

IDLE FLUX: A COMPOSER/CHOREOGRAPHER COLLABORATION

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The following thesis documents the collaboration process behind *Idle Flux*, a collaboration between Samuel A. Montgomery, a graduate composer at University of North Texas, and Emily Jensen, a graduate choreographer at Texas Woman’s University. Comprising an 18-minute stereo fixed media composition and choreography for seven dancers, *Idle Flux* seeks to challenge the traditional spatial relationship between audience members and performers through restructuring seating and stage arrangements while featuring immersive sound design in multiple venues. This thesis considers multiple sources of inspiration, including Immersive Van Gogh® Exhibit Dallas, John Jasperse’s *Canyon*, Zoe | Juniper’s *BeginAgain*, Francisco López’s installations, Alexander Ekman’s *A Swan Lake*, Imagine Dragons’ “Enemy,” Son Lux’s “Dream State (Dark Day),” and Ryan Lott’s dance compositions. This thesis also examines the interdependent collaborative relationship between composer and choreographer by considering the issues of autonomy and creative control, examining previous collaborative models proposed or implemented by Van Stiefel, José Limón and Norman Lloyd, John Cage and Merce Cunningham, Doris Humphrey and Norman Lloyd. In addition, this thesis discusses the creative process and foundational concepts behind the fixed media composition, including the use of sound samples, exploration of timbre through synthesizers, development of motives and musical language, and the spatialization of sound in multiple venues. This thesis further considers the advantages and challenges associated with creating an immersive experience at each venue as well as an interdependent collaborative process that facilitates the autonomy and creative independence for both the composer and choreographer.

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TABLE OF CONTENTS

	Page
LIST OF FIGURES	iv
CHAPTER 1. INTRODUCTION: CREATING A PERFORMANCE SPACE.....	1
1.1 Introduction.....	1
1.2 Creating a Performance Space	2
1.2.1 Immersive Van Gogh® Exhibit Dallas.....	2
1.2.2 John Jasperse’s <i>Canyon</i> and Zoe Juniper’s <i>BeginAgain</i>	3
1.2.3 Francisco López’s Installations.....	4
1.2.4 Designing and Integrating Sound.....	5
1.2.5 Texas Woman’s University and the Merrill Ellis Intermedia Theater.....	6
CHAPTER 2. AN INTERDEPENDENT COLLABORATION	9
2.1 Considering Composer and Choreographer Collaboration Structures.....	9
2.2 Considering Additional Collaborative Structures	13
2.3 Adopting Structures for an Interdependent Collaboration.....	14
CHAPTER 3. THE COMPOSITION	16
3.1 Foundational Concepts for <i>Idle Flux</i>	16
3.2 The Compositional Process.....	16
3.2.1 Using Sample Recordings to Create an Intimate Performance Space	16
3.2.2 Exploring Timbre through Synthesizers	17
3.2.3 Exploring Motivic Development and Musical Language.....	19
3.2.4 Approaching Spatialization in Two Separate Venues	24
CHAPTER 4. DISCUSSION AND CONCLUSION	26
4.1 Discussion.....	26
4.1.1 The Advantages and Challenges of Each Performance Space.....	26
4.1.2 The Advantages and Challenges of an Interdependent Collaboration.....	27
4.1.3 The Advantages and Challenges of a Fixed Media Composition.....	28
4.2 Conclusion	29
REFERENCES	31

LIST OF FIGURES

	Page
Figure 1.1: Concept of the performance space for Texas Woman’s University.....	7
Figure 1.2: Concept for the performance space at Merrill Ellis Intermedia Theater.....	8
Figure 3.1: The opening motive features quintal harmony within the fixed media composition for <i>Idle Flux</i>	20
Figure 3.2: Implications of polytonality can be heard through a pseudo circle of fifths progression from 0:02:04 to 0:05:00.....	20
Figure 3.3: Implications of a whole-tone scale are featured at 0:02:20, 0:02:55, 0:03:33, and 0:04:53.	21
Figure 3.4: The circle of fifths is further explored through a five-note motive that is repeated and varied from 0:05:01 to 0:05:58.	22
Figure 3.5: The opening motive is restated with some modifications to intervallic structure from 0:05:59 to 0:09:23.....	22
Figure 3.6: The opening motive is simplified and varied to introduce a D major tonality at 0:09:40.	23
Figure 3.7: The five-note motive develops within a D major tonality from 0:09:50 to 0:13:23..	23
Figure 3.8: The five-note motive is further developed within multiple software instruments from 0:09:50 to 0:13:23.....	24
Figure 3.9: The climax features a variation of the five-note motive, briefly alluding to an E minor tonality from 0:13:55 to 0:14:10.....	24

CHAPTER 1

INTRODUCTION: CREATING A PERFORMANCE SPACE

1.1 Introduction

Idle Flux is an 18-minute composer/choreographer collaboration consisting of a stereo fixed media composition as well as choreography for seven dancers. The title *Idle Flux* refers to the collaboration exploring the relationship between the audience's perception of static and kinetic motion as well as the performers' internal and external experience of change throughout the performance.

Idle Flux seeks to challenge the traditional performance space for both music and dance by physically restructuring preestablished seating and stage arrangements at performance venues. Performance venues for both music and dance often share a binary approach to the spatial relationship between performers and audience members—facilitating a physical divide between the performance stage and audience seating.¹ By design of composition and choreography, *Idle Flux* is structured to blur the physical distinction between stage and audience, creating an intimate performance space often cultivated in environmental theatre.² By creating an intimate space, *Idle Flux* invites audience members and performers to consider the senses of sight, sound, and touch through choreography, manipulation of material to generate live sound, and implementation of an immersive fixed media composition.

The following document will discuss my compositional and collaborative process with Emily Jensen, choreographer of *Idle Flux*. As of this document's publication, *Idle Flux* has

¹ Edward A. Langhans, "Theatre architecture," in *Grove Music Online*, 2002, accessed February 8, 2023, <https://doi.org/10.1093/gmo/9781561592630.article.O003175>.

² *Encyclopedia Britannica*, s.v. "environmental theatre," edited by E. Luebering, accessed February 8, 2023, <https://www.britannica.com/art/environmental-theatre>.

received two performances at two separate venues. In December 2022, *Idle Flux* premiered at the COALESCE: MFA Culminating Projects concert on Texas Woman’s University campus in Denton, Texas. This collaboration was also performed at the Merrill Ellis Intermedia Theater on the University of North Texas campus in Denton, Texas, in February 2023. At each venue, the performances utilize a similar approach to blur the distinction between the stage and seating arrangement.

1.2 Creating a Performance Space

1.2.1 Immersive Van Gogh® Exhibit Dallas

When initially approaching *Idle Flux*, Emily and I have been inspired by several dances and installations in our effort to create an immersive performance experience for both dancers and audience members. To facilitate an immersive experience, Emily explored composing visual focus by providing audience members with multiple perspectives within the seating arrangement.

