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Reflections on Collaboration in *Growth* for Violin, Fixed Media, and Three Dancers

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

Doctor of Philosophy

in

Music

by

Chen-Kang Kao

June 2024

Dissertation Committee:

Dr. Ian Dicke, Chairperson

Dr. Dana Kaufman

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2024

The Dissertation of Chen-Kang Kao is approved:

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ABSTRACT OF THE DISSERTATION

Reflections on Collaboration in *Growth* for Violin, Fixed Media, and Three Dancers

by

Chen-Kang Kao

Doctor of Philosophy, Graduate Program in Music

University of California, Riverside, June 2024

Dr. Ian Dicke, Chairperson

Interdisciplinary research has emerged as a prominent trend in tandem with technological advancements, rendering it an inevitable aspect of 21st-century scholarship. In light of this trend, the present study strives to amalgamate electroacoustic music and dance within the framework of the composition titled “Growth.” This research delineates five primary inquiries and corresponding objectives: 1) Does the inclusion of dance foster novel cognitive processes or creative methodologies? 2) Does the combination of music and dance inspire a cohesive artistic experience? 3) What methodologies are effective for directing dancers? 4) What are the distinct concerns inherent in music and dance? 5) How can strategies for negotiation and compromise be effectively employed amid discord? These questions and objectives are addressed through a brief review of pertinent literature, elucidation of methodology, and comprehensive analysis. Furthermore, this

study advocates for enhanced video documentation of music-dance collaborations to foster future research pursuits by musicians, dancers, composers, and choreographers, thereby illuminating new possibilities for interdisciplinary exploration and innovation.

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CHAPTER ONE: INTRODUCTION

This dissertation is about the reflections on a music-dance collaborative piece titled “*Growth*—for Violin, Fixed Media, and Three Dancers,” involving an MFA dance student, Kevin Wong; three undergraduate dance students, Em Berdeja, Zoe Foy, and Tyra Logan; a violinist Dr. Xenia Deviatkina-Loh; and myself. It premiered on March 13, 2024, at the Performance Lab at the University of California, Riverside (UCR). All the participants study at UCR, except the violinist, who received her doctoral degree from the University of California, Los Angeles.

Growth represents my initial venture into incorporating dance within a musical framework. Music, as an auditory medium, lends itself to blending with diverse art forms, whether through the transmutation of poetry into lyrical compositions, as observed in art songs, or the multifaceted incorporation of dramatic elements in operatic works, encompassing characterization, scenic design, and choreography. My previous collaborations primarily involved musicians, prompting my curiosity about the creative dynamics created by interdisciplinary partnerships. It is my aspiration that such collaborations will foster novel artistic experiences.

Moreover, electronic music emerged as the most significant development of concert music in the previous century, coinciding with the proliferation of serial, chance, and minimal music. Serialism epitomizes meticulous control, contrasting sharply with chance music’s celebration of unbounded spontaneity yet yielding analogous aesthetic outcomes. As Robert P. Morgan mentioned in his book *Twentieth-Century Music* (1991, 379), “In both approaches, ‘external’ systems are to some degree arbitrarily imposed

upon the musical materials they govern. Moreover, both produce results that are often analogous.” Meanwhile, minimalism adopts a simplistic palette of motifs, subject to iterative variation through strict processes. While each approach bears its inherent constraints, electronic music appears boundlessly expansive. According to composer Thom Holmes (2012, 195), “The sound resources available to electronic music are unlimited. New sounds can be constructed from the raw material of electronic waveforms. The composer not only creates the music, but composes the very sounds themselves.” Despite the burgeoning popularity of electroacoustic compositions, wherein acoustic and electronic elements intertwine, the prevalence of purely acoustic music remains, particularly in locales like my native country, Taiwan, where resource limitations and technological disparities prevail in comparison with the United States. Confronted with these challenges, I elected to incorporate fixed media within my electronic composition, leveraging its potential as a sonic reservoir.

Apprehensive that the music might merely serve as a backdrop to the audience’s engagement with the dancers, akin to a cinematic soundtrack, I made the deliberate choice to incorporate a live violin performance as an expressive counterweight to the fixed media electronic sounds. This decision stemmed from inspiration drawn from Igor Stravinsky’s theatrical composition, *Histoire du soldat* (1918). The selection of the violin was informed by its pivotal role within the narrative arc and instrumentation of Stravinsky’s work, where it occupies a significant thematic position alongside the dancers within the composition’s framework.

Overview

There are two distinct segments to *Growth*: the pre-show and the main show. Rather than structured as a formal performance, the entire presentation was organized as a semi-formal workshop, characterized by its ongoing developmental nature, a common approach adopted within the dance department for choreographic works, as Kevin stated.

The pre-show, spanning approximately 20 minutes, comprised two sections characterized by an informal and relaxed improvisational exchange between choreographer Kevin Wong and myself. Beyond our roles as composer and choreographer, we engaged as performer and dancer, epitomizing one facet of our collaborative process—simultaneous improvisation based on shared themes or methodologies, followed by reflective discussions on observations and potential enhancements. The thematic focus of this performance revolved around the concepts of lead and support, which I fully explore in Chapter Four.

The initial segment featured a concurrent improvisation involving a pianist and a dancer, while the subsequent section involved a dancer engaging in simultaneous improvisation with a digital performer utilizing Ableton Live, a digital audio workstation, thereby manipulating parameters dynamically.

The main show, spanning approximately one hour and comprising 10 movements, featured contributions from the violinist, three dancers, and fixed media. Notably, the dancers assumed multifaceted roles, serving as performers and potentially even composers across different pieces, while Kevin and I assumed the roles of choreographer

and composer, respectively, or facilitators as necessitated by the evolving dynamics of the collaborative venture.

Research Questions and Objectives

This dissertation is concerned with addressing five pivotal inquiries:

1. Does the inclusion of dance foster novel cognitive processes or creative methodologies? This serves as the foundational inquiry guiding my research. Historically, my perspectives have been predominantly musician-centric. By venturing into uncharted territory by integrating dance, I aspire to transcend conventional compositional paradigms and expand my creative practice.
2. Does the combination of music and dance inspire a cohesive artistic experience? Central to this investigation is the interrogation of whether the fusion of these two modalities yields a synergistic whole or if each element maintains its artistic integrity in isolation. While acknowledging the potential for certain sections to foreground either music or dance, the crux lies in preserving a delicate equilibrium, ensuring neither component eclipses the other for prolonged durations.
3. What methodologies are effective for directing dancers? At the heart of this examination lies the effort to comprehend the choreographer's mindset through the act of directing dancers. This necessitates a shift in communication approach, transitioning from performer-oriented dialogue to a mode tailored to resonate with the dancers' vernacular. Such a transition

facilitates a deeper immersion into the choreographic process, thereby enabling more effective direction of the dancers.

4. What are the distinct concerns inherent in music and dance? A mutual understanding of the concerns unique to composition and dance could complement the aural and visual aspects of the performance, thereby fostering a closer alignment of objectives and ultimately enhancing the project's overall efficacy.
5. How can strategies for negotiation and compromise be effectively employed amid discord? Given the inherent disparities in priorities and the abstract nature of artistic expression, negotiation and compromise assume paramount significance in instances of disagreement among composers, performers, choreographers, or dancers.

Organization of the Dissertation

This dissertation consists of five chapters that analyze the most salient topics of our collaboration.

Chapter One, Introduction, furnishes a comprehensive overview of the collaborative project. It delineates the research questions and objectives and outlines the structural organization of the dissertation.

Chapter Two, designated as Literature Review, critically assesses scholarship pertaining to collaborations between music and dance. It scrutinizes relevant works and summarizes their inspirations for *Growth*.

Chapter Three, Methodology, delineates the methodological frameworks employed for reflexive analysis of the collaboration.

