer, Helena Kleinschmidt, with greater success.

The same year as the creation of *It's Just a Matter of Acceleration*, I lived in a triple. My roommates and I constantly used the "royal we" to refer to ourselves. I began questioning this grammatical term and the struggle of the individual in choosing to identify with a "we" in a conforming status-obsessed society. This idea seemed similar to how molecules move in space,

[3] Introduction, Figure 1
[4] Appendix F

flowing down concentration gradients in the search of equilibrium. Or how people interact in society until the collective "we" is reached.

I visited an interactive installation exhibit, the *Pulse Room* by Rafael Lozano-Hemmer at the Musée d'art contemporain de Montréal that alluded to my questioning of the royal "we".[5] The exhibit measured the heartbeat of each visitor and added their pulse to the beat of the three hundred light bulbs, each representing a different visitor's pulse. This selective but unified harmony was a source of inspiration for the piece I created during my third year, *The Royal We*.

I collaborated with a violinist, Thomas Liao, to create an original composition for *It's Just a Matter of Acceleration*. Since that interaction, I was inspired by acoustics and the physics of music from learning to play the violin in *Biology 321: Art, Music and the Brain*. *Dance 216: Intermediate Modern* inspired me to explicitly explore connecting choreography to music. Therefore the solo, *Audacity* analyzed the kinetic energy of sound and the relationship between dance and music.

I was inspired by entropy and chaos, and specifically what particles look like when there is little space to move and they bounce off walls in close proximity (Peterson). I wanted to reflect on this using improvisation, a choreographic tool that I had barely utilized in my previous choreographic works. Helen Pickett's *Choreographic Essentials Workshop* introduced me to Forsythe modalities, which are specific techniques used to generate movement. My favorite modality was cross-hemispheric, where the dancer crosses the right and left upper body while also doing intricate footwork. Crossing the limbs over the midline of the body is beneficial for memory and brain function. By generating new neuronal pathways between the right and left hemispheres of the brain through the corpus callosum, cross-hemispheric movement sparks

[5] Appendix B, Figure 19

agility and visual continuity (Barkovich *et al.*). In this technique, the dancer moves so quickly that the rational brain can hardly keep up, as Helen Pickett would say, "first choice, best choice".

I combined this improvisation with the movement exploration, the Gaga technique, created by Ohad Naharin. Gaga activates sensory afferent interneurons and stimulates the cerebral cortex and areas of the brain such as the motor cortex, which are responsible for triggering muscles ("The Primary Motor Cortex"). By engaging in internal awareness, Gaga allows for stimulation of the autonomic nervous system by creating a quiet state of alertness. Specifically, the Vagus nerve is activated, which excites the parasympathetic nervous system and allows the body to become relaxed (Homann). In this state, blood pressure and heart rates decrease and the body is able to rest, repair, and find pleasure in movement (Sherwood). I utilized this restorative technique in my solo as I had sprained my ankle at the beginning of my choreographic process. Gaga allowed me to heal while still dancing.

The final piece was difficult to title because it was a collaboration based on the previously titled sections. Once the pieces fit together as a cohesive whole, it was easier to think of an encompassing title; for the first time the title followed the creation. Some of my favorite options for titles were: *Just Matter, speed of light, on the same wavelength, Cross Section, At a Slant, and Three Lines Horizontal*. None of these provoked thought or elicited curiosity. Nothing clicked until I stumbled across Einstein's quote, *Nothing happens until something moves*.[6]

Sound score

It was a visit to Thomas Edison's laboratories in the summer of 2013 that inspired the sound for *It's Just a Matter of Acceleration*. I was fascinated by the synchronicity and

[6] Abstract

articulation of the industrial machines.[7] I recorded the machines during my visit and this led me to record other "found" sounds as I had done from my final project for *Dance 252: Intermediate Composition*. In the process of creating a sound score for *Dance 252: Intermediate Composition*, I came across an industrial light switch noise. This sound evoked initiation and bookended my solo, as well as *It's Just a Matter of Acceleration*.

When I made the sound score for *It's Just a Matter of Acceleration*, I knew I wanted an instrument that produced sound by physical forces. I discovered that wine glasses sing due to friction as they create a slip-stick oscillation, similar to a violin (Hinrichs *et. al*). Therefore, I recorded sound samples of singing wine glasses to incorporate into the score.[8] I demonstrated the concept of acceleration with wine glasses in the first section to mimic the dancers' movement by adjusting the number of glasses and the water level in the instruments during recording. For the next section, I stayed in the same sound range and I asked my friend, Thomas Liao, to compose a violin solo.[9] I indicated to Liao that I was interested in contemporary violin, and sounds that echoed my recordings from Thomas Edison's Laboratory. The third and final sections of the dance are set to music from the trailer for the film *Pina*. I enjoy the brevity of trailers as they provoke curiosity and the desire to know more. In my choreography, I wanted to leave the audience craving more, so I used the music from *Pina*'s trailer to limit the length of movement in the final section.

The soundtrack from *Pina,* was also inspiration for the sound score of *The Royal We.* In *Dance 353: Advanced Composition*, I choreographed a solo that had a linear box structure to *Pina* by Thom Hanreich. I utilized the same music and spatial pattern from the solo made for

[7] Appendix A, Figure 15
[8] Appendix A, Figure 16
[9] Appendix E

Advanced Composition in the creation of *The Royal We* to demonstrate the confinements of physics and of society.

Colonization was demonstrated by the sounds of bees buzzing in a box. It was important to me to incorporate spoken word. I chose to do so through rap, as rap is a progressive social movement and conveys politics through vocal art. I have always been influenced by the Beat Movement, especially Jack Kerouac's rhythmic recitation of poems, so I challenged myself to choreograph to text. Similar to Kerouac, I was enthralled by the beat of Montreal musician Waahli and I choreographed to the beat of his voice in *Solo.*[10]

Also included in the sound score are samples of champagne in different forms to portray: the anticipation, the cork pop, the fizz, and the singing. Champagne is a social object and the motion of bubbles is similar to collective movements in society. The singing of the champagne flute connects *The Royal We* to the sound score of *It's Just a Matter of Acceleration.* I used the remainder of Liao's composition for *Audacity*.

Every section for *Nothing happens until something moves.* already had a separate sound score, but I wanted to find a way to unify the piece. To accomplish this, I cut all the mainstream music, such as *Lilies of the Valley* by Jun Miyake and *Solo* by Waahli and instead only used found sound samples and violin. After successfully working with Liao on the sound score for *It's Just a Matter of Acceleration*, I decided to collaborate with musicians for *Nothing happens until something moves*. I wanted to display the hard work of making music, similar to Balanchine's philosophy to "see the music, hear the dance". Therefore, I collaborated with two violinists, Anna-Julia Plichta and Eileen O'Grady from the Mount Holyoke College Orchestra and placed them in the audience.

[10] Appendix G

Each violinist had different strengths: one played in a fiddle band and the other was interested in jazz and was learning to play the bass. Through improvisation sessions I catered to the violinists' strengths and chose sections of the dance to highlight their individual talents. They attended rehearsals and interpreted my sketches of textures and intensities for the new sections.