In January 2022, we attended the Immersive Van Gogh® Exhibit Dallas held at the Lighthouse ArtSpace. This exhibit functions primarily as a site-specific installation, strategically projecting thematic selections of Vincent Van Gogh’s paintings onto the venue’s interior architectural structure. The paintings are primarily projected onto the venue’s walls and floors but are further fragmented by mirrored structures placed in the middle of a small room. In conjunction with the projections, the installation features modern remixes of classical compositions—such as Luca Longobardi’s arrangement of Samuel Barber’s (1910-1981) *Adagio for Strings*³—as well as experimental, ambient music—such as “Sing” by Guy Sigsworth,

³ Luca Longobardi, composer, “Adagio for Strings: Recomposed,” track 6 on *Vincent*, Paralleli Records, Spotify streaming audio.

featuring vocalist Imogen Heap.⁴ The music is projected through a multi-speaker system within the three-room installation, creating an immersive sound environment throughout the venue.⁵ While the Immersive Van Gogh® Exhibit Dallas does not feature live performers, Emily expressed her interest in creating an immersive performance space and seating arrangement similar to this installation. Within the larger main room of the venue, the chairs and large wooden blocks are sparsely distributed throughout the room for attendees to sit and enjoy the exhibit. We chose to create a similar seating arrangement that defies a traditional physical separation between audience members and performers.

1.2.2 John Jasperse's *Canyon* and Zoe | Juniper's *BeginAgain*

One fundamental aspect of the visual component to *Idle Flux* was the possibility of providing the audience with multiple distinct perspectives to view the performance. John Jasperse's *Canyon* served as a model when considering dance works that implemented a multi-perspective audience arrangement. Within one performance at Wexner Center for the Arts in Columbus, Ohio,⁶ audience members are positioned in a pseudo-“horseshoe” arrangement with seating on three sides of the stage.⁷ This performance of *Canyon* utilizes a surround sound system that contributed to an immersive experience based on sound spatialization. Like *Canyon*, *Idle Flux* adopts a similar performance configuration, featuring a central stage surrounded by audience members and a multi-channel sound system.

⁴ Guy Sigsworth, “Sing,” featuring Imogen Heap, track 1 on *STET*, Mercury KX, Spotify streaming audio.

⁵ “The Venue,” Immersive Van Gogh Exhibit Dallas, accessed February 8, 2023, <https://www.dallasvangogh.com/the-venue/>.

⁶ John Jasperse, “Canyon (2012),” Wexner Center for the Arts, April 24-26, 2012, 0:59:36, video of performance, <https://vimeo.com/68627131>.

⁷ Langhans.

In conjunction with providing audience members with multiple perspectives, *Idle Flux* features physical materials to create visual focus. Within *Canyon*, the dancers interact with props—primarily various stands with flags—creating visual arrangements on the stage that further provides audiences with opportunities for interpretation of visual structure based on a given perspective.⁸ Another collaboration exploring visual focus is *BeginAgain* by Zoe | Juniper—a company founded by dancer and visual artist Zoe Scofield and visual artist Juniper Shuey.⁹ Within *BeginAgain*, Zoe | Juniper utilizes the placement of structural materials to create visual focus while simultaneously obscuring the audience’s perspective on the dancers’ performance. Just as *BeginAgain* utilizes physical materials, *Idle Flux* features dancers interacting with a long green silk material to compose visual focus as well as obscuration.

1.2.3 Francisco López’s Installations

Furthermore, we considered the work of Francisco López when designing an immersive, spatialized sound world. An experimental sound artist, López primarily features environmental recordings in his compositions, facilitating fixed media installations of his sound art. Within these installations, López would place multiple speakers in the center of a venue, arranging them in a 360-degree array to project a multichannel composition outward. López then would blindfold his audience, arranging their seats with their backs towards the speakers in a circular seating chart that enclosed the speakers.¹⁰ While López’s model for spatial arrangement was not adopted for *Idle Flux*, these sound art installations and concerts provided a reference when

⁸ Jasperse.

⁹ “BeginAgain,” Zoe | Juniper, accessed February 8, 2023, <https://zoejuniper.org/beginagain>.

¹⁰ Francisco López, “[live techs],” the official francisco lópez website, accessed February 8, 2023, <http://www.franciscolopez.net>.

creating an immersive environment that allowed for an audience’s nuanced perception of sound based on their physical placement.

1.2.4 Designing and Integrating Sound

From the early conception of *Idle Flux*, the sound design was fundamentally intertwined with the visual components of the collaboration. Early concepts included incorporating live sound into the performance. Emily and I considered the use of live sound with various textures, approaching the dancers’ interaction with stage elements found in choreographer Alexander Ekman’s modern interpretation of Tchaikovsky’s *A Swan Lake*, performed by the Norwegian National Ballet. The second act of this ballet involves dancers interacting with a flooded stage to create both a visual and auditory spectacle.¹¹ Like *A Swan Lake*, *Idle Flux* features a live sound component through gestures—such as instances of dancers clapping—as well as the manipulation of physical materials via multiple types of fabrics within the performance space.

During initial collaborative discussions, Emily and I would exchange recordings of compositions to use as aesthetic references. Emily expressed the desire to integrate elements reminiscent of Imagine Dragon’s hit “Enemy” from *Arcane: League of Legends*,¹² which features abrasive “interruptions” within the background texture. This song’s aesthetic is similar “Dream State (Dark Day),” a song by Oscar-nominated experimental band Son Lux that I recommended to Emily to use as an aesthetics reference.¹³ Similar interruptions and distortions

¹¹ Alexander Ekman, “A Swan Lake by Alexander Ekman, music by Mikael Karlsson,” sound design by Mikael Karlsson, Oslo Opera House, Norway, 2014, video of performance, <https://www.medic.tv/en/ballets/swan-lake-tchaikovski-alexander-ekman-norwegian-national-ballet>.

¹² Imagine Dragons, “Enemy (with JID) – from the series Arcane League of Legends,” featuring JID, track 1 on *Mercury – Acts 1 & 2*, KIDinaKORNER/Interscope Records, Spotify Streaming Audio.

¹³ Son Lux, “Dream State (Dark Days),” featuring WILLS, track 3 on *Labor*, City Slang, Streaming Audio.

can be heard within *Idle Flux* that support the foreground material within the climax of the composition.

Furthermore, I drew inspiration from compositions written by Ryan Lott, a contemporary experimental dance composer as well as founder, composer, and lead singer of Son Lux. Lott approaches his compositions by building his library exclusively from his own recorded samples, allowing for electronic experimentation while maintaining an organic aesthetic.¹⁴ Similar to Lott's approach, *Idle Flux* does incorporate sampled sounds within the fixed media composition; however, *Idle Flux* primarily consists of synthesized sound that emulates organic materials. Despite these differing approaches, we share similar aesthetic goals, striving to emulate and tamper with organic timbres.