Chapter Four, entitled *Analysis of Growth*, encompasses reflections on the artistic processes and outcomes of the *Growth* collaboration, analyzes the violin parts, fixed media, and dance in *Growth*, discusses the interpersonal dynamics among collaborators, and contemplates personal development engendered by the collaborative engagement.

Chapter Five, Conclusion, serves as the culmination of the dissertation. It encapsulates the reflections generated throughout the study, deliberates on the scholarly contribution, and proposes avenues for future research in the field.

CHAPTER TWO: LITERATURE REVIEW

In this chapter, I will delve into four significant music-dance collaborations and examine their influence on my collaborative piece, *Growth*. The selection of these examples is based on their prominence in music-dance history post-20th century, accessibility to accompanying videos, and their inspiration for my collaborative project.

Brief Review of Existing Literature on Music-Dance Collaborations

When it came to music-dance collaboration, I immediately turned to the famous ballet *Le Sacre du printemps* (1913) written by Stravinsky in collaboration with choreographer Vaslav Nijinsky under the commission by Sergei Diaghilev, which was a breakthrough in the history of ballet at the time.

During its premiere in 1913 at the Théâtre de Champs-Élysées, it is popular belief that the dissonant music and the jerky choreography caused turmoil in the audience.¹ In many musical movements like “Danse des adolescentes,” the traditional hierarchical structure of organized pitch is superseded by the angular rhythms as witnessed by the extreme dissonance of harmony, little change of pitch, and frequent changes of time signatures or accents, as depicted in Figure 1. In the choreography, “The dancing... is agitated and uneven, with performers cowering, writhing, and leaping about as if

¹ According to J. Peter Burkholder, Donald J. Grout, and Claude V. Palisca (2019, 825), the composer thought, “It was Vaslav Nijinsky’s choreography, far more than the music, that provoked the audience.” According to the article “This is what REALLY happened at The Rite of Spring riot in 1913” from *Global Media & Entertainment Ltd* (2024, accessed May 12, 2024, <https://www.classicfm.com/composers/stravinsky/news/rite-and-the-riot/#:~:text=Stravinsky%20himself%20believed%20that%20the,sounds%20from%20the%20woodwind%20section>), “It was likely not just the shock of hearing the music, nor Nijinsky’s exotic choreography, nor Roerich’s bizarre settings that prompted the riot that ensued in the theatre. There were anti-Russian, anti-Diaghilev and anti-Nijinsky factions at work in Paris, determined to disrupt proceedings before a note of music had been heard.”

possessed. Often, the dancers are not one with the music, but rather seem to struggle against it (Ted-ed, 2020).”



Figure 1. The opening of Stravinsky’s “Danse des adolescentes”

According to Serge Leonidovich Grigoriev’s *The Diaghilev Ballet, 1909-1929* (1960, 88), “In the meantime we devoted every spare moment to the rehearsals of *Le Sacre*. The music once again was inconceivably difficult, full of changing rhythms; and even with Stravinsky’s anxious assistance Nijinsky’s composition progressed very slowly indeed.” Drawing from Grigoriev’s account, Nijinsky’s choreography evolved in tandem with Stravinsky’s music, reflecting a conventional approach where the music composition precedes dance choreography. Similarly, in the first movement titled “Growth,” I adopted a comparable approach, composing the music before Kevin crafted the choreography.

Later partnerships between John Cage and Merce Cunningham in the mid-1940s brought about new paradigms for collaboration. According to the Merce Cunningham Trust (2021), they introduced a new concept: “Music and dance could exist

independently within the same performance. The dancers' movements would no longer be tied to the rhythms, mood, and structure of music. Instead, all forms of art could stand alone, simply sharing a common space and time."

Their utilization of chance operations also challenged traditional narrative structures. For instance, their last collaboration combined the music *Four*³ (1991) and the choreography *Beach Bird* (1991).² Four music performers executed four distinct actions: silence, the sound of rainsticks, a violin or a sine wave, and an excerpt from *Extended Lullaby*³ played on one or two pianos. Eleven dancers in white leotards and tights with black gloves exhibited individual physical phrasing, simulating the sudden take-off of a flock of birds.

Cage's *Four*³ and Cunningham's *Beach Birds (for Camera)* share a performance space under distinct titles. They offered music and dance independent identities. This separation allows for the coexistence of music and dance within the same temporal and spatial framework (Brown 2007, 40). Likewise, I rarely asked the dancers to dance punctually in *Growth*. Sometimes, the music even ends earlier than the dance, or vice versa.

More recent collaborations between composer Matteo Fargion and choreographer Jonathan Burrows challenge the preconceived notions of what constitutes music and dance. According to their official website (n.d.), "They describe all their work as music,

² The piece was later adapted for the film *Beach Bird for Camera* (1992), using Cage's *Four*³. The choreography was filmed at two locations, with occasional moving camera shots.

³ According to the John Cage Trust (2016), "It was a set of 12 chance-determined variations of the cantus firmus and counterpoint of *Vexations* by Erik Satie."

and are often engaged in acts of translation where what was heard is now seen, or what was seen becomes spoken language.”

Consider their *Both Sitting Duet* (2002). It constitutes the first installment of the trilogy of duets, followed by *Quiet Duet* (2005) and *Speaking Duet* (2006). In this piece, Burrows and Fargion occupied two chairs, with two books of scores of Morton Feldman’s violin and piano piece *For John Cage* (1984) lying on the ground before them. They translated the notes and bars into their movements. “Each of the three duets looks in a different way at how to blur the boundary between what is seen and what is heard” (Burrows&Fargion 2019).

During the 35-minute-long performance, though there was very little music—limited to sporadic shoe swiping, clapping, forcibly releasing their hands from holding, or shouting “hey” in a two-against-three rhythm, the viewer perceived the musicality through repetition, call and response, imitation, and unison in their movements. This evokes Cage’s *4’33’’*, where any number of musicians, with any instruments, remains silent throughout the performance lasting 4 minutes and 33 seconds.

Both Sitting Duet presents a unique fusion of music and dance, blurring the boundaries between the two art forms. Fargion and Burrows performed similar movements, sometimes mirroring or following each other. In other words, their dance movements were alike, as was the way they made sounds. Moreover, no instrument is used except body percussion or voice. Furthermore, this is a good example of how music can be seen or dance can be heard because some movements cause sounds, and vice versa, whose idea resembles “Tyra Lift” and “Space Growth.” In the former, there is no

violin music or fixed media, but the oral instructions given by the dancers form rhythm and intensity, whereas in the latter, there are no dance movements, but the focus on the violinist's movement leads to visual attention.

In 2015, *The Red Circle and the Blue Curtain* brought together choreographer Bill T. Jones, cellist Joshua Roman, and vocalist Somi in Vancouver, Canada, at the Ted2015 conference. Despite having only two days to prepare, the trio devised a structured improvisation that began with Roman playing J. S. Bach's Prelude in C Major BWV 846 and Somi singing Charles Gounod's *Ave Maria*. Jones provided contextual narration while dynamically moving around the stage, setting a narrative backdrop that transitioned from a morning in Vancouver to various thematic sections marked by changes in musical style and choreography. The distinct middle section featured a melancholic cello solo, a jazz-inflected passage, and scatting by Somi, all punctuated by Jones's gestures and movements. The final section returned to the initial musical themes, with Roman playing bass notes and Somi singing melodically as Jones slowly lay down upstage.

The piece, despite its improvisational nature, achieved remarkable coherence, with Jones's cues and interactions creating an engaging and captivating performance, which made the music sound structured in a sense. Reflecting on our pre-show, Kevin and I embraced improvisation to enhance mutual engagement. Kevin did not say any lines, but he did use gestures like clapping his hands hard and drawing big circles with his arms repeatedly, which informed me to strike the major seconds in the high register several times, followed by a cluster in the low register, marking the end of Kevin's clapping hands.