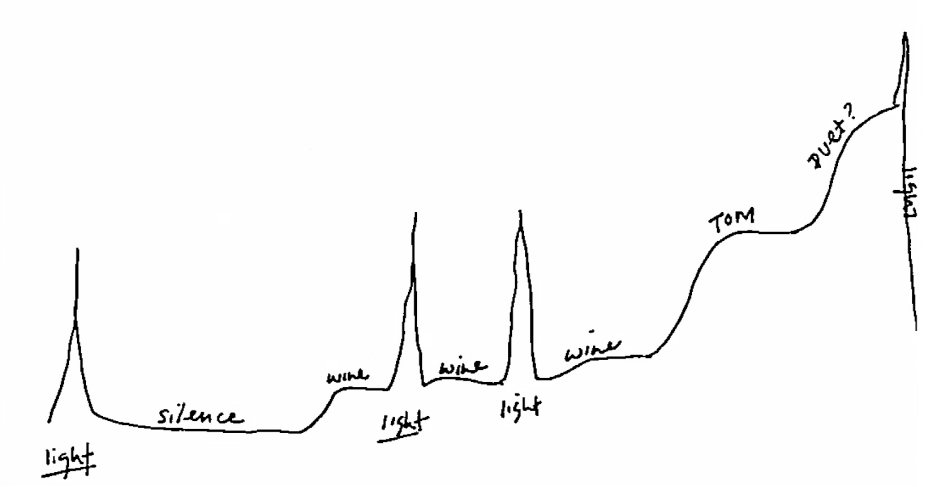

Figure 6: Sample textures for musicians

The first area that needed redesigning was the third section of *It's Just a Matter of Acceleration.* The dancers were familiar to *Lilies of the Valley* by Jun Miyake but I did not want heavy instrumental music, nor did I want to stray from the original syncopated rhythm. Therefore, Anna-Julia Plichta recorded the baseline rhythm of *Lilies of the Valley* on the bass. This track was looped for the live performance. Eileen O'Grady played the same beat on the violin as Plichta improvised on top of the recorded baseline rhythm.

The next section that needed new music was the opening of *The Royal We*. The previous music—also from the *Pina* soundtrack—was too heavily synthesized, but I wanted something that elicited a similar quality. I chose music with a drive that reflected the spiraling movement of the dancers. O'Grady played a waltz by Nicholas Williams titled *Glades* and Plichta improvised and droned behind O'Grady's main melody to add body and drive.

The last section of the dance demonstrated harmonics with spatial patterns of movement and I needed music that reflected this physical concept. I wanted to mimic the unrefined and scratchy quality that my class had produced in *Biology 321: Art, Music and The Brain* while learning to play harmonics on the violin. Therefore open string harmonics on the bass and violin were recorded and overlapped.

The final sound score for *Nothing happens until something moves.* included sound samples such as wine glasses, light switches, amplified radiator noises, clanking pots, and light humming sounds. The entire score was created with two sound editing softwares, Soundtrack Pro and Amadeus. Since the piece was performed at two different venues, two different sound scores were made. For The Biomorphic Dance Festival in New York City, the musicians were recorded on top of the sound samples, as they could not attend the festival. The Mount Holyoke College version, the sound score remained the same with the addition of the violinists playing live on top of the sound samples.

Costume Design

The costumes were selected to exhibit the athleticism of the dancers' bodies. Leotards and tights are designed to display proper alignment and muscle activation to the teacher and I wanted to reveal the work of the dancer to the audience (Whatley, 92). While selecting costumes for *It's Just a Matter of Acceleration*, I stayed away from pink tights, as they are integral to classical ballet. Instead I decided on black tights and red leotards.[11] I chose red, as it is the color of muscle and blood. The pointe shoes were pancaked the color of the dancers' skin to extend

[11] Appendix A, Figure 17

their lines. The hair was put up in an elegant French twist to counteract the athletic and industrial quality of the movement.

For *The Royal We*, the costumes were chosen to portray elegance. I originally wanted to construct extravagant bodices for each individual, with diamond, gold, and silver embellishments but I never had the time to complete the production.[12] I liked the individuality the bodices would have created but realized I was creating a dance about unison and leotards had this effect. (Whatley, 92). After contemplating the color royal blue, I choose a plum colored leotard because of the associations between the color purple and high status. Each dancer had a different style crown braid, which added to their royal appearance. This choice alluded to a "crown" as a status object and source of hierarchal ranking.

The initial idea for *Nothing happens until something moves.* was to have different colored leotards for each of the three sections and the finale to remain consistent with the costumes of the other dances. The costume for *Audacity* was never completed as it was created as a part of *Nothing happens until something moves*. and was only performed as a solo for an informal showing. The final design for both *Audacity* and *Nothing happens until something moves.* was emerald green leotards and black tights with pancaked pointe shoes. Over the summer I was determined to teach myself to make leotards and it just happened that my practice spandex was the same bright emerald green.[13] Green is vibrant, eye-popping, and elicits an electric feel. All the leotards were structurally designed differently as I wanted to best display the function of each individual dancer's muscle.[14]

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[12] Appendix B, Figure 21
[13] Appendix D, Figure 26
[14] Appendix D, Figure 27

The leotards were ordered from Israel about a month and half before the performance. They were scheduled to arrive before our NYC debut but were lost in the mail. Therefore in NYC we wore an assortment of colored leotards.[15] A replacement order was shipped and scheduled to arrive on Wednesday for dress rehearsal at Mount Holyoke. Unfortunately they did not and we arranged for a second alternative. This time we wore personal leotards in cool colors.[16]

Lighting Design

Entering tech week for *It's Just a Matter of Acceleration* in 2014 I did not realize I was only given three cues. My elaborate plan of runways and flashes of light faded. In 2013, I watched Lemon Sponge Cake Contemporary Ballet's *Vertical Migration* and loved the path of lights on the stage. Ever since, I have wanted to create a dance piece with similar lighting.[17] This lighting pattern appeared again in a Montreal fashion show that I attended, and confirmed my desire to incorporate it into the piece.

With my three cues, I choose a design that separated the sections of the dance and created three separate environments. The first cue had only the shins on stage left lit. The second cue was a pool of light constricting Kleinshmidt in her solo. The final cue was stimulated by the elastic collision and the entire stage flooded with bright down light.

For *The Royal We*, I envisioned the dancers in shimmery gold lighting to contrast the purple leotards. I created a shadow on the cyc to give the illusion of more bodies on stage. I initially proposed using a movie spotlight to create this effect to demonstrate how society sees

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[15] Results, Figure 13
[16] Appendix D, Figure 32
[17] Lemon Sponge Cake Contemporary Ballet – *Vertical Migration* by Robert Sher-Machherndl https://www.youtube.com/watch?v=EA4Go8XYeK4

the capitalistic market. In the final piece I used a light at the front of the house. The dancers prepared for this bright light shining in their faces by practicing the dance in the dark as well as with rented lighting equipment.[18]

For *Audacity*, I slowly condensed the area of light for the length of the piece. This demonstrated how pitch increases within a smaller space as the particles have less space to bounce around.[19]

Nothing happens until something moves. combined all my previous lighting ideas. The runways of light during the opening section[20] gave life to my original plan for *It's Just a Matter of Acceleration*. For the Mount Holyoke show, I envisioned three runways of light for each dancer. The title at this point was *Three Lines Horizontal: Nothing happens until something moves*. Due to the four-wing stage, the lighting designer could only create four lanes to make equidistant runways. I settled with two because the black line in the middle could potentially be perceived as one. However, I changed the title to *Nothing happens until something moves.* because I did not want the audience to focus on the number three.