Within the initial creative process for *Idle Flux*, Lott's dance compositions often provided insight in how to approach and structure dance music. The composition "tether shift" demonstrates flexibility in tempo as well as minimally developing an ostinato;¹⁵ in addition, "possibility bells" implements a similar compositional approach to "tether shift," featuring the juxtaposition of motivic statements with subsequent arpeggiating figures.¹⁶ Both tracks are minimalistic in design, building on a central concept over four to six minutes of music. Each of these compositional strategies are incorporated within the fixed media composition for *Idle Flux*.

1.2.5 Texas Woman's University and the Merrill Ellis Intermedia Theater

When considering these various influences for both logistic and aesthetic concerns, we

¹⁴ Son Lux, "Technology Ep. 1 // Ryan Lott Interviews Producer Chris Tabron (Beyoncé, Nicki Manaj, Common)," October 2020, in *Plans We Make with Son Lux*, produced by Chris Jacobs, podcast, Spotify Streaming Audio.

¹⁵ Ryan Lott, "tether shift," track 3 on *learning structures, vol. 2: end firma*, Ryan Lott Music and This Is Meru, Spotify streaming audio.

¹⁶ Ryan Lott, "possibility bells," track 5 on *learning structures, vol. 2: end firma*, Ryan Lott Music and This Is Meru, Spotify streaming audio.

implemented a relatively consistent design for both performance spaces, adopting elements from each of the references previously discussed. Figure 1.1 below demonstrates the final concept for the audience and stage arrangement at the Texas Woman’s University. The performance venue is a black box theater, facilitating an audience arrangement lengthwise along each side of the dance floor (stage). The audience seating was arranged on the stage, facing inwards towards the dancers. Three aisles on each side were created between the chairs to allow for dancers to move between these aisles at the beginning and end of the dance. Due to technical limitations at this venue, only two speakers were utilized on opposite corners of the venue, facilitating a more binary approach to the spatialization of sound.

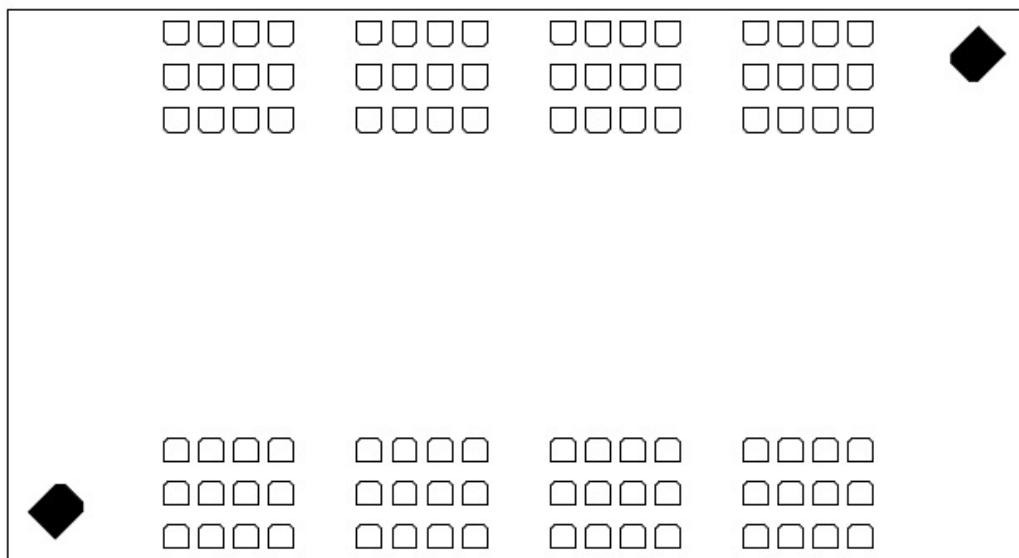


Figure 1.1: Concept of the performance space for Texas Woman’s University.

The Merrill Ellis Intermedia Theater adopted a similar audience, stage, and speaker setup, which Figure 1.2 demonstrates the final concept for this performance of *Idle Flux* below. As opposed to the black box theater at Texas Woman’s University, the dance floor had to be installed in the middle of this venue. The audience arrangement maintained a configuration like the performance at the black box theater. The most notable difference in concept is the

spatialization of sound. The Merrill Ellis Intermedia Theater’s speaker system is arranged as an ambisonic dome, surrounding both the stage and the audience arrangement. The bottom layer of speakers is arranged as a ring. This speaker setup allowed for a more immersive sound experience for both audience members and performers.

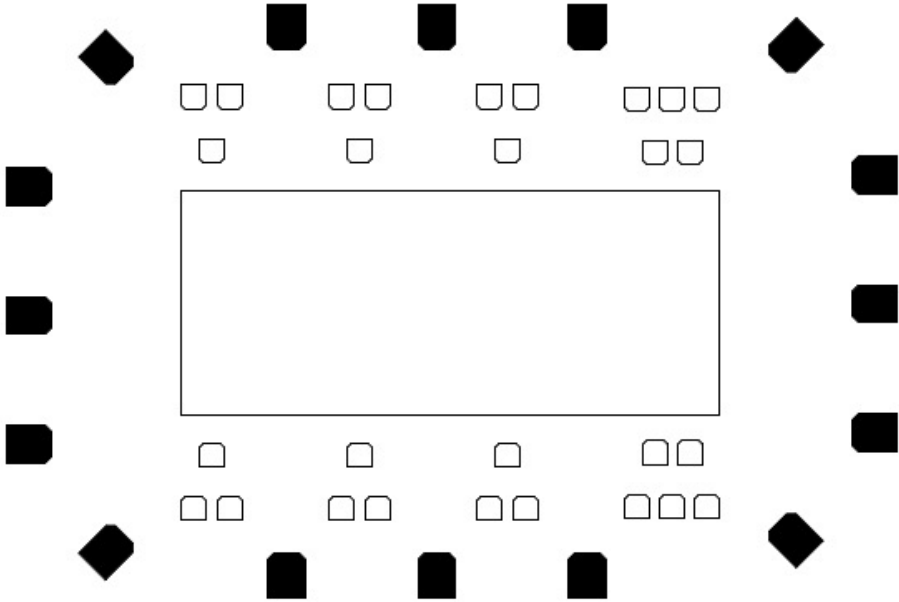


Figure 1.2: Concept for the performance space at Merrill Ellis Intermedia Theater.

CHAPTER 2

AN INTERDEPENDENT COLLABORATION

2.1 Considering Composer and Choreographer Collaboration Structures

In creating an immersive performance environment for *Idle Flux*, the project required a collaborative approach to yield a cohesive final product. A large portion of preexisting academic discourse regarding composer/choreographer collaborations focuses on how audiences perceive the final collaborative product rather than addressing potential hierarchical concerns between composers and choreographers—thus music and dance—within projects.¹⁷ Within this collaboration, dance and music share equal importance in their contributions to the project. To best understand how this conclusion was reached in the context of *Idle Flux*, several preexisting composer and choreography collaboration served as models.