Impact of the Repertory on *Growth*

The collaborative pieces mentioned earlier have served as wellsprings of inspiration, yet I sought new avenues for collaboration. First, while these pieces did not utilize fixed media, I incorporated it to explore diverse timbres and effects unattainable with live instruments. I did not use live processing⁴ to minimize variables amidst numerous performers, incorporating free rhythms in violin parts and randomization in fixed media segments.

Furthermore, each piece mentioned previously emphasized a specific aspect of collaboration, contributing to the broader exploration of artistic synergy, whereas *Growth*, comprising 10 movements in the main show, provided a wide canvas for experimentation across multiple collaborative dimensions. Additionally, dividing the performance into two parts allowed for a nuanced shift in roles between Kevin and myself, enhancing the depth of our collaborative dynamic.

Lastly, the integration of varied lighting schemes and performance positions for the violinist in *Growth* fostered dynamic interplay among all involved, enriching the overall artistic experience. These deliberate choices contributed to a cohesive and engaging performance, highlighting the multifaceted nature of collaborative creativity.

⁴ Some contemporary collaborations include live processing, but their videos are not easily accessible. Such instances are composer Guilherme Bertissolo's and choreographer Lia Günther Sfoggia's *Converse* (2020) and composer Siyang Shen's and choreographer Yang Yang's *Between Heaven and Earth, Hovering* (2017).

CHAPTER THREE: METHODOLOGY

For the initial segment of this chapter, I will delve into the genesis of the collaborative process, tracing its inception from a dance class to a partnership with a choreographer, and culminating in the formation of a group of three dancers and one violinist alongside the choreographer. In the subsequent section, I will outline the methodologies employed to evaluate the extent to which the research questions and objectives were addressed.

Collaborative Process for Rehearsals

This section examines the collaborative process utilized during rehearsals, focusing on motivations, experimental approaches, and the evolution of draft versions. The genesis of this collaboration can be traced back to the “Dancing Representation: Figures, Forms, and Frames” course conducted during the winter quarter of 2023. The objective for the course was to finish an individual project and a group project based on the interest or discovery we had during the course. For my individual project, I focused on the order of music and dance. With the help of video editing, I tailored my music to my dance video recordings or created choreography to complement my composition recordings. For my group project, my group emphasized the coordination between music and dance. During rehearsals, my group members refused to give a clear structure, so I observed a prevalent reliance on improvisation among the dancers, a departure from my accustomed practice of meticulously notating musical scores prior to a performance. This

distinction prompted a deeper exploration of dance, revealing a multitude of possibilities for intertwining music and movement, thus sparking an interest in collaborative ventures.

Inspired by the innovative fusion of Chinese⁵ music and dance elements showcased by Cloud Gate Dance Theatre of Taiwan, recognized as “the first contemporary dance company in the greater Chinese-speaking community” (Shih, 2020), I embarked on Directed Research under the guidance of Professor Joel Mejia Smith during the spring quarter of 2023. Since Kevin and I both share an Asian background⁶ and had previously met in the Dancing Representation course, I approached him to propose a joint effort for my Directed Research project. Recognizing the potential of this collaboration, I decided to center my PhD dissertation around our collective exploration.

The collaborative process began with my piano playing and Kevin’s dancing, engaging in improvisational sessions followed by reflective discussions to refine our work.⁷ Each week, the rehearsal was based on a new theme I brought.⁸ I also pre-composed a 30-second excerpt featuring a sampled violin and fixed media, which served as a foundational element for our creative process and allowed us to experiment with timbres other than piano. Throughout subsequent sessions, I revised and expanded upon the initial composition, incorporating feedback from Kevin. All sessions were recorded

⁵ Taiwan and China share a common cultural heritage (Chang and Frederiksen 2016, 156), but their paths diverged gradually.

⁶ Kevin is Chinese-American and learned Chinese dance when he was young.

⁷ In each rehearsal, we usually commenced with warm-ups, which I generally omitted in this dissertation even though they were essential to the following rehearsal.

⁸ These weekly rehearsals were structured around focused explorations, including Chinese Music and Dance, Meditation in Music and Dance, Tai-Chi in Music and Dance, Classical Music and Dance, and Timbre and Dance.

and documented, with reflections uploaded for review by Professor Smith. By the end of the Directed Research course, we had developed the initial five-minute segment of our collaborative piece, “A Seed,” marking a significant achievement in our collaboration.

During the course, several key insights emerged that reshaped my approach to collaborative composition with Kevin. First, I came to recognize the importance of viewing our collaborative efforts as mutually created works, where despite occasional fluctuations, neither music nor dance assumes a secondary role. This shift in perspective underscores the overall equal partnership between our disciplines. Second, I have learned to adopt a more open-minded approach, reimagining structural possibilities independently within each discipline. This flexibility allows for greater exploration and innovation in our creative processes. Moreover, I realized that musical ideas need not always conform strictly to dance movements, and vice versa. This newfound freedom allows us to explore ideas more deeply during improvisation without feeling restricted by the need to conform to immediate changes initiated by the other person. Finally, I have recognized the necessity of precision in language, particularly due to the differing customs and terminologies inherent in music and dance. For instance, when I mentioned the music and dance were “synchronized” or that the melody was “flowing,” such terms require clarification regarding their specific application within both realms, ensuring clarity and effective communication throughout our collaborative process.

After completing Directed Research, Kevin expressed his desire to choreograph and direct dancers, inviting undergraduate dance students Em, Zoe, and Tyra, while I brought in UCR undergraduate alumni violinist/composer Willow Murphy. We focused

on our interdisciplinary collaboration for Kevin's Graduate Critique Panel (GCP), showcasing our progress to faculty and peers for the first time. Kevin prepared a choreographed sequence for the "Growth"⁹ sound score, which we performed twice during the GCP. While the dancers seemed fatigued during the second performance, the violinist's integration within the group was evident, suggesting cohesion rather than detachment.

Following the presentation, the attendees shared numerous reflections. Firstly, there arose a question regarding the feasibility of collaboration, given the divergent focal points of the disciplines involved. While Kevin leaned towards a process-oriented approach without a specific product in mind, I gravitated towards the notion of achieving a tangible outcome. Secondly, there was a recognition of the inherent beauty of the music, prompting contemplation on how to effectively convey its merits alongside the choreography. Lastly, there emerged a consideration for composing music devoid of traditional time signatures and bar lines, given the inherently liberated nature of the composition.

In addition to the "Growth" sound score, we also explored different experiments. In my meetings with Kevin, we engaged in improvisational exercises centered around exploring various music and dance elements, often pushing the boundaries of our respective fields by experimenting with unconventional terms. For example, I might challenge Kevin to incorporate the concept of "conjunct" into his dance movements,

⁹ The name of the piece changed from "A Seed" to "Growth" to encompass more possibilities, so that it was not limited to the growth of a plant and could denote many things that developed.

while he might prompt me to integrate the notion of “collapsed” into my musical improvisation. Table 1 illustrates the music and dance elements, along with some possible adjectives we explored.

Table 1. Music and dance elements and their adjectives

Music	Dance
Dynamic: (getting) loud, (getting) soft	Energy: sustained, percussive, swinging, suspended, collapsed, vibratory
Rhythm: (getting) short/fast, (getting) long/slow, contrasting, similar	Time: fast, medium, slow, still, retrograde
Pitch: conjunct, disjunct, high, low, repeated, ascending, descending	Space: close, far, large, small, stationary, never in one space

Alongside exploring elements, we experimented with various approaches. One such method involved mirroring each other’s actions while standing face-to-face on opposite sides of a piano. For instance, when Kevin stroked the piano lid, I would mimic the action by playing the piano keys, and when Kevin laid his arm on the lid, I would also lay my arm on the keys, effectively altering my usual piano-playing technique.