[18] Appendix B, Figure 23
[19] Appendix C, Figure 25
[20] Appendix D, Figure 31

METHODS

"Art resides in the quality of doing, process is not magic."
– Charles Eames

Choreography allows me to explore science through the process of biomechanically analyzing dance and magnifying unseen force fields and conversions of energy for the stage. I challenge myself in the creative process to attempt to overcome the classical definition of ballet technique and the physical limitations of the body. Movement is first visually realized in my imagination. I test and create phrases when I have bodies. The next step involves combining phrases of movement to create the dance and drawing spatial patterns for my dancers. I choreograph *en pointe* because biomechanical principles are heightened by elevation (Shah). The dancers, standing on their toes have increased their distance from the ground. As a result, they have more potential energy and therefore more kinetic energy as well. Choreographers have the ability to test physical limits by creating movement that piques the audience's curiosity. Overall, I am interested in dynamic movement that stimulates the perception of dance as a scientific sport.

It's Just a Matter of Acceleration's movement vocabulary was inspired by speed skaters. I was stirred by an AT&T 2010 winter Olympics commercial, featuring the speed skater Apolo Ohno.[21] I was interested in movements that slid across the stage, alluding to a low friction environment, like a skating rink. The opening phrase reflects this desire as the dancer runs across the stage and slides and rolls back to where she entered. To simulate a low friction environment without a frozen stage, the dance was *en pointe*. The pointe shoe has less friction *en pointe* and interacts differently with the floor than flat slippers (Shah). In translating the dance to pointe, the dancers' musculature had to adjust to compensate for the height and decreased surface area.

[21] AT&T Commercial https://www.youtube.com/watch?v=lCj_Il-trqA

The next section of the dance was a solo for Kleinschmidt based on a pendulum and the "drop swing" quality with the changing energy states. To begin choreographing her solo, I expanded on an arm phrase created for a homework assignment for *Dance 352: Advanced Composition: Duets*. In the end, Kleinschmidt's solo was set to a section of the original violin composition created by Thomas Liao.

To introduce the final section of the dance, I demonstrated an elastic collision, where the kinetic energy between the two bodies is the same before and after the collision (Peterson). To demonstrate this, I ran towards and bumped into Kleinschmidt. Following this contact, Kleinschmidt twirled me around in a counterbalance, which illustrates the mechanisms of a fulcrum. Fulcrums are present in the skeleton to maintain the forces necessary to move lever arms (Clippinger).

Figure 7: Fulcrum movement practice rehearsal February 2014

The third and final section of the dance is a release of the built up potential energy. It is the first time the dancers are on stage together and dancing in unison. This results in the climax.

Kleinschmidt and I finished the dance two weeks before the performance. Before the show we had qualms about our endurance levels, we were unsure if the adrenaline produced in

performance would hinder our stamina as this hormone activates the sympathetic nervous system and restricts the flow of blood and oxygen to muscles (Sherwood).

The piece was performed in two different venues. After watching the show at Mount Holyoke College, people believed Kleinschmidt and I were the same person in the beginning. Only until three minutes into the piece when the elastic collision occurred did the audience realize the piece was a duet.

The feedback we received at the American College Dance Association New England Conference in March 2015 from the three adjudicators, David Parker, Larry Keigwin, and Anjali Austin was varied. Parker, a musical theater artist, was interested in increased exploration with the pointe shoe. He asked, "what would an alien do with that?" Austin, a ballerina herself, liked the incorporation of floor work into the ballet technique, but she wanted the pointe shoe to be used more and for there to be increased risk and more partnering. She wanted it to go farther – bigger – bolder, much like Fred Astaire often said, "Do it big, do it right and do it with style." Keigwin enjoyed the repetitive themes, but wanted to see more acceleration and speed to accentuate the title.

I took all the feedback I received from the performance of *It's Just a Matter of Acceleration* and incorporated them into the production of *The Royal We.* I focused the movement of thermal kinetic energy and related it to the societal motion of status groups. With this in mind, I choreographed a quartet in unison with gestures specific to the individual. Originally, I planned to use a yellow helium balloon that would be passed from dancer to dancer throughout the piece to symbolize the unattainable idealistic views of society and the continual migration of these societal norms. Towards the end of the process, I took the balloon away because I recognized that societal norms are invisible but individuals are still dictated by these

rules. To show how society as a whole can leave an individual behind and stripped of the collective identity, the piece culminates with a solo. The soloist remains left with the (invisible) balloon showing her inability to detach from societal standards.

The final performance of *The Royal We* at Mount Holyoke College was four minutes in length. The dancers were unified through the collective movement, which added an electrifying tension and made for an exhilarating performance. Through the movement, the muscles in all of the dancers were activated at the same time as they responded to the same stimuli. Their body systems collectively acted together in the conversions of energy states (Nugent, 32).

The traveling undulation of sound waves inspired the movement of *Audacity*, as I was studying waves in *Physics 132*. Sound can dissipate and expand endlessly in the absence of boundaries (Cox, 42). When sound hits boundaries, it reverberates and bounces back (43). My original choreography reflected this as the dancer exited and entered from the wings as if dissipating off into the wings and hitting a boundary off stage and bouncing back on stage. However, the transition times were too long, so the dancer stayed on stage for the entire solo. In the solo, the dancer rebounds off invisible walls, but in the larger work, bodies make the boundaries and constrain the dancer. Dancers confining the space in addition to the lighting design illustrated the ratio of frequency to space as well as the kinetic energy of the space and sound. The soloist's movements become more frantic in this small space, which expands on the idea of the kinetic energy of the body explored in *It's Just a Matter of Acceleration*. The ending of the solo illustrates high frequency when the dancer is constrained by the lighting design and other dancers.

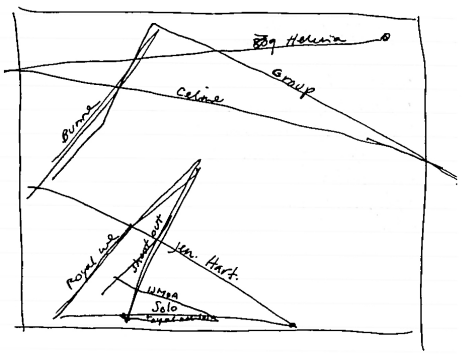

Figure 8: Movement patterns of *Audacity* and incorporation of movement phrases from previous pieces.