There are many possible models for composer/choreographer collaboration. Composer-performer Van Stiefel provides several categories of collaborative models, basing these categories on anecdotal evidence from conducted interviews and discussions from composers and choreographers—as well as related professionals such as dancers, producers, and critics—at the 2000 Bates Dance Festival (as well as previous years).¹⁸ Stiefel provides a composer's insight into the composer/choreographer collaboration experience; furthermore, he provides common models for collaborations, categorizing working relationships between composers and choreographers—as well as potential third parties (directors, producers, and the rare instance of a music ensemble)—based on two factors: who initiates the project, and how that project is

¹⁷ Jess Rymer, “An Argument for Investigation into Collaborative, Choreomusical Relationships within Contemporary Performance: A Practical and Theoretical Enquiry into the Distinct Contributions of a Collaborative, Co-creative Approach,” in *AVANT* 3 (November 21, 2017): 182-183.

¹⁸ Van Stiefel, “A Study of the Choreographer/Composer Collaboration,” in *Working Paper Series* 22 (January 2022): 2-3.

constructed. These two factors often determine how much autonomy each artist retains during the collaborative process in making the final artistic decisions—further determining a hierarchal relationship between music and dance.¹⁹ At the basis of each of these categories, whoever initiates a given collaborative project—whether a composer, choreographer, producer, or music ensemble—will most likely retain the most autonomy and creative control over the final product.

As a composer, I have experienced retaining as well as relinquishing creative control to a collaborative party outside of choreography-based projects. Within my background in studying composition for live classical chamber music, “composer-initiated” projects were commonplace.²⁰ Within these instances, the composer often would retain creative control over the final product rather than the performers of a new composition. A hierarchal relationship between the musicians and the composition where the musicians would elevate the composition—rather than composition elevating the musicians’ performative abilities. Conversely, several “producer-initiated” collaborations,²¹ which included commissions to compose theater cues for several small productions, created a dynamic where my own artistic vision was subservient to what the producer or director envisioned for each production. A hierarchal relationship between collaborators still exists in these scenarios in which the final iteration of my musical contributions was dependent on what the stage demanded—and ultimately, what the director desired. In these instances of “composer-initiated” and “producer-initiated” projects, the initiator did retain creative control over the final product.

In further discussing the nuances of composer/choreographer collaborations, Stiefel

¹⁹ Stiefel, 2-3.

²⁰ Stiefel, 13-14.

²¹ Stiefel, 10-13.

categorizes such collaborations through project “structures.”²² Stiefel provides seven common project “structures” that influence the working relationship between composers and choreographers during a collaboration:

- 1) Music composed prior to choreography and performed live with dance
- 2) Music composed prior to choreography and recorded
- 3) Music composed after a specific choreography and performed live
- 4) Music composed after choreography and recorded
- 5) Music improvised to choreography and performed live
- 6) Dance improvised to live music
- 7) Dance improvised to recorded music²³

As *Idle Flux* does not feature improvised music or dance within the collaboration, the last three categories are irrelevant to this project; however, the first four of these common structures provide insight into the potential imbalance of creative autonomy between choreographers and composers.

The first category is often demonstrated in ballet, in which new choreographies are created to elevate—and restricted by—grand music, such as Pyotr Ilyich Tchaikovsky’s (1840–1893) *Lebedinoe ozero* (“Swan Lake”) (1875–6).²⁴ Modern dance students as well as professional choreographers often adhere to the second category’s structure, sometimes licensing music by modern dance composers such as Ryan Lott²⁵ or Michael Wall.²⁶ While there may be

²² Stiefel, 8.

²³ Stiefel, 7.

²⁴ Roland John Wiley, “Tchaikovsky, Pyotr Il’yich,” in *Grove Music Online*, 2001, accessed February 8, 2023, <https://doi.org/10.1093/gmo/9781561592630.article.51766>.

²⁵ “About,” Ryan Lott, accessed February 8, 2023, <https://ryan-lott.com/about>.

²⁶ “About,” Sound for Movement, accessed February 8, 2023, <https://soundformovement.com/about>.

instances of this category that allows the music to elevate the dance, the dance may still function to elevate the preexisting music, especially in the cases of dancers using lyrical or popular music.²⁷ Conversely, the third category facilitates a structure where the music functions to elevate the dance, such as choreographer José Limón's and composer Norman Lloyd's (1909–1980) collaboration on *La Malinche*, where an underlying narrative was established prior to the composition.²⁸ The fourth category is a variation of the third category, often providing the ability for dancers to travel with recorded music without the need to hire musicians and pay for related expenses.²⁹ Recorded music further provides dancers with consistent accompaniment from performance to performance.

The first four of Stiefel's categories are fundamental in understanding the collaborative yet often hierarchal relationship between musicians and choreographers—and by relation, music and dance. While the preexistence of one contribution (either music or dance) within a composer/choreographer collaboration does not determine whether one's contribution will be elevated, the preexistence of one contribution does influence how often said contribution receives higher importance within a given collaboration. Admittedly, Stiefel's categories are limited in scope as collaborative structures are not necessarily limited to these more binary formats regarding one contribution's preexistence. Stiefel does acknowledge that relational structures outside of these seven categories do exist.

²⁷ Jonathan Burrows, *A Choreographer's Handbook* (London: Taylor & Francis Group, 2010), chap. 45, 183, ProQuest Ebook Central.

²⁸ Norman Lloyd, "Composing for the Dance: An Overview of Procedures; Personal Experiences; and Advice to Collaborators," in *Making Music for Modern Dance: Collaboration in the Formative Years of a New American Art*, edited by Katherine Teck (New York, Oxford University Press, 2011): 93-102, ProQuest Ebook Central.

²⁹ Stiefel, 16.

2.2 Considering Additional Collaborative Structures

Another such collaborative structure occurred between composer John Cage (1912–1992) and dancer and choreographer Merce Cunningham. Within their later collaborations, Cage and Cunningham worked independent of each other’s influence, only agreeing upon the duration of each collaborative piece or project in advance. This agreement provided both Cage and Cunningham with creative independence and autonomy over their own contributions to a collaboration—while also providing an element of chance in how the music and dance either coincided with or contradicted each other.³⁰ In opposition to Cage and Cunningham’s approach, choreographer Jonathan Burrows encourages both composer and choreographers to hold initial discussions to establish how both parties view the roles of sound and music within a given collaboration.³¹ While Burrows’ perspective on collaboration is more “choreographer-initiated,” this initial discussion lays the foundation for potential collaborative structures that do not rely on the preexistence of music or choreography. Cage and Cunningham provided a collaborative structure that facilitates creative autonomy yet could also be adapted by integrating elements of Burrow’s collaborative philosophy.