Another approach involved co-composing the score by outlining instructions for four sections on a whiteboard and spending 10 minutes independently brainstorming ideas for each section. Table 2 illustrates these instructions. During our first attempt, we aimed to minimize the influence of each other’s choices. In our second attempt, we designated who started first and synchronized the starting points of some sections, paying closer attention to cues indicating the start of a section.

Table 2. Instructions for the co-composition

1.	Generate a seed
2.	Do what your heart desires for 30 seconds
3.	Surround the space widely
4.	One stops and the other moves, and vice versa

In one group meeting, I provided Willow with written instructions for improvisation. Recognizing the importance of clarity in guiding improvised performances, I attempted to write detailed instructions to ensure the violinist could accurately execute the musical nuances. Figure 2 illustrates the instructions devised for six distinct sections, intended to guide the improvisational performance of the violinist. In section A, the instruction stipulates that the violinist should produce one short, detached, and loud single note on the high E string at a time. Section B serves as a transitional segment leading into section C, where the player is directed to perform two to four long, smooth, and soft notes simultaneously, ensuring the inclusion of the low G string. Section D amalgamates elements from both sections A and C. Section E adopts a more percussive approach, instructing the violinist to bounce the bow on the strings, pluck the strings, or knock on the sounding board. Finally, in section F, the performer is tasked with executing ascending and descending arpeggios across various strings, transitioning from very soft to very loud dynamics, and varying the tempo from slow to fast.

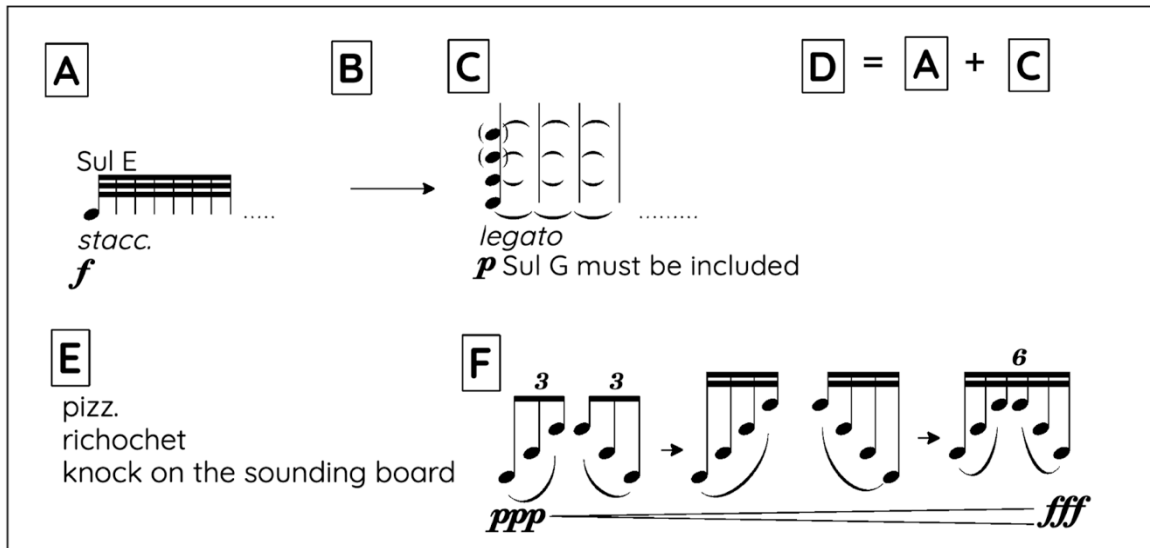


Figure 2. Instructions for the violinist to improvise on

During one particular session, I experienced a new dynamic between live music performers and dancers, prompting a desire for increased intensity in my compositions, while Kevin explored spatial dynamics. It marked the first collaboration for the dancers and violinist, influencing each other's creative decisions. In a subsequent meeting, I introduced musical elements like "timbre" and "texture" to enhance the excerpt of "Growth," inspiring discussions on movement qualities and choreographic techniques such as "flocking," a choreographic technique wherein the dancers formed a triangle, with the dancer in the front dictating movements that were then imitated by the others behind her.

The piece went through several drafts. In the beginning, the piece, entitled "Two Sides of a Coin," aimed to underscore the notion that Taiwanese and European music and dance, while distinct, could converge to form a cohesive whole, mirroring the harmonious coexistence of seemingly disparate elements in life, inspired by Cloud Gate, which often employed music from Western composers, such as J.S. Bach, Stravinsky, and so on. Comprising three distinct sections, the piece delineated the realms of music, dance, and their synthesis. The initial segment, entitled "A Seed," symbolized the inception of growth, evoking imagery of a germinating seed intertwined with the unfolding development of both music and dance.

However, as Sydney-based composer Christine Pan (2024) articulated, "See me as me even if I write about aliens, which has nothing to do with me." My initial desire to integrate Taiwanese elements into the performance diminished over time. Taiwanese culture, for me, is a personal and inherent aspect that can be either superficial or

concealed. To be more specific, I do not need to use Taiwanese elements to prove I am Taiwanese, and if I use any, it must be out of nature without deliberation.

Later, I aimed to expand my initial three-section scheme into eight movements, each lasting approximately five minutes. This adjustment, which involved condensing the “Growth” movement, aimed to explore a wider variety of collaboration approaches. These included exploring group dynamics such as music preceding dance, dance preceding music, co-composition, integration of musicians as dancers, integration of dancers as musicians, and the incorporation of storytelling elements. Additionally, I planned to leverage individual collaboration with Kevin, building upon our previous explorations.

I drafted an overall formal plan for all movements, fostering cohesion despite potential divergence in content. In Table 3, I envisioned an arch form, with the fourth and fifth movements serving as rapid duets between Kevin and me, transitioning from the dancers and the violinist. Moreover, the root note of each movement formed a whole-tone scale reminiscent of the descending drone in “Growth.”

After Kevin suggested borrowing 20 music stands to explore potential interactions between the dancers and the environment, we experimented with various arrangements of the stands, including clustering them together, spreading them out, laying them down horizontally, and arranging them into three sculptures. After exploring these options, we settled on a preliminary arrangement, which is detailed in Table 4.¹⁰ Notably, Kevin suggested incorporating software-generated music played by Zoe or Em during the duet

¹⁰ The final order for the performance is shown in Table 5.

Table 3. The draft for all movements

Mvt.	Tempo	Expression	Performer	Solo	Fixed media	Approach	Root note
1	4/4 ♩= 80	dawning	trio dancers & violinist	gliss., pizz., tremolo, harmonics	Drift, noise, gliss., ghost violin	music before dance	G
2	3/4 ♩= 60	calm		legato, s.t.	arpeggio	dance before music	B
3	5/8 ♩= 100	scherzando		(Bartok) pizz.	granular	dance as sounds	A
4	6/8 ♩= 120	leggiero	Kevin & I	chance	delay	co-composition	C [#]
5		delicato		knob	filter	improv	D ^b
6	5/8 ♩= 100	agitato	trio dancers & violinist	molto vib, s.p., trill, chord	panning	(de)accumulation	F
7	3/4 ♩= 60	peaceful		harmonics, ricochet, pizz.	high register	music as movements	E ^b
8	4/4 ♩= 80	dusky		gliss., pizz., tremolo, harmonics	Drift, noise, gliss., ghost violin	storytelling	G

in the seventh movement, prompting us to experiment further with the setup. As a result, Kevin requested an additional 10 music stands to accommodate our evolving vision.

Table 4. The first draft with the 20 music stands

Mvt.	Music stands	Music	Dance
1	setting a forest		
2	forest	Growth	
3	three sculptures set by Kevin and me	Percussive	
4	three sculptures	not yet composed	Unison Trio
5	three sculptures set by the dancers	piano improvisation by Kevin and me	making the sculptures
6	dancers' three sculptures	Crunchy Grapes	
7	the one dancer making her own sculpture	not yet composed	duet with one dancer making her own sculpture
8	one sculpture	not yet composed	Tyra Lift

After the experiment with the music stands, the performance order changed again. The new draft of the performance order became “Growth,” “Violin 30,” “Unison Trio,” “Duet,” “Percussive,” “Tyra Lyft,” “Balloon,” “Crunchy Grapes,” and “Growth 2.” Kevin proposed arranging the music stands in a semicircle resembling an orchestra setup. As the audience entered, the stands would already be in place. Kevin and I would begin the show with piano improvisation while the dancers repositioned the stands to create a forest setting. The remaining order remained unchanged.