I sprained my ankle in September 2015, and was unable to physically choreograph the solo. The process took a different direction than I intended. My original plan was to choreograph the entire dance *en pointe* rather than transposing it from flat shoes to pointe, because I wanted to create new pathways that I would not think of if I were dancing in flat shoes. I accomplished this as the dancers performed a string of movement sequences from each dance for me *en pointe*. For the end section of the solo, I used a combination of Gaga and Forsythe improvisational techniques. This gave me freedom and Gaga specifically allowed me to access the parasympathetic nervous system to calm my body and heal through dance (Homann).

The solo was performed at the informal concert at American College Dance Association New England Conference in 2016 at Springfield College. The gym floor was very slippery and the piece could not be preformed *en pointe* like it was intended. There was no special lighting as the performance was in a gym with a taped floor to represent the stage and the audience sat on the floor. As a result of this performance, I had much to consider and went into rehearsals for the larger work with ideas to incorporate the entire cast into the solo.

Nothing happens until something moves. requires seven dancers. Auditions were held in the fall and I was looking for three new members in addition to the cast of *The Royal We*. The audition was not *en pointe* but it was a requirement to be considered for the piece. The new

members I chose were Nora Buonagurio, Isoke Samuel, and Olivia Chandler. These three dancers were set to dance in *The Royal We* with Emily Clark.

Kleinschmidt resumed her position in *It's Just a Matter of Acceleration* and Barreau learned my part. The process of teaching Barreau my part went extremely smoothly as she is a quick learner and had watched the development of the piece over the past years. I did not want to keep the same order and structure of the *The Royal We,* as I had done with *It's Just a Matter of Acceleration*. Instead the piece was ripped apart and put back together. I was faced with the process of teaching the old choreography to Samuel, Chandler, and Buonagurio as well as rearranging and creating new choreography so that it would fit with *It's Just a Matter of Acceleration*. In addition to restaging the two previous pieces, I dedicated a great deal of time to the creation of *Audacity*. Being injured, I mainly visualized the dance in the space. Mirror neurons have the same activation during visualization and movement, and therefore increase neurological pathways and organization when an individual is using imagery. (Hargrove). When I finally was able to dance, I did not have to make new pathways for the movements because they were already established.

During second semester, the dance became a whole, rather than a conglomeration of separate sections. The piece followed the order of *It's Just a Matter of Acceleration*, *Audacity*, *The Royal We* and the finale. I was inspired by the movie *Ballet 422* in the creation of the finale. The film exposed Justin Peck's production of the finale for the ballet *Paz de La Jolla*. On stage, Peck's ballet had increased in intensity and I wanted this as a last gasp of the dancers' energy. We had tried overlapping the various sections in the finale so the audience could see them again, but with different constraints and with more bodies on stage, but this ended up being too repetitive. Therefore only a section of the dance was repeated.

In the dance, elastic collisions played a big role, as there is constantly the reaction of someone bumping into another to initiate the movement. In the opening phrase, the structure of *It's Just a Matter of Acceleration* was maintained. The only thing that changed was instead of one dancer running across from stage right to stage left, there was an accumulation of dancers, like Newton's cradle, concluding with Kleinschmidt deposited downstage left for her solo.

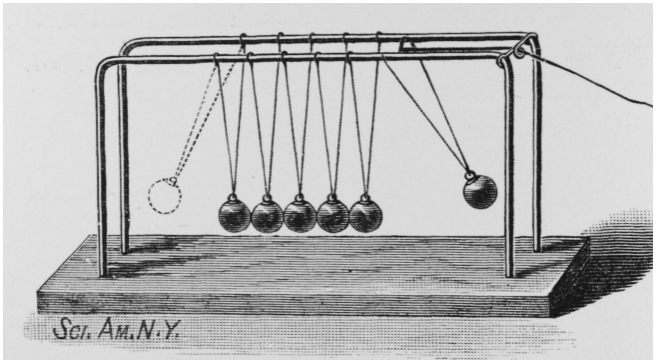

Figure 9: Newton's cradle is an instrument that demonstrates the conservation of energy through the constant collision transfer of force from one side to the next. Kinetic energy is converted to potential energy at the last ball when it reaches the same height and the cycle then repeats (College Physics)

Kleinschmidt's solo retained the same from *It's Just a Matter of Acceleration* to demonstrate the pendulum quality of physics. The next section also integrated more dancers rather than keeping the duet. The end of this section resulted in all the available dancers running in a straight line across the stage and depositing Barreau upstage left. Next, to mimic the collision that had occurred downstage, I ran into Barreau to begin *Audacity*.

Kleinschmidt ran across and her movement initiated a reaction in me to follow her pathway. This began the bouncing reaction of the particle. In the solo, each dancer stepped on stage to create this confinement. The dancers walked with the aim to confine.

Figure 10: Demonstration of the kinetic sculpture in *Nothing Happens Until Something Moves.*

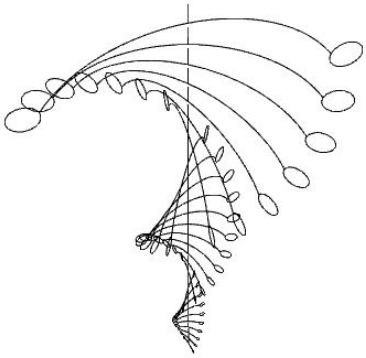

Figure 11: Sample kinetic sculpture sketch by Macro Mahler

The next section was the first time dancers move in unison. The movement was from *The Royal We* and illustrates a kinetic sculpture. This moved into the opening of *The Royal We* that demonstrated the confinement of a box and the confinements of physics of the world we live in. New dancers emerged and initiated a series of reactions like ping pong balls. This wave of chaos deposited couples of dancers upstage left and downstage right into a variation of material from T*he Royal We* that was choreographed to rap. This led into a repeat of The *Royal We* material and rolled seamlessly into the finale.

The post-finale section was inspired by standing waves and harmonics.[22] The choreography was designed to reflect the music and represent the spatial patterns of harmonics. The dancers followed the pathway of the fundamental, second and third harmonics through the opening phrase from *It's Just a Matter of Acceleration*. Originally the dancers ran across the

[22] Introduction, Figure 2

stage on the same straight line to demonstrate the constant string of the harmonic but there are only a certain number of times that one can see the same phrase. Instead the spatial orientation was reorganized. The dance ends with one dancer running across the stage in the same trajectory. This movement was a constant theme that resonated throughout the piece.