In a sense, Doris Humphrey and composer Norman Lloyd’s collaboration on *Lament for the Death of Ignacio Sanchez Mejías* featured such a philosophy that integrated Cage and Cunningham with Burrow’s approach to the creative process. Choreographer Doris Humphrey and composer Norman Lloyd also implemented a combined approach of Stiefel’s first and third structures.³² Within their creative process, Humphrey approached Lloyd to establish the aesthetic

³⁰ Stiefel, 4.

³¹ Burrows, 181-182.

³² Stiefel, 8.

and logistic concerns of the collaboration prior to beginning their own contributions. They divided the project's formal structure into three parts and exchanged sections to work independently while maintaining communication.³³ In this scenario, sections of the choreography existed before the music while sections of the music existed before the choreography, further facilitating future revisions to ensure cohesiveness within the collaboration. Music revisions were finalized, however, based on what the dance demanded. While the *Lament for the Death of Ignacio Sanchez Mejías* was a “choreographer-initiated” project, Humphrey and Lloyd provide a framework for collaboration that could facilitate more interdependent collaborations between composers and choreographers.

2.3 Adopting Structures for an Interdependent Collaboration

Except for Cunningham and Cage's collaborative structure, there remains a hierarchal relationship between dance and music among the previously discussed models. Stiefel considers how the preexistence of dance or musical material can elevate its own importance in a project. Burrows considers how music—in even collaborative situations—can better serve choreography. Humphrey and Lloyd's collaboration exemplifies Stiefel's philosophy regarding final creative control based on who initiates the project. Cunningham and Cage conversely recognize how artistic autonomy provides composers and choreographers with fuller expression of their mediums.

In approaching *Idle Flux*, Emily and I implemented an amalgamated approach to collaboration—incorporating elements from all these collaborative structures into our creative process. The collaborative relationship behind *Idle Flux* cannot be strictly categorized by models

³³ Lloyd, 97.

proposed by Stiefel as it is simultaneously both “composer-initiated” and “choreographer-initiated.”³⁴ The mutual initiation signifies a sense of partnership rather than the hierarchy that a commission work implies. Our early discussions explicitly included an agreement that both creative parties would retain creative autonomy over their contributions while also allowing for revisions that would promote the cohesiveness of the project. From a composer’s perspective, the elevation of music would disrupt the non-hierarchical relationship between music and dance by distracting or negating the choreography.

Like Cunningham and Cage’s late collaborations, early drafts for both the music and choreography were created in isolation from each other’s direct influence; however, as Burrows recommends for choreographers, Emily and I discussed the creative intention for *Idle Flux* prior to drafting any music or choreography. We continued to hold such discussions inside and outside of rehearsals. As the creative process for *Idle Flux* moved forward, the collaborative structure adopted elements from Stiefel’s proposed structures, specifically categories two and four.³⁵ Like Humphrey and Lloyd, we exchanged concepts, drafts, and sections of choreography and music, revising and adjusting throughout the rehearsal and composition process to benefit both the music and the dance.

³⁴ Stiefel, 8.

³⁵ Stiefel, 8.

CHAPTER 3

THE COMPOSITION

3.1 Foundational Concepts for *Idle Flux*

Prior to collaborating on *Idle Flux*, Emily and I collaborated on the project *Seams*, which focused on a narrative of two dancers exploring the concept of connection. As opposed to *Seams*, Emily and I did not approach *Idle Flux* with an intended narrative. Rather, the shared intention was to invite both audience and dancers to engage and stimulate the senses of sight, sound, and touch within an immersive performance environment. The dance contributed to activating of all three of these senses, providing a visual experience while dancers would manipulate, rip, and immerse themselves in fabrics to generate sound while alluding to touch. The fixed media composition was further pivotal in providing stimulation of sound as well as touch, emulating familiar sounds associated with physical textures.

3.2 The Compositional Process

3.2.1 Using Sample Recordings to Create an Intimate Performance Space

Conveying the sense of touch through sound design provided an interesting challenge. Early considerations for *Idle Flux* included facilitating an experience similar to the recent ASMR (autonomous sensory meridian response) phenomenon found on digital platforms such as YouTube, Instagram, and Tik Tok. Within ASMR content, sounds are often recorded near microphones and commonly consist of tapping, whispers, and scratching material that creates a sense of proximity for the audience members.³⁶ Regarding *Idle Flux*, the initial concept involved potentially prompting an ASMR response among audience members throughout the entire piece;

³⁶ Rob Gallagher, "Eliciting Euphoria Online: The Aesthetics of 'ASMR' Video Culture," in *Film Criticism* 40, no. 2 (June 2016).

however, I adapted the approach to feature sampled sounds within the composition's introduction and coda, beginning and ending the music with heartbeats. To create an immediate sense of both proximity and intimacy, I incorporated multiple sample recordings within the introduction, including heartbeats, snapping, and skin scratching. Over time, some of these sample recordings become distorted with various effects, including reducing the sample rate as well as applying low-pass filters. The source materials from these sample recordings are further associated with the human body, alluding to invitation for the dancers and audience members to project their own sensory experience into the fixed media composition and *Idle Flux* as a whole.

3.2.2 Exploring Timbre through Synthesizers

Exploring timbre is a fundamental aspect of *Idle Flux*'s soundscape. Incorporating sample recordings within the musical introduction invited dance members and audience members to consider familiar organic textures via physical sensations, framing the subsequent timbral material in a manner that alluded to similar organic sources; however, most of the subsequent material is generated through digital synthesizers. Thus, the next challenge was to generate sounds emulating organic sound sources that could be considered familiar but not immediately identifiable.

One primary method of emulating organic sound sources included Sculpture: a physical component modelling synthesizer that models acoustic instruments or other sound sources through mathematical algorithms. Sculpture provides the capability to create hybrid instruments that may not exist in the physical world. Within Sculpture, users can design up to three objects per instrument that allow a combination of attack methods—such as striking, bowing, plucking, blowing, and bouncing—providing flexibility to adjust the variation and strength of each object's as well as other parameters. Users can further decide where each attack is performed on this

modelled instrument, affecting the timbral quality of the generated sound. Users can choose an instrument's tension (contributing to detuning and pitch bending) and media loss (contributing to the overall resonance of an instrument). Users can also choose the material of the modeled instrument, offering a customizable XY pad that provides a spectrum of nylon, steel, glass, and wooden materials.³⁷ This XY pad allows for the transition between materials while MIDI data is performed, often resulting in sounds akin to warbling, screeching, or scraping.