Between “Violin 30” and “Unison Trio,” we introduced a new improvised piece called “Trio,” where Em would manipulate the MIDI controller using the patch I made for her, Zoe would play the violin, and Tyra would dance. We rearranged the duet between Kevin and me as a pre-show, which differed from the trio dancers in the main performance. I simplified and mapped the parameters to four knobs and labeled the knobs on my MIDI controllers for clarity, although time constraints limited thorough explanations.

In “Unison Trio,” Kevin revised the choreography, directing the dancers to avoid repetition, and instructed me to commence the fixed media after the dance. I presented the music, anchored on the harmonic series of E^b and B^b on the violin, accompanied by a drone transitioning between E^b, B^b, and E^b. The music complemented the dance movements and concluded harmoniously, garnering unanimous approval.

In a subsequent meeting, I introduced the music for “Percussive,” aiming to guide the dancers with percussive sounds such as pizzicato, knocking on the sounding board, and stomping on the ground performed by the violinist. The fixed media utilized a

sampled piano and featured a repeated descending four-note melody akin to a passacaglia. The dancers likened the music to the style of American choreographer and dancer Martha Graham, whose music “was sparse in its instrumentation and strong in its rhythms and away from the lush, the familiar, or anything that might dominate the dance. Piano was usually the principal instrument” (Deborah 1998), as documented in *The International Encyclopedia of Dance*. Kevin revised the choreography, instructing a dancer not in the duet to count to thirty before swapping with another. He also entrusted me with directing the dancers, and I introduced the concept of body percussion with the aim of amplifying movement audibly. However, this approach encountered difficulties as the dancers tended to become robotic and lingered in one place for extended periods while performing body percussion. To address this, Kevin intervened by instructing two dancers at a time to execute movements as fast as they could, along with verbal sounds such as loudly enunciating certain vowels, consonants, or words from time to time. This adjustment yielded impressive results, as evidenced by the vibrancy of their movements. Additionally, Kevin provided feedback on the music, expressing a desire for it to evoke more extreme emotions. Therefore, I decided to change the piano sample sound to an Ableton Live instrument Wavetable, which is composed of two oscillators capable of smoothly transitioning between different waveform shapes. I also augmented the sonic depth with a low bass drum.

The music for “Tyra Lift” featured frequent sine wave pitch fluctuations. However, the dominance of the music prompted Kevin to relocate it after the choreography, allowing for potential extensions and heightened virtuosity without the

fear of interfering with the dancers. Instead of asking the violinist to mimic the pitch fluctuations present in the fixed media, I meticulously transcribed the figures resembling those in the fixed media. This movement where there were no dance movements was later called “Space Growth.”

During an individual session with Kevin, I improvised using a preset patch of “Balloon,” utilizing seven MIDI tracks in the Session View in Ableton Live with its instrument Operator, which is capable of generating FM synthesis using up to four oscillators (A through D) routed either in parallel or in series, offering a wide range of sonic possibilities. Figure 3 shows how an Ableton Session View¹¹ appears and Figure 4 provides an overview of the notes and rhythm for “Balloon.”

The musical improvisation process comprised four phases, with the duration of each phase and the back-and-forth transitions between them contingent upon Kevin’s improvisation in dance. These phases are delineated as follows:

1. Activate and adjust the velocity in the master iteratively for each track in random order (but start with C^{#4}).
2. Once all tracks are activated, manipulate the velocity in oscillators B, C, or D.
3. Experiment with Low-Frequency Oscillator (LFO), which alters parameters at a low frequency, usually below 20 Hz, and pitch adjustments, avoiding manual pitch alterations and instead inputting values of 12, -12, or 0 followed by pressing enter.

¹¹ In the Session View, the clips (looped melodic ideas) are arranged vertically and are usually looped.



Figure 3. The Session View of “Growth”



Figure 4. The score for “Balloon”

4. Turn down and off each track in random order (but end with C^{#4}). When all tracks are off, alternate between activating and deactivating the C^{#4} track several times, gradually extending the duration of pauses until the piece reaches its conclusion.

I created “Duet,” a patch primarily comprising an arpeggiator for Zoe to manipulate along with the other two dancers’ movements. Kevin also encouraged the dancers to experiment with playing the violin, singing, and manipulating the controller. As in “Trio,” I also simplified and mapped the parameters to another four knobs and

labeled the knobs on my MIDI controllers for clarity, although time constraints limited thorough explanations.

The music for “Crunchy Grapes” was composed after reviewing a video that showcased varied upward and downward movements in choreography. With the keywords “spurt” and “repair” in mind, the music adopted a melodic structure, building towards a climactic conclusion. Figure 5 illustrates the final page of the initial version of “Crunchy Grapes.” Kevin remarked on the dramatic intensity of the music, expressing concern that it might overly affect the dancers, contrary to his vision. Therefore, I revised the musical movement to feature minimal music, as the dance preceded the music, aiming to prevent the music from overtaking the dance. Kevin and the dancers found this version more conducive to their movements compared to the previous, more dramatic rendition. Despite the seeming limitations in my composition, I learned how to compose with just a few notes by repetition, which I would not have done if I had not worked with Kevin.

In “Growth 2,” Kevin assigned me the task of choreographing for the dancers. The music, a truncated and sectionally reversed rendition of “Growth,” commenced and concluded with white noise. I instructed the dancers to walk around the stage randomly, sectionally reverse their movements in “Growth,” and exit in the opposite direction upon hearing only the white noise, signifying the end of the movement. Following the session, Professor Smith provided feedback, expressing reservations about the collapses and the reversed version in “Growth 2” not aligning with the theme of growth. He also noted similarities among most violin parts, prompting considerations for revisions to “Growth

39

Vln. *mp*

F.M. *mp*

42

Vln.

F.M.

48

Vln.

F.M.

53

Vln. *f*

F.M. *f*

Figure 5. The last page of the first version of “Crunchy Grapes”

2” both musically and choreographically. Therefore, I tweaked “Growth 2” by infusing detached violin sounds and pulsating white noise, evoking a sprinkler effect. Despite similarities in melodies, each section’s shorter length and sectionally reversed order differentiated it from “Growth.” Moreover, I incorporated recordings from the violinist for the ghost violin part into “Growth 2.”

Reflecting Methods

Several methods were employed to facilitate reflection on the research questions and objectives throughout the course of this study.

1. **Video Recording:** Arguably the most pivotal method for reflection, video recordings played a central role in capturing rehearsals and performances. This allowed for the meticulous review of sessions, affording multiple viewings to ensure comprehensive analysis, especially when I was busy manipulating the fixed media and might miss something during the rehearsals. The recordings were systematically organized within a shared Google Drive repository, enabling subsequent review, note-taking, and the initiation of discussions with absent collaborators. Early in the project, even verbal discussions were recorded for thorough documentation, though this practice was later supplanted by direct note-taking during sessions, so I could focus on the rehearsals or performance and not spare another effort and time to listen to the discussion again.