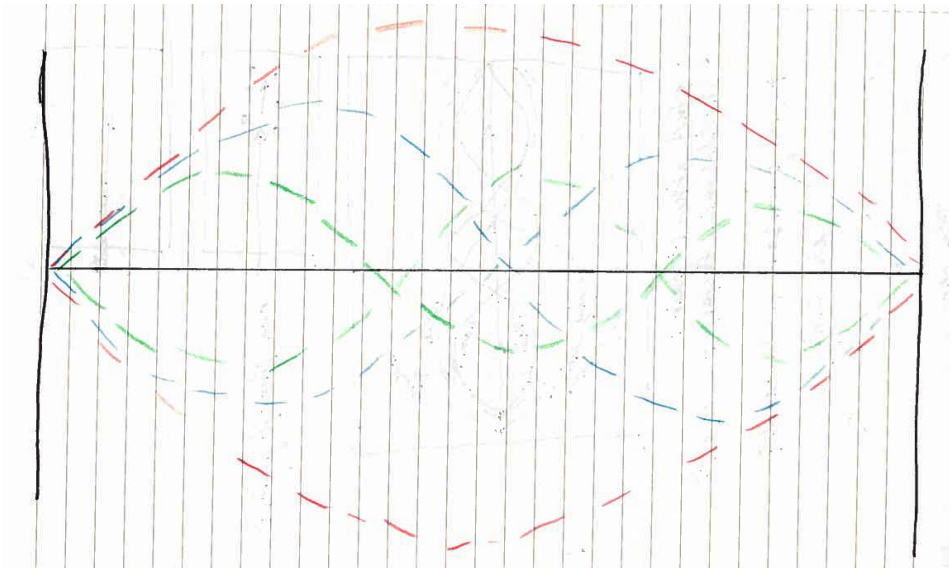

Figure 12: The spatial pattern for the harmonic section. Each colored line represents a different dancer for the final canon.

RESULTS

"In the end all collaborations are love stories."
— Twyla Tharp, The Collaborative Habit: Life Lessons for Working Together

Nothing happens until something moves. was performed at two different venues in the same week. The piece premiered at The Biomorphic Dance Festival in New York City and four days later the piece was performed at Mount Holyoke College in the Senior Concert.

The Biomorphic Dance Festival: *March 20th, 2016*

The Biomorphic Dance Festival was a two-day festival that showcased emerging and established choreographers whose work related to science. Upon arrival at the West End Theater for our thirty-minute technical run through, we faced and adapted to unforeseen challenges; the floor was peeling and slippery, the stage was semi-circular, and we were given only one lighting cue. Last minute adjustments were made in the hours between our technical run through and the performance.[23]

The dance was created with linear geometry in mind and the circular shape of the stage changed the dynamic of the piece. The lighting design did not produce linear sections on stage; instead, the lights flooded the entire stage. We were unable to wear pointe shoes due to the less than ideal floor. To makes matters trickier, there was just one way on and off the stage. We had prepared a version of the dance in the event that the stage had no wings, but we decided against performing this version, as it strayed too far from my choreographic vision.[24] The stage dimensions were smaller than the Mount Holyoke stage and this limited the amount of energy that the dancers could exert in the constrained space and also shortened the time required to

[23] Appendix D, Figure 29
[24] Appendix D, Figure 28

execute movements, thus speeding up the dance. There was no boundary between the audience and the dancers.[25] We had to maintain a safe distance so that the choreography could still hold its spatial integrity. Although we faced many challenges, we learned firsthand how to effectively collaborate with one another in a new space.

Figure 13: Taking a bow after the performance of *Nothing happens until something moves.* at the Biomorphic Dance Festival at the West End Theater on March 20th, 2016. Photo by Noel Valero.

Mount Holyoke College Senior Dance Concert: *March 24 & 25, 2016*

It was a relief to be back at Mount Holyoke College after New York—the dance was designed for the dimensions of the Studio Theater. The lighting design fit my vision of separated environments and streamlined lines of light to accentuate the dancers' bodies. The dancers were back *en pointe*, had four wings at their disposal, a cross-over behind the stage, and costumes for opening night.

The music varied between performances. Since there were multiple tracks overlapping to create a massive sound, technical difficulties were unavoidable. On opening night the violinists'

[25] Appendix D, Figure 30

acoustic sounds were drowned out by the recorded music. For the next night's performance, the sound levels were equalized.

People saw the continuity of all the different years of choreography and the unity of the final combination. Many audience members seemed to understand that there was a mechanical quality to the dance and were curious to further explore this concept. One individual attempted to dissect her reactions; she thought the dance was a revolt against the pointe shoe, implying they are constricting and a confinement of mechanical movement.

Figure 14: Dress rehearsal of *Nothing happens until something moves.* at Mount Holyoke College Senior Concert March 23rd, 2016. Photo by Jim Coleman

DISCUSSION

"If at first the idea is not absurd, then there is no hope for it."
— Thomas Edison

Although the piece began as three separate entities, the process came together as a successfully cohesive dance. Performing in two different venues was a challenge but the dancers developed connections with each other by adjusting to the movement, space, and energy of the others around them. This interconnectivity aided to the unity that the audience at Mount Holyoke College witnessed.

I am eager to further the evolution of my choreography by exploring multiple avenues. First, I am interested in performing this piece in a program that features contemporary ballet works to reveal the strengths and weaknesses of my choreography. Therefore I am currently applying to present my work at several ballet festivals around the country.

At the start of this process, I was hesitant about my ability to create a piece that was longer than four minutes. However, I was able to overcome my fears by combining multiple short sections. But, after watching the performances I would like to shorten the length of this piece because I want the audience to leave wanting more, similar to the feeling that movie trailers elicit. I do not want to satiate the audience. At the Mont Holyoke show, the piece was the shortest and contrastingly, at the Biomorphic Dance Festival, *Nothing happens until something moves*. was one of the longest dances.

In general, I plan to incorporate the audience's feedback into my next creative process. Many individuals noticed and enjoyed witnessing the development of the work throughout the years. Due to this, I would like to try the process of works in a series again. But I am also interested in experimenting with different forms of the creative process. How do you just make a

whole piece without previously choreographed sections? What does that imply for the inspiration of the process?

For future projects, I would be interested in collaborations with other kinds of artists; as Aristotle said, “the sum of the parts is greater than the whole.” I established a strong initial connection with my musicians, which allowed for fine-tuning and connecting movement to melodies to spark the intensity of the piece for dancers and musicians alike. But I would like to massage this process further and exfoliate new possibilities by spending an extended period of time in close collaboration.

Performing in NYC taught me how to adjust to a new space and gave me a glimpse into site-specific work for theater. The stage in NYC was different from where the piece was initially designed and so we had to limit the amount of space we covered while executing movement. The piece was not as exhausting due to the confined space. At times, it felt as though we were on top of the audience because there was no barrier. Understanding how to adjust the amount of energy for different spaces while maintaining the same amount of intensity in a performance is something I will consider when designing my next piece. For instance, if I perform on a stage twice as large as my rehearsal space, I would like to explore how to translate the same level of energy to the audience without appearing exhausted.

Because of this freelance choreographers must know the performance space and how the audience will see the piece to determine the type of movement they create. I learned this from witnessing Kinsun Chan’s choreographic process last year. I believe the physical dimensions of the Mount Holyoke College Studio Theater informed my process to a great extent. I knew the dancers would be at a specific distance from the audience and that they had a finite amount of

time to run across and behind the stage. The movement and sound score were created with this level of precision in mind.

For the future I will keep in mind site-specific theatrical work and the implication for translating for other spaces. Depending on the amount of time I am given in the certain space will determine the creative process that I ensue. I will listen to the dancers and adjust the movement to fit the constraints of their bodies and well as the limits I am given during creation such as length or sound score. Overall for my next project I will collaborate with the space, sound and body.

CONCLUSION

“Dance, dance, otherwise we are lost.”
— Pina Bausch

In conclusion, this four year long process has aided me in developing a cohesive piece that revealed the invisible forces of kinetic energy. My passion of investigating biomechanics and furthering the limits of classical ballet are far from over. This process and thesis further piqued my curiosity. I will keep dancing, adapting, and creating in different environments because “otherwise we are lost”.