To model organic sound sources, I developed approximately twenty synthesized instruments from Sculpture's default patch for *Idle Flux*. Within these synthesized instruments, I explored a variety of timbres that functioned as melodic and arpeggiating instruments as well as pads and ambient sound. Introduced at 0:00:53,³⁸ one melodic instrument serves as a primary example of Sculpture's capabilities. This instrument utilizes a combination of two attack objects—blow and gravity strike (like a piano hammer or a mallet)—which allows for a defined attack as well as the ability to sustain MIDI data. This melodic instrument fluctuates between wooden and glass material, creating an effect that evokes a sense of scraping or screeching while often generating high overtone frequencies. This hybrid instrument exemplifies an obscuration of sound source as the input attack parameters exist in either an aerophone or idiophone. Sculpture provides excellent timbral variety within *Idle Flux*'s soundscape.

Alchemy—which specializes in sample manipulation as well as additive, granular, and spectral synthesis—generates further ambient and non-pitched material in *Idle Flux*. Within Alchemy, instruments created via additive and granular synthesis also provide users with the

³⁷ Logic Pro Instruments,” Apple Support, accessed February 23, 2023, https://help.apple.com/pdf/logicpro-instruments/en_US/logic-pro-instruments-user-guide.pdf.

³⁸ Because *Idle Flux* was written as a fixed media composition in collaboration with dance, the following document will provide timestamps rather than measure numbers when referring to sections of the composition.

ability to add and remove sound sources and filters to manipulate the generated sound.³⁹ I readjusted software instruments within Alchemy's library, removing the source soundwave (often a sine or square wave) from a software instrument and preserving granularly synthesized sounds, including either environmental or percussive sources. Alchemy is implemented within sections of the choreography that featured dancers manipulating fabric. The combined use of synthesizers via Sculpture and Alchemy allows a diverse, timbral exploration within the soundscape of *Idle Flux*.

3.2.3 Exploring Motivic Development and Musical Language

Musically, *Idle Flux* prioritizes timbre as a primary compositional element; therefore, the melodic and harmonic content consists of more minimalist techniques as the composition slowly develops. From 0:00:18 to 0:00:52, a synthetic bassline alludes to a C# (sharp) minor tonality by repeating a C#1 at regular intervals. At 0:00:53, the C# minor tonality is further reinforced within the opening motive, which can be examined on the next page in Figure 3.1. The ties below indicate a sustain within the virtual instrument. The design of this motive is rather linearly sparse, allowing for the audience to focus on the instrument's timbre rather than the melodic content. The motive consists of planing parallel fifths, which allude to a sense of openness while also introducing an allusion to quintal harmony that is present throughout the entire fixed media composition. This opening motive's contour consistently moves downward from the sustained whole notes. At 0:01:37, a simplified version of this motive is repeated immediately interspersed with arpeggiating figurations, further establishing the harmonic language introduced thus far.

³⁹ "Logic Pro Instruments."

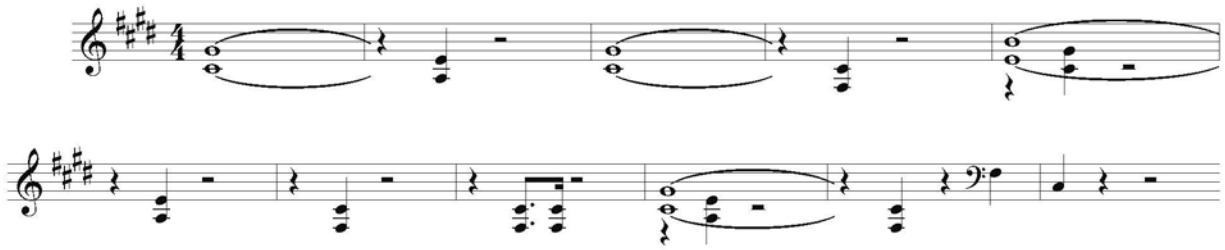


Figure 3.1: The opening motive features quintal harmony within the fixed media composition for *Idle Flux*.

Idle Flux continues to explore the possibilities of quintal harmony while also integrating elements of both polytonality and neo-tonality. Figure 3.2 features a reduction of the musical content from 0:02:04 to 0:05:00, where the bottom staff demonstrates a repeating configuration comprised of a C# minor seventh chord before evolving into a similar configuration of a first inversion G# minor seventh chord—subsequently followed by a similar configuration of D# minor seventh chord. This configuration’s movement through the circle of fifths is further supported by the similar progression within in top staff, which progresses from a G# tonality to D# tonality to A# tonality before landing on a E# major tonality (F major).



Figure 3.2: Implications of polytonality can be heard through a pseudo circle of fifths progression from 0:02:04 to 0:05:00.

While the circle of fifths is not synonymous with quintal harmony, the progression through the circle of fifths does allow for a method to explore quintal harmony. The call and response nature between the bottom and top staff further allude to a sense of polytonality as the top staff progresses through the circle of fifths before the bottom staff does. Melodic and formal variations of Figure 4 are repeated throughout 0:02:04 to 0:05:00, and every two measures are often repeated before progressing to the next two measures. As this section progresses, the musical content is often obscured by the nature of an instrument's timbral design.

From 0:02:04 to 0:05:00, the music features additional implications of neo-tonality. Figure 3.3 below demonstrates two whole-tone figurations that indicate the restatement of a progression through the circle of fifths shown in Figure 4. Despite the equal temperament found in whole-tone scales, the following figuration maintains a C# tonality by the repetition of C# in multiple octaves. Variations of these figurations can be heard at 0:02:20, 0:02:55, 0:03:33, and 0:04:53. In a sense, the transition into the whole-tone scale is slightly foreshadowed by the juxtaposition of C# with both an A# and E# major tonality. Whether alluding to minor tonality or whole-tone scale, C# remains as the tonal center of these sections.

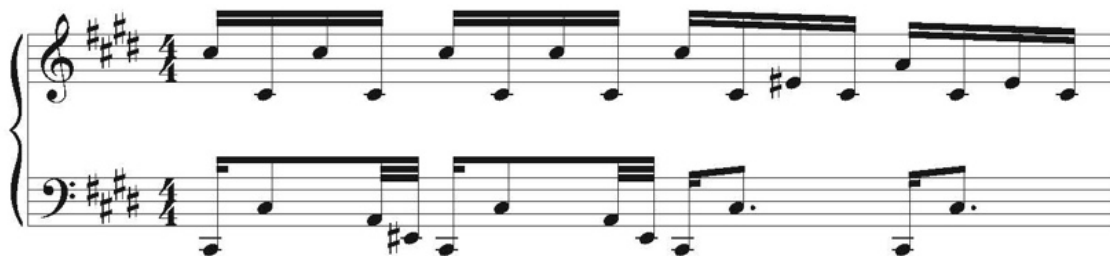


Figure 3.3: Implications of a whole-tone scale are featured at 0:02:20, 0:02:55, 0:03:33, and 0:04:53.