2. Google Docs: Initially, reflections were penned directly within Google Docs, facilitating streamlined feedback from Professor Smith. These documents served as repositories for insights gleaned from video analyses and formed the basis for subsequent discussions and revisions.
3. Note-Taking: As the collaboration evolved to include dancers, reliance on note-taking became prevalent. Key observations, phrases, and queries were diligently transcribed into a dedicated notebook, supplementing the video recordings and expediting the retrieval of pertinent details during subsequent analyses without spending time searching among the video recordings. This method also facilitated the formulation of targeted questions for further exploration.
4. Committee Member Meetings: Regular engagements with the dissertation committee, comprising Professor Dicke, Professor Kaufman, and Professor Smith, proved invaluable for garnering feedback and insights. These interactions, conducted both in person and via video conferencing, offered multifaceted perspectives on the project's progression, often highlighting nuances that may have escaped initial scrutiny.
5. Collaborative Dialogue with Dancers: Engaging in open dialogue with the dancers provided an additional avenue for reflection. By soliciting their interpretations of the music and choreography and juxtaposing them with personal perspectives, we identified, addressed, retained, or revised inconsistencies collaboratively.

6. Debriefing Sessions with Kevin: Regular debriefing sessions with Kevin served as a cornerstone for collaboration. These discussions facilitated the exchange of critical observations, strategic planning, and the resolution of challenges encountered during the creative process. Kevin's expertise in the realm of dance proved instrumental in bridging disciplinary gaps and fostering a deeper understanding of choreographic principles.

Utilizing these multifaceted methods of reflection, the project's progress and outcomes were meticulously documented, allowing for a rigorous examination of research inquiries and objectives.

CHAPTER FOUR: ANALYSIS OF *GROWTH*

Growth spans approximately 80 minutes, comprised of a 20-minute pre-show and a main performance lasting approximately 60 minutes. This chapter delves into the summary of *Growth*, the balance between process and outcome, the analysis of the violin part, fixed media, and dance in *Growth*, the dynamics among collaborators, and personal development.

Description of *Growth*

Growth represents a truly collaborative project that provided insights into the nuances of working with a choreographer, three dancers, and a violinist. While my collaboration with the violinist amounted to eight hours spread across four days, I engaged with the dancers for six months and with the choreographer for nine months.

Although “Growth” evolved from its predecessor “A Seed,” which initially seemed akin to program music with its depiction of a growing seed, the final performance transcended a traditional narrative to embody absolute music, where forms and elements took precedence. Nonetheless, we strived to maintain the essence of inspiration, aiming to depict development in both music and dance as a form of “growth.”

The pre-show consists of two segments, featuring my improvisations on the piano and digitally with Kevin’s improvised dance. The main performance consisted of 10 musical movements involving the three dancers and the violinist: “Growth,” “Violin 30,” “Trio,” “Unison Trio,” “Duet,” “Percussive,” “Tyra Lift,” “Space Growth,” “Crunchy

Grapes,” and “Growth 2.” Notably, there were no distinct transitions between these movements.

Throughout the performance, the pre-show unfolded backstage behind the curtain, where we positioned a grand piano, two speakers, and a laptop. This segment illustrated the dynamic between a musician-composer and a dancer-choreographer, showcasing the collaborative process between Kevin and me at the project’s inception. Initially, we explored various themes for improvisation, intending to demonstrate the concept of “mirroring.” However, due to constraints regarding the piano’s preservation, excluding plucking the strings in the piano, knocking or rubbing on the piano body, or putting some weight on the piano, we opted to explore the theme of “lead and support” instead. When we tried “dance before music” and “homophony,” there seemed to be one leader and one follower. Instead of using the word “follow,” Kevin preferred “support” over “follow,” as it conveyed a more active role, allowing the supporter to either maintain the leader’s direction or push boundaries through different improvisations.

Conversely, the main performance exemplified the interplay between music and dance in the absence of Kevin and me on stage. Kevin intentionally encouraged the dancers to engage in improvisations using the MIDI controller or the violin. Table 5 presents the subtitles and details of performers, fixed media, music, and dance arrangements for each of the 10 movements in the main show.

Kevin and I made the decision to relocate the duet between us to the beginning of the show, transforming it into a workshop-like experience, and to distinguish the dynamics between us and the trio dancers and the violinist.

Table 5. The performers and fixed media/music/dance arrangement in the main show

Mvt.	Subtitle	Performer	Fixed media	Music	Dance
1	Growth	trio dancers, violinist	Y	Y	Y
2	Violin 30	trio dancers, violinist	N	Y	Y
3	Trio	digital performer (Em), violinist (Zoe), dancer (Tyra)	Y	Y	Y
4	Unison Trio	trio dancers, violinist	Y	Y	Y
5	Duet	Digital performer (Zoe), two dancers (Em & Tyra)	Y	Y	Y
6	Percussive	trio dancers, violinist	Y	Y	Y
7	Tyra Lift	trio dancers	N	N	Y
8	Space Growth	violinist	Y	Y	N*
9	Crunchy Grapes	trio dancers, violinist	Y	Y	Y
10	Growth 2	trio dancers, violinist	Y	Y	Y

* The trio dancers were upstage left in the shadow, facing backward and remaining motionlessly.

Process and Outcome

Throughout my collaboration with Kevin, there was a constant negotiation between prioritizing the process versus the outcome. While I tended to focus on the final performance, Kevin emphasized the value of the process itself. His perspective encouraged me to shift towards a more process-oriented approach, diverging from conventional outcome-based methods in research. This adjustment allowed for a more experimental and adaptable composition process, accommodating changes following each rehearsal and keeping the work in a continual state of evolution, particularly in aligning with the dance elements.

Integrating dance into my compositions necessitated a slower pace of progress, as I embraced a more open-minded approach to revisions. Even as movements approached completion, there remained room for adjustments, ensuring a fluid interaction between

music and dance. Despite the gradual progress, I found the experience rewarding, as it allowed me to witness my music materialize through the dancers' movements, enriching the collaborative process and enhancing the performance through iterative refinement.

While the focus leaned towards the process, the significance of the outcome was not diminished. The final performance served as a benchmark for evaluating the collaborative efforts and provided valuable insights for future projects. For me, the performance signifies not the end but a continuation of the journey, inviting further revisions and opportunities for collaboration in the realms of music and dance.

Violin Part in *Growth*

In *Growth*, most violin parts for Xenia showcased her skill and versatility, resembling cadenzas with passages that allowed freedom or virtuosity. These sections were crafted by importing improvised recordings to score software, with some adjustments made to pitches and rhythms to ensure clarity and ease of performance. To convey a sense of rhythmic freedom, irregular rhythms such as tied notes, syncopations, or 32nd notes were employed in "Growth," as depicted in Figure 6. Additionally, techniques like vibrato and numerous glissandi were utilized in "Space Growth," as illustrated in Figure 7. The movement "Unison Trio" featured several large leaps, exemplifying virtuosity, as shown in Figure 8. Furthermore, preceding the conclusion of "Growth 2,"¹² a solo passage for the violin emerged, accompanied only by soft white

¹² "Growth 2" is a short and sectionally reversed version of "Growth," with the violinist playing staccato throughout the movement.

noise in the fixed media, granting the violinist ample room to showcase her technical prowess.



Figure 6. The rhythmic freedom in mm. 84–91 of “Growth”

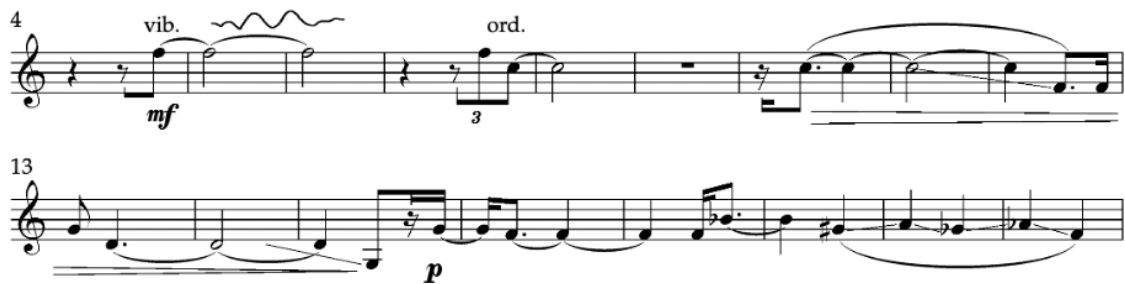


Figure 7. The vibrato and glissandi in mm. 4–20 of “Space Growth”



Figure 8. Several large leaps in mm. 59–72 of “Unison Trio”

In “Violin 30,” the stage was adorned with 30 music stands randomly spread, some of them flipped, each bearing a distinct violin excerpt from various movements except “Duet,” “Trio,” and “Tyra Lift,” which lacked a written score. Ranging from two to nine measures, each excerpt could be played twice, with variations in repetition based on Xenia’s improvisation. Transitioning between stands required Xenia to pause playing

and walk normally to the next stand. This arrangement aimed to revoke or hint the musical movements featured in the main performance, akin to a prelude.