APPENDIX A

It's Just a Matter of Acceleration

Figure 15: Machines recorded in Thomas Edison's Laboratory, August 2013

Figure 16: Wine glasses recording, November 2013

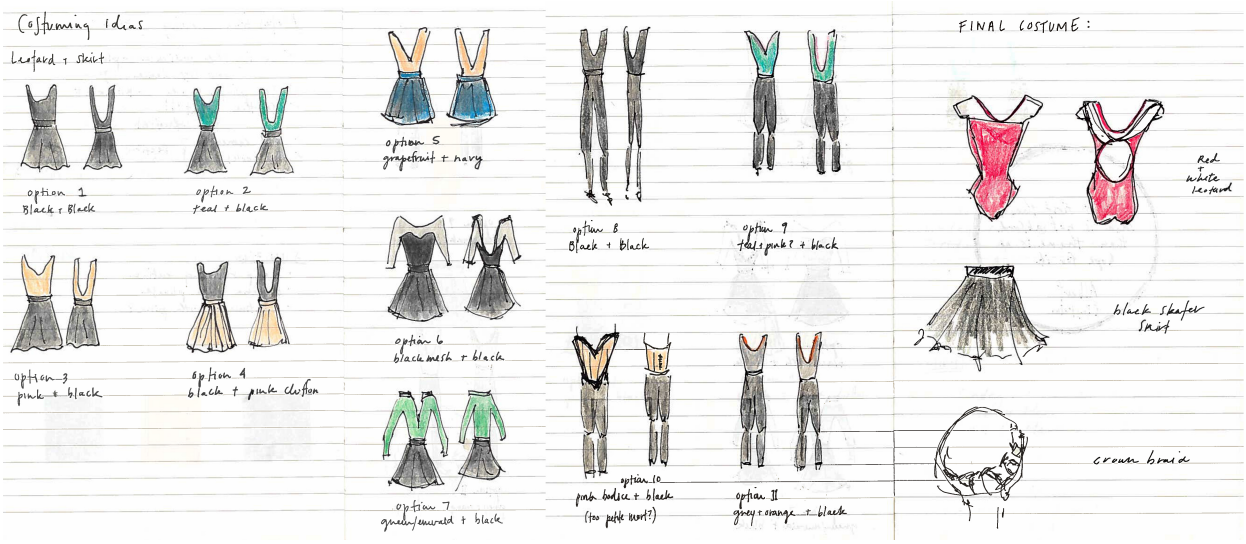

Figure 17: Costume sketches for *It's Just a Matter of Acceleration* with the final costume design on the far right

Figure 18: The cast of *It's Just a Matter of Acceleration* backstage the MHC Student Dance Concert, April 2014 (From Left to Right: Margaret Wiss, Helena Kleinschmidt)

APPENDIX B

The Royal We

Figure 19: The *Pulse Room* by Rafael Lozano-Hemmer at the Musée d'art contemporain de Montréal, August 2014

Figure 20: Sketches for *The Royal We* costume with a bodice and skirt, December 2014

Figure 21: Bodice Construction, December 2014

Figure 22: Bodice fabric displaying individuality of each dancer

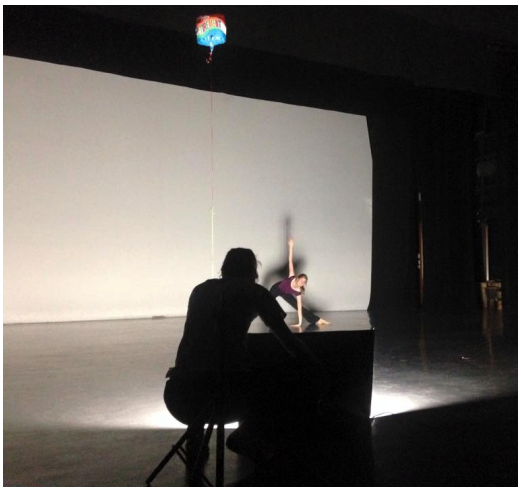

Figure 23: Sample lighting practice for *The Royal We* still with the balloon in rehearsals, April 2015

Figure 24: The cast of *The Royal We* backstage the MHC Student Dance Concert, April 2015 (From Left to Right: Barreau, Kleinschmidt, Wiss, Clark)

APPENDIX C

Audacity

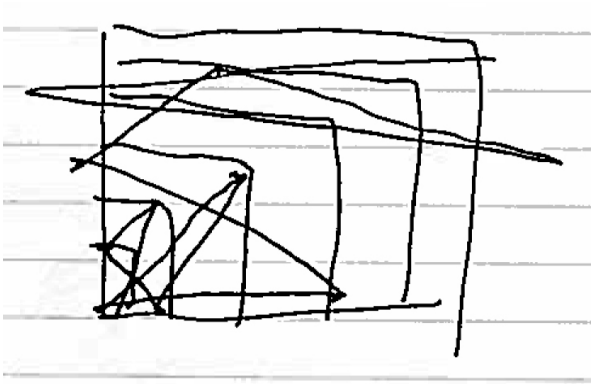

Figure 25: Lighting design for *Audacity* showing the condensing of light downstage right

APPENDIX D

Nothing happens until something moves.

Figure 26: Leotard construction, July 2015 (a) Initial Stages (b) Sewing the two halves together

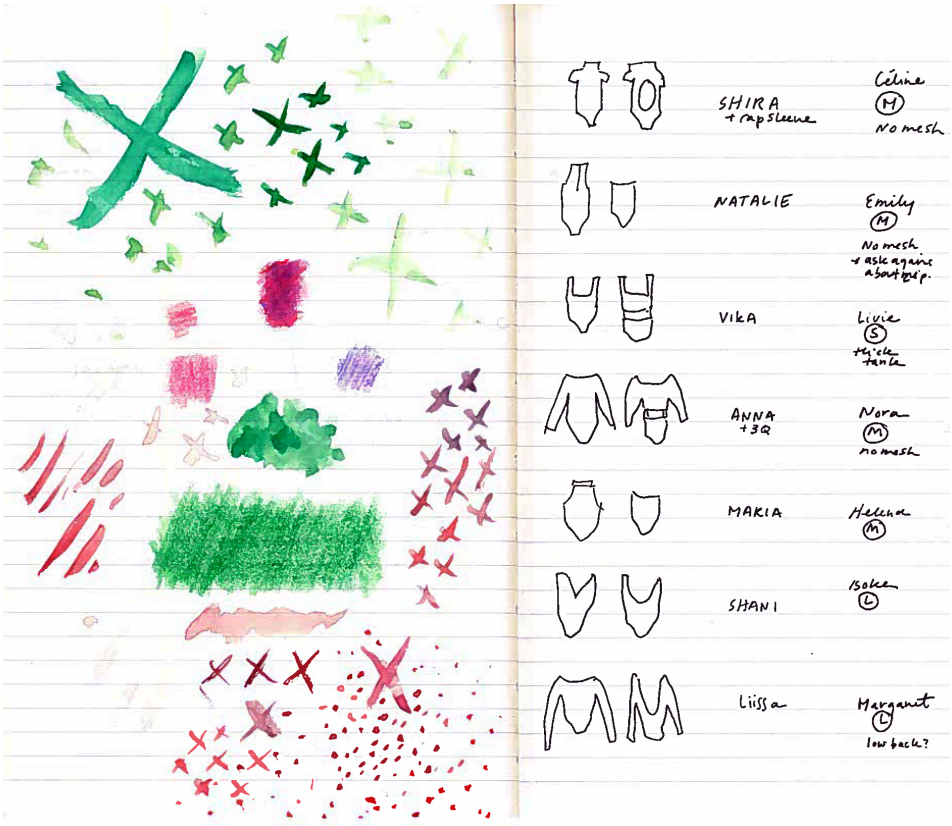

Figure 27: *Nothing happens until something moves* costume sketches, January 2016