Figure 3.4 demonstrates the continuation of this circle of fifths progression, repeating a five-note motive that is passed between two instruments in counterpoint from 0:05:01 to 0:05:58, dissipating and lowering in register as the motive progresses. These motivic figurations continue

before restating the opening motive, which has developed from the motive presented in Figure 3.1.



Figure 3.4: The circle of fifths is further explored through a five-note motive that is repeated and varied from 0:05:01 to 0:05:58.

As demonstrated in Figure 3.5, this development breaks the established rule of planing parallel fifths by introducing minor sixth intervals (as well as augmented fifth intervals that could also be rewritten as minor sixth intervals) at 0:05:59. The return to this motive also reinforces the C# minor tonality. This development of the opening motive is featured repeatedly from 0:05:59 to 0:09:23, interspersed with arpeggiating material that coincides with both gradual and frantic movement within the choreography.



Figure 3.5: The opening motive is restated with some modifications to intervallic structure from 0:05:59 to 0:09:23.

The last iteration of this development—which can be viewed in Figure 3.6—overlaps with a simplified development of the motive, introducing a D major tonality that presides over the latter half of the composition beginning at 0:09:40.



Figure 3.6: The opening motive is simplified and varied to introduce a D major tonality at 0:09:40.

From 0:09:50 to 0:13:23, both the melodic and harmonic content can be distilled to a variation of the five-note motive introduced in Figure 3.2. This distillation can be viewed below in Figure 3.7, where the development of the five-note motive serves as the antithesis to the opening motive. The five-note motive adopts a major tonality rather than a minor tonality; furthermore, the contour of the motive progresses upward rather than downward. This five-note motive does feature planar movement in stacked parallel fifths as the opening motive does.

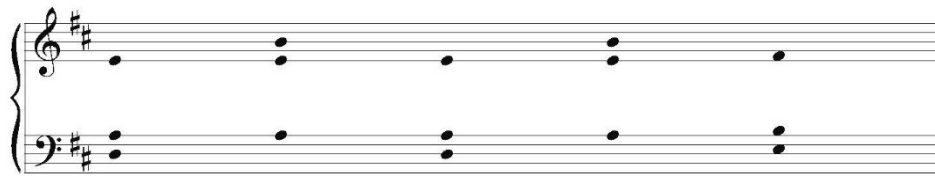


Figure 3.7: The five-note motive develops within a D major tonality from 0:09:50 to 0:13:23.

From 0:09:50 to 0:13:23, the five-note motive further develops into a new motive, where the five-note motive is repeated twice before moving stepwise into an F# sharp major ninth chord and descending back into a E major ninth chord. The duration of each chord fluctuates—though the length of each chord gradually becomes smaller by diminution as the music progresses. The development of the motive can be viewed in Figure 3.8.

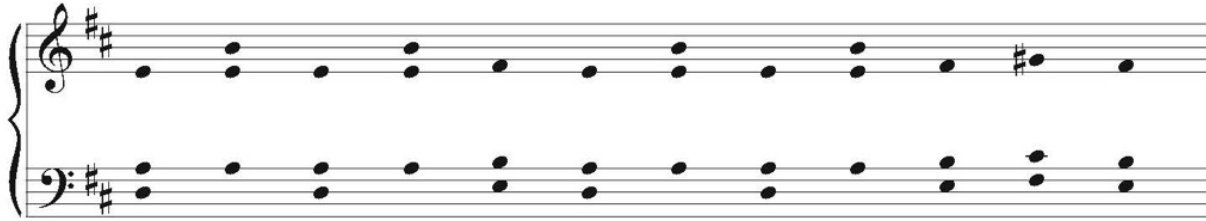


Figure 3.8: The five-note motive is further developed within multiple software instruments from 0:09:50 to 0:13:23.

From 0:13:55 to 0:14:10, a variation of this new development is featured within the climax of the piece. While this variation does experiment with both a D major and E minor tonality within multiple instruments, the planing figurations are still present within the motivic structure. This variation is demonstrated in Figure 3.9 below. As previously described, the motivic content within *Idle Flux* is rather minimal but is further complemented by the timbral exploration found within the synthesized instruments.

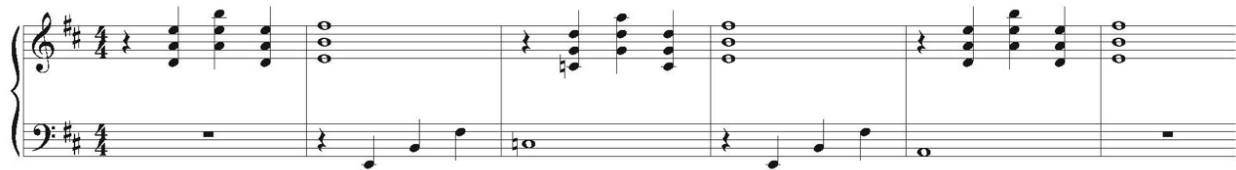


Figure 3.9: The climax features a variation of the five-note motive, briefly alluding to an E minor tonality from 0:13:55 to 0:14:10.

3.2.4 Approaching Spatialization in Two Separate Venues

In conjunction with the timbral and musical content of the fixed media composition, *Idle Flux* is primarily an immersive experience that requires an immersive spatialization of sound. As indicated previously, *Idle Flux* was performed in two different venues in Denton, Texas. Each venue featured vastly different sound systems. For the black box venue at Texas Woman’s University, the sound system consists of only two speakers, whereas the Merrill Ellis Intermedia Theater’s sound system consists of a 37.2 ambisonic dome. The difference in sound systems prompted the creation of different stereo mixes for each performance.

At the black box theater, I spatialized the composition through a more binary approach. Motives would be projected through either speaker, sometimes simultaneously or sometimes isolated to one speaker. With the opening motive in Figure 3, I split the MIDI data into “left” and “right” instruments, creating a spatialized call and response approach. Contrapuntal figurations, such as those found in Figure 6, also implemented a similar call and response approach. Arpeggiating figures, especially when acting as background elements, would often pan between both speakers to emulate a sense of movement within the performance space.

The 37.2 ambisonic sound system installed at the Merrill Ellis Intermedia Theater prompted a different approach to spatializing the sound. While I still mixed this version of *Idle Flux* in stereo, the music is diffused in a 360-degree space. Instead of maintaining a strictly binary approach (left versus right), I considered how the 128 variables of panning that exist within MIDI data would correspond to a ring of speakers. In this circular configuration, hard left (0) and hard right (127) would not necessarily be projected into left and right speakers—rather, within a circular design, hard left and hard right would be positioned right next to each other. I re-automated the MIDI data for panning to best reflect to achieve a similar call and response effect within a two-speaker system. To achieve this effect, the MIDI data points for call and response figurations had to be automated at 64 data points (128 divided by two) away from each other to be projected on opposite sides of the venue; in addition, the circular configuration of the speakers allowed for arpeggiating instruments to project and pan through the speakers behind the audience members. The configuration of this venue’s sound system did allow for a more immersive experience.