In “Percussive,” the violin melodies were composed on a four-note bass ostinato, creating a sense of continuous variation. Xenia executed pizzicato or Bartok pizzicato throughout the movement,¹³ adding its rhythmic intensity. Additionally, starting from the midpoint, she incorporated stomping on the floor to further enhance the percussive elements.

The violin part in “Crunchy Grapes” repeated phrases in the style of minimal music, serving to support rather than dominate the dancers’ movements. While predominantly in 3/4 time, the time signature occasionally shifted to 2/4 time or 4/4 time phrase beginnings or endings. The violin melody began with a single note B, gradually expanding to four notes around B, then reverting to a single note before ascending two octaves higher. Figure 9 depicts the final passage in “Crunchy Grapes.”



Figure 9. mm. 64–79 of “Crunchy Grapes”

¹³ Due to the softer quality of a pizzicato, I revised the version to be mostly arco, with some accented notes being Bartok pizzicato when it was performed in Asian Classical Music Initiative: 2024 International Conference at Mount Saint Mary’s University, Chalon Campus in Los Angeles, California, on April 14, 2024.

Fixed Media in *Growth*

In *Growth*, fixed media played a pivotal role alongside the live violin performance, enriching the overall experience of the piece. To ensure continuity in the absence of the violinist, I created a dedicated track for the live violin part, enabling the ensemble to hear its contribution, which was simply muted when the violinist was present.

Motivic development emerged as a fundamental aspect of the performance. Throughout the piece, I employed perfect fifths and major seconds as intervallic themes. The utilization of perfect fifths drew inspiration from the open strings of the violin, while the inclusion of major seconds reflected the expansive trajectory of the outer voices, symbolizing the thematic concept of growth. An illustrative example of the intervallic motives appeared in “Growth,” where drones originated from a G-A-D-E chord and descended a major second in all voices until the bass reached two octaves lower. These drones are bifurcated into two tracks: one dedicated to the bass, featuring portamento between long held tones, and the other for the drone’s remaining notes without portamento. This separation facilitated the perception of diverse chordal harmonies while the bass pitch glides two measures before it descends a major second, as depicted in Figure 10. Notably, all voices glide simultaneously only when the bass reaches an octave lower, as exemplified in Figure 11. Furthermore, in measures 137 to 138, the interval between each voice widened, contributing to the dynamic progression of the composition.



Figure 10. The drone in mm. 75–77 in “Growth”

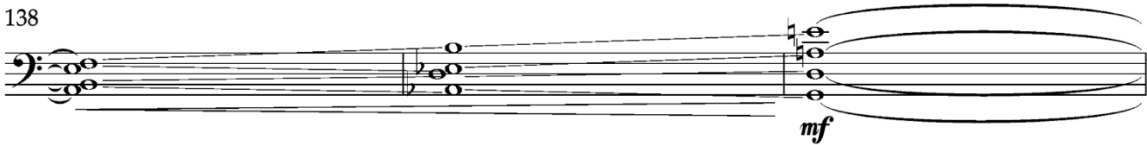


Figure 11. The drone in mm. 138–140 in “Growth”

I experimented with various Ableton instruments, including Drift, Analog, Operator, and Wavetable.

Drift emulates the characteristics of vintage hardware by incorporating subtle imperfections in tuning and parameter settings. I extensively relied on this synthesizer due to its versatile timbral capabilities. For instance, in movements such as “Growth,” “Unison Trio,” and “Growth 2,” Drift was employed to create drones, enriching the sonic landscape with its nuanced timbres. Furthermore, in “Percussive,” I utilized Drift to generate a bass drum timbre and create a drum machine capable of producing crash, conga, tom, and clap sounds. In “Crunchy Grapes,” I specifically utilized Drift’s mono mode, allowing for seamless pitch glide between two notes, as depicted in Figure 12.

Analog is a polyphonic synthesizer with a classic voice architecture. In “Growth” and “Growth 2,” I utilized Analog to generate various colors of white noise, and in “Space Growth,” Analog was employed to introduce vibrato into the synthesizer, enhancing the sonic palette with subtle modulation effects.

Operator is capable of generating FM synthesis using up to four oscillators (A through D), which can be routed either in parallel or in series, offering a wide range of



Figure 12. The glides in “Crunchy Grapes”

sonic possibilities. I specifically employed Operator in “Trio” due to its ability to create timbral changes through additive synthesis. In this movement, the music derived from “Balloon” in the pre-show was looped throughout the piece. All seven tracks were routed to one bus track, with an additional track created for the performer to improvise on the MIDI keyboard. At first, the volume for the looped track is off, so we can only hear the notes improvised on the MIDI keyboard. Four knobs were mapped for parameter control. Knob one controlled spread and time, knob two adjusted filter frequency and filter resonance, knob three regulated dry/wet parameters, and knob four managed tempo and looped track volume, as illustrated in Figure 13.

Wavetable consists of two oscillators capable of smoothly transitioning between different waveform shapes. I specifically integrated Wavetable into “Duet” to take advantage of its nuanced timbral changes. In this movement, the performer improvised on the MIDI keyboard, triggering the arpeggiator set to a C whole-tone scale due to major seconds in the intervallic motive. Various parameters were mapped to four knobs, enabling real-time manipulation of the sound. Knob five controlled synced rate, gate, and



Figure 13. The mapping for the knobs in “Duet” and “Trio” pitch, while knob six adjusted wave position, filter frequency, and filter resonance. Knob seven activated the arpeggiator and major triad device, while knob eight controlled amplitude decay time and volume, as depicted in Figure 13.

In addition to the Ableton instruments, I incorporated various audio effects to enhance the sonic landscape of the movements. Among these effects were Shifter, EQ Eight, Reverb, Delay, Beat Repeat, Auto Pan, and Low-Frequency Oscillator (LFO).

Shifter, a tool capable of subtly transposing pitches, and EQ Eight, which allows for the attenuation of eight frequency bands, found application in “Space Growth.” Inspired by Belgian composer Henry Pousseur’s electronic composition *Parabolics Studies 1* (1972), I sought to emulate the sense of liberation experienced in music characterized by significant pitch fluctuations. Shifter was employed to capture this essence, while EQ Eight was utilized to filter out the piercing high frequencies, ensuring audience comfort and enjoyment.

Reverb, an effect simulating different room sizes, played a role in “Unison Trio” by providing a solid bass foundation to support the free-flowing violin melody. In “Crunchy Grapes,” Reverb complemented the monophonic fixed media and the somewhat hypnotic characteristic of minimal music.

Delay, capable of producing echoes at various rates, is featured in “Growth” and “Growth 2” to accentuate the buzzy quality of certain passages, as depicted in Figure 14. Additionally, it was used in “Percussive” to enhance vibrancy of percussive elements, particularly during drum solo passages, by creating distinct layers of sound.



Figure 14. A buzzy passage in mm. 159–168 of “Growth”

Beat Repeat produces randomized or controlled repetition for an incoming signal. I used it in “Unison Trio” to enhance the interest of the simple three long bass notes throughout the movement. I employed it in “Percussive” to gradually divide the long descending bass ostinato formed by four notes into fragmented rhythms.