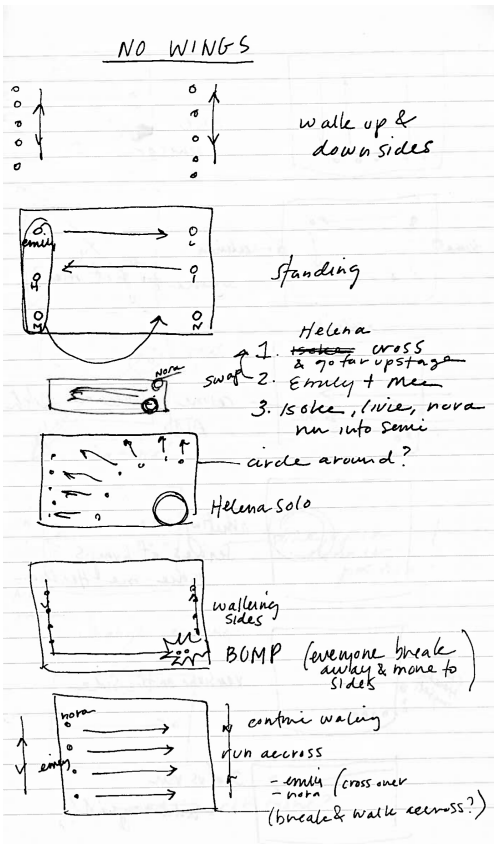

Figure 28: The plan for no wings for the Biomorphic Dance Festival before seeing the space, March 2016

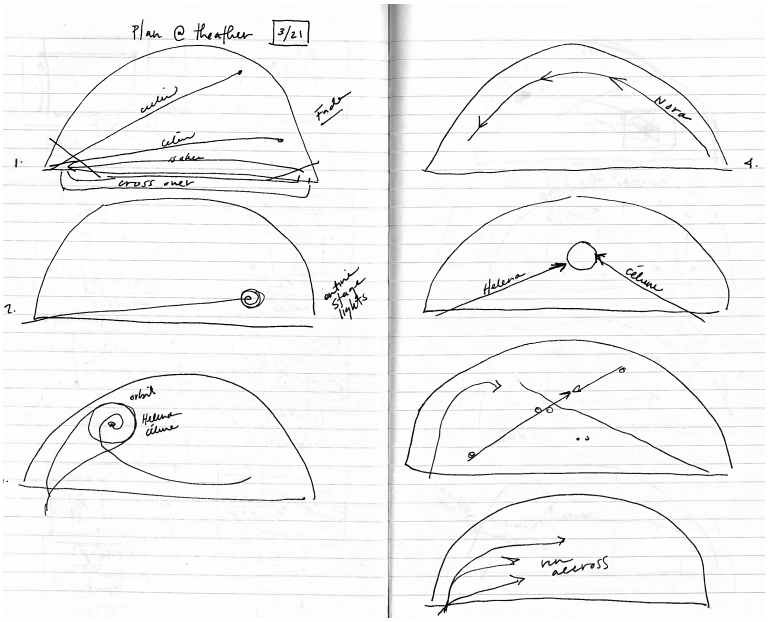

Figure 29: Quick sketch of *Nothing happens until something moves.* transposed for the West End Theater after seeing the stage during arrival and before our thirty minute tech run, March 20th, 2016

Figure 30: Technical rehearsal at Biomorphic Dance Festival showing the relativity of the audience to the stage

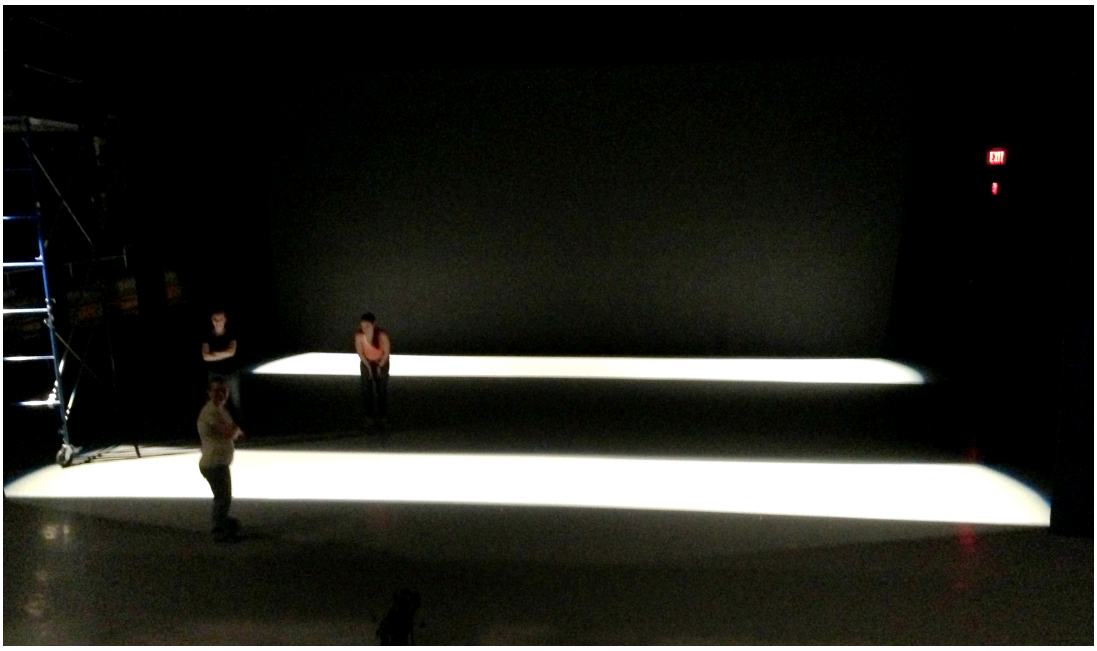

Figure 31: The lighting design for Mount Holyoke College performance of *Nothing happens until something moves.*

Figure 32: The cast of *Nothing happens until something moves.* backstage during dress rehearsals with alternative costumes

Figure 33: The cast of *Nothing happens until something moves.* backstage MHC Senior Dance Concert, March 2016 (From Left to Right: Buonagurio, Samuel, Chandler, Wiss, Clark, Barreau, Kleinschmidt