CHAPTER 4

DISCUSSION AND CONCLUSION

4.1 Discussion

4.1.1 The Advantages and Challenges of Each Performance Space

Both Texas Woman's University and the Merrill Ellis Intermedia Theater provided flexibility in arranging the performance space that would facilitate an immersive performance experience for *Idle Flux*—both in terms of physical space and audio projection. Based on my preliminary conversations with Emily, the ideal configuration for the performance space was circular in design, allowing for a 360-degree audience seating arrangement more akin to Francisco López's sound art installations; however, both venue-related and financial restrictions prompted us to structure a more rectangular performance space instead. Specifically, with the Merrill Ellis Intermedia Theater, the venue is carpeted, thus dance flooring had to be installed the night before the performance. Due to the expense of dance flooring, we had to use what flooring configurations were available at the venue, which consisted of rectangular rolls. Thus, we did not have the ability to cut and create a circular performance space for this project. Despite these challenges and shifted approach to the stage and seating arrangement, the Merrill Ellis Intermedia Theater still facilitated an immersive concert experience.

This physical seating arrangement further influenced how the fixed media composition for *Idle Flux* was mixed for each venue. For both performances, the seating arrangement was more akin to a “conference style” arrangement rather than a venue arrangement. While the Merrill Ellis Intermedia Theater allows for ambisonic spatialization of sound, the rectangular seating arrangement creates an issue of balancing foreground and background elements within the music itself. In a 360-degree environment, there is more fluidity in how the foreground

elements occupied the space—there would not be a hierarchy of spatialization within a circular arrangement; however, since the final seating arrangement involved audience members facing inward along the length of the rectangular performance space, the foreground elements were spatialized primarily on each side of the audience to allow equal perception of foreground material. Conversely, background and ambient elements within the composition were spatialized to pan behind audience members on either side.

Emily and I further acknowledged several limitations regarding the proximity between audience members and dancers throughout the performances. As our initial conversations regarding *Idle Flux* began in January 2022, we had to consider social distancing protocols to ensure the safety of both dancers and audience members from potential COVID-19 exposure. These protocols limited how we could physically obscure the boundaries between the audience’s seating arrangement and the stage.

4.1.2 The Advantages and Challenges of an Interdependent Collaboration

As discussed in Chapter 2, the structure of an interdependent collaboration facilitates creative autonomy for both the composer and the choreographer while creating a cohesive final product. In the case of *Idle Flux*, this interdependency facilitated mutual inspiration between the composer and choreographer, allowing each other’s work to influence and shape the final product without necessarily compromising any artistic integrity. Because we were generating material during the same time, we maintained communication regarding revisions as well as what would remain intact choreographically and musically.

While I do prefer the approach of an interdependent collaboration, the nature of this type of collaboration creates a necessity for flexibility with all parties involved—in this case, the composer, the choreographer, and the dancers. Compositionally, flexibility is often required to

restructure the musical form to complement the dance framework. Revisions would include the rearrangement of formal structure on both a micro- and macrolevel to match the pacing of the choreography. Microscopic revisions included readjusting the temporal aspect of the composition, sometimes implementing an *accelerando* or *ritardando*—or even modifying a time signature for one or more measures. Both micro- and macrolevel revisions involved inserting or removing measures or entire sections. Revisions also included the removal of material to thin the texture so as to not overshadow the dance—as well as incorporating background elements as transitional material between sections while providing a sense of momentum to propel both the music and the dance forward.

In addition, later musical revisions—such as adding new ambient or arpeggiating layers within the composition—caused the obscurement of dance cues. Burrows acknowledges that revised material may cause complications regarding communication between the music and the dancers, stating the following:

The first recording the choreographer begins to work with will form the foundations of the piece, and the emotional landscape of this recording will underpin the balance between sound and movement, and the meanings created. This first recording cannot easily be replaced... by a better recording, without disturbing everything.⁴⁰

While such revisions seemed minimal from my perspective as a composer, these revisions did affect the dancers' perceptions of preestablished cues within the final section of the piece.

4.1.3 The Advantages and Challenges of a Fixed Media Composition

There were several advantages in utilizing a fixed media composition for the performance of this collaboration. The obvious advantages involve creating a timbral palette that reflect aesthetic and conceptual decisions. Synthesized instruments allow for the exploration and

⁴⁰ Burrows, 181.

manipulation of sound synthesis as well as sampled sounds. As previously discussed, a fixed media composition allows for flexibility of sound spatialization to create an immersive performance space for both dancers and audience members. Writing a fixed media composition also eliminated the additional logistics required to secure performing musicians as well as generating and distributing revised scores and parts. This decision also facilitates ease of revision throughout the creative process.

However, the fixed nature of *Idle Flux*'s fixed media composition did not necessarily allow for flexibility of the dancers' performance. While some choreography adheres to a rhythmic or formal structure, modern dance often allows for dancers to set their own temporal pace, which sometimes allows the dancers to perform a cue early or late in respect to the musical composition. As the composition does not involve performing musicians, remote triggers, or reactive processes, the composition does not have the inherent capability to either repeat material or advance to a later cue to remain in-sync with the choreography during a performance. Some musical sections are also constructed to allow for more flexibility within a fixed time. For example, the choreography progresses from a solo to a duet to quartet from 0:08:45 to 0:13:10. Within this section, the music is ambient to facilitate the dance and allow for more flexibility of timing within the choreography.

4.2 Conclusion

Idle Flux presented opportunities to explore the nontraditional structures of performance space, a concept that I intend to pursue within composer/choreographer collaborations. The spatialization of sound in the Merrill Ellis Intermedia Theater was particularly successful in creating an immersive performance environment, which was further enhanced by the integration of the stage with audience seating. While each venue limited the performance configuration, I

hope to explore additional configurations in other spaces, blurring the performance space between dancers and audience members—perhaps blending elements of installation art with performance art. An audience arrangement akin to the Immersive Van Gogh® Exhibit Dallas would allow for an even more intimate and immersive experience for both audience members and dancers. The size of the dance cast may further influence some creative and logistical constraints: smaller dance casts may allow for more flexibility in choreography where dancers may have opportunities to explore the performance space with some improvised material. This may further provide flexibility within a fixed media composition, consisting of more ambient materials that facilitates creative autonomy of all parties involved (dancers, choreography, and composer).

In future collaborations, integrating live sound may also be handled with more consideration in a manner that still facilitates interdependence and creative autonomy. Certain live sounds contributed to a cohesive collaboration, such as the manipulation of various fabrics and hearing the dancers' breath in an intimate space; however, uses of clapping did not coincide with the composition, and conversely, the music was not written to necessarily coincide with the use of clapping. These elements could be more integrated in a way that does not also imply a hierarchal relationship between live sound generation and a fixed media composition. I hope to explore the relationship between live sound and fixed media to further enhance an immersive experience in future collaborations.

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