Auto Pan pans the music to the right or left channel. When a sawtooth down is chosen, we cannot hear the sound when the line reaches its lowest point, making a similar effect as Beat Repeat. I used it in “Percussive” and “Growth 2” to make a sound on and off frequently.

LFO alters parameters at a low frequency, usually below 20 Hz. I used it in “Growth,” “Space Growth,” “Unison Trio,” and “Growth 2” to constantly change parameters like pitch, filter, and noise color so that the sound was more dynamic.

There were also pre-recorded violin sound clips in “Growth” and “Growth 2.” I added Shifter and Reverb, which created a ghost-like violin timbre to echo or recall the live violin’s phrases.

The utilization of audio tracks and looping proved to be crucial aspects of the performance’s technical setup and musical continuity.

For movements like “Growth,” “Unison Trio,” and “Growth 2,” where extended drones and noise elements were prevalent, recording them onto an audio track ensured a seamless and continuous sound when triggering different sections mid-movement. Moreover, consolidating these elements into an audio track simplified parameter control, allowing for adjustments to be made more efficiently, as demonstrated in “Trio.” Looping, on the other hand, played a vital role in maintaining coherence and fluidity throughout the performance. In movements characterized by flexible tempo or rhythm, such as “Growth” and “Growth 2,” the Session View in Ableton Live facilitated the triggering of sections, granting the violinist greater artistic freedom. To prevent premature endings and maintain flow, certain clip ends were set to loop. Conversely, for movements like “Unison Trio,” the Arrangement View¹⁴, as depicted in Figure 15, was

¹⁴ In the Arrangement View, the clips, MIDI sequence, audio recordings, and effects are arranged horizontally in a time-line manner, allowing users to play them at any time point. This timeline-based arrangement is a common feature in many music editing applications.

preferred, despite gradual tempo changes as each section featured only one bass note. To synchronize with the violinist, the ends of the first two sections were looped.

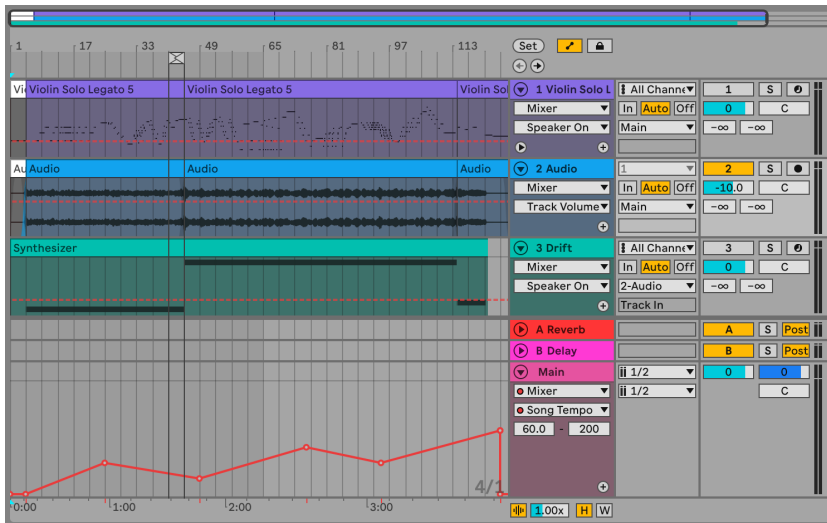


Figure 15. The Arrangement View in “Unison Trio”

Table 6 summarizes the instrument and audio effects used in the fixed media for each movement in order.

Table 6. The summary of the instruments and audio effects in the fixed media

Movement	Subtitle	Instrument	Prominent audio effect*
1	Growth	Drift, Analog	Delay
2	Violin 30	N	N
3	Trio	Operator	Reverb
4	Unison Trio	Drift	Reverb, Beat Repeat
5	Duet	Wavetable	N**
6	Percussive	Drift	Delay, Beat Repeat, Auto Pan
7	Tyra Lift	N	N
8	Space Growth	Analog	Shifter, EQ Eight
9	Crunchy Grapes	Drift	Reverb
10	Growth 2	Drift, Analog	Delay, Auto Pan

* There were more audio effects than listed.

** I only used MIDI effects for this movement because the audio effects in Wavetable are enough for me.

Dance in *Growth*

In this section, I will discuss three dimensions related to dance: costumes, lighting, and choreography.

With no prior experience in costume design myself, Kevin suggested brainstorming growth-related keywords to aid visualization. Nouns like “hope,” “light,” and “ball” emerged, leading to considerations of size, texture, and color. After evaluating clothing options and ensuring coordination among dancers, we finalized costumes: light blue, green, or white undershirts with earthy-toned bottoms for the dancers, mirrored by the violinist’s attire. Kevin and I opted for pink casual shirts and dark pants, a nod to a community ritual from our rehearsal practice where Kevin wore pink every Wednesday.

Lighting, a new aspect for me, played a vital role in the performance, as visual elements are pivotal in dance. Collaborating with Kevin, we discussed the mood and atmosphere for each segment, allowing technical personnel to adjust lighting accordingly. This iterative process led to four distinct lighting schemes, with subtle variations to enhance the narrative. These schemes included dawn, impact, settlement, and hope. In the opening of “Growth,” a single white spotlight intensified gradually, symbolizing dawn, while “Unison Trio” incorporated additional side lights. The “Percussive” section featured a darker red and blue scheme, reflecting the music’s impact, followed by a return to brighter lighting to signify settlement. “Growth 2” commenced with minimal pulsing lights, transitioning to warmer yellow lights to represent hope, with all lights fading before the final bow.

In regard to choreography, I discovered that it is based on the music, the mapping drawn by the dancers, and role-shifting among the dancers. For example, in “Growth,” the constant white noise evoked imagery of sea waves so the dancers were told to dance like waves crashing at the rocks, and the buzzy section, as shown in Figure 14, inspired Kevin to instruct the dancers to move with a vibrating quality like clapping or pulsating waveform. The choreography was also affected by my explanations of intent. For instance, I told the dancers that I wanted to convey the struggle in the process of growth, so Kevin brought up the idea of five touch points, in which the trio dancers could only touch the ground with five collective points, including a foot, a back, a hip, a hand, and so on. Another example is the music in “Percussive.” It made Kevin choreograph a game for the trio dancers: two dancers danced as fast as they could with no repetition as well as found angular pathways or only curvy pathways and actions, and the other counted from one to thirty, repositioning music stands upstage close to the curtain before switching with a dancer. Yet another example is the music “Duet” improvised by Zoe. The other dancers were informed by Zoe’s improvisation and vice versa, and sometimes the dance and the music had the same pace.

The mapping choreography method occurred in the dancer’s trio collaborations, including “Unison Trio,” “Crunchy Grapes,” and “Tyra Lift.” Kevin prompted the dancers to reflect on their associations with the word “growth,” culminating in the collective creation of short and group phrases through improvisation. Each dancer took turns improvising with the words “spurt” and “repair,” while the others documented their

observations on paper. These mappings formed the foundation for developing a collective phrase derived from shared memories or impressions.

To choreograph based on role-shifting among the dancers means that the dancers became music performers, choreographers, or directors. In “Trio,” Zoe transitioned to the role of the violin player, while Em assumed the role of a music improviser previously held by Zoe in “Duet,” demonstrating how they became integral to the music-making process. In “Unison Trio,” “Crunchy Grapes,” and “Tyra Lift,” the trio dancers became choreographers, composing their movements by themselves. In “Tyra Lift,” they became directors, saying cue words for Tyra to be successfully lifted. Throughout these shifts, each dancer’s decision-making influenced the others, underscoring the collaborative nature of their creative process.

Dynamics Between Collaborators

As Pierre Bourdieu’s field theory (1984) surmises, artistic production is a culmination of contributions from a large field, encompassing