APPENDIX E

***It's Just a Matter of Acceleration* – Thomas Liao**

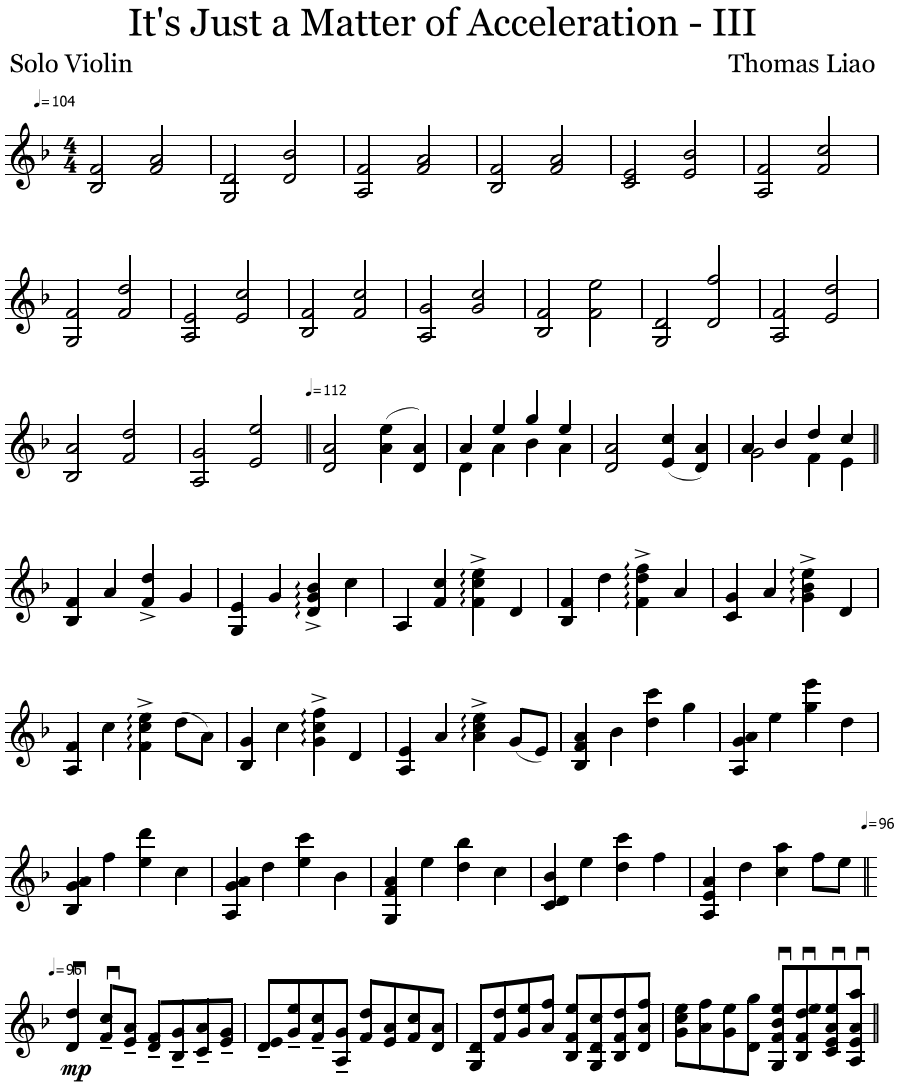

Figure 34: The first page of *It's Just a Matter of Acceleration* composed by Thomas Liao, March 2014

APPENDIX F

Sample Movement Analysis of Phase 7

Joint	Action	Prime Movers	Contraction	Force
R Hip	Flexion External Rotation	Gluteus Maximus Iliopsoas Rectus Femoris Deep outward rotators	Concentric Isometric	Acceleration due to gravity Torque
R Patellofemoral	Flexion	Hamstrings	Concentric	Acceleration due to gravity
R Tibiocrural	Dorsiflexion	Triceps Surae	Concentric	Acceleration due to gravity
R Metatarsophalangeal				Friction N3
R Shoulder	Extreme Horizontal Abduction	Middle deltoid, Supraspinatus	Eccentric	Torque
R Elbow	Extension	Triceps brachii	Eccentric	Gravity Torque
R Radioulnar	Pronation	Pronator quadratus	Eccentric	Torque
L Hip	Extension External Rotation	Hamstring Gluteus Maximus Deep outward rotators	Eccentric	 Torque
L Patellofemoral	Extension	Quadriceps Femoris	Eccentric	
L Tibiocrural	Plantar Flexion	Tricpes Surae	Isometric	
L Metatarsophalangeal	Flexion	Flexor digitorum brevis	Isometric	Friction
L Shoulder	Flexion	Anterior deltoid Pectoralis major	Concentric	Gravity Body weight
L Elbow	Flexion	Biceps brachii	Concentric	
L Radioulnar	Supination	Supinator	Concentric	N3
Atlanto occipital	Extension (slight)	Rectus capitis posterior major	Isometric	
Spine	Lateral flexion Rotation	Quadratus lumborum Obliques	Eccentric Isometric	Torque

APPENDIX G

SOLO by Waahli (lyrics)

Hey yah !
Spots where we gather man!/
To bring back the basics___ confidence is raised/
When i freestyle with the buttabeats
Its saddens me_ to take a canvas_ to reinvent a landscape /
Oh snap! Alone goes your ticket, you been to many places/
To meet the el presidente/
Explore my continent just like an Indian /a montrealien with millions tasks/
That moves to zillion/
Killing civilians wont bring you a million/
To let my people in tents goes against the fact jack /
Intact___Reach an impasse follow the impact they come with the big gap
We fall in the big cracks/ ziz zag_ blackjack and watch my quarter back sack
U grew too soon, get in tune and let go/
Catch the visual when i pause with my in glow/
U move slow, can't afford a lost__no more nemo/
Waahli mindful powerful mighty sparrow/
Live and seeing this scene, you'll need no alibi/
A bright sky___breaking its fast, sober now/
Family cries/ not proud ____who gets the best of it (x2)
Scratch your lotto ticket/ the mood on your face is two times zero/
Close to go below sleeping indoors zero tears on pillow/
Sak fet li fet kon pret' ki kon beni moun/
Kon moulin tet mwen ap danse map danse rumba
Parol goumain ak butta sandal ak sak zaboca/
Nou pa jem envi lot pase ke ce men mize nou konnen
Misik tout kote ap joue non lang mwen pa konpren
Tout kote mwen gade yo semble ak kouzin et ke frem
Nou gen ji kan nan san'n nou rele'l rum li douce/
Kon soufrens pa dous kot kob lan nou louche
Gon di rit ki ap kuit ak feve li ka reve/
Men si pay' en sou regime, ouap jouen'/
On bagaye pou mange/ men si timoun yo krie
Yo di yo bezoin alle/ se nan tet yo voyage/
An kite jazz lan pale et saaa_____/
Nuite yo pi long pase malecon/ tete klerin
Grate guitar deye son klaxon/
Rezon'm le m'te lot bo/ tan kou moustic/
Ou we Cuba pikem li fem blye kin jen pou'm danse kompa/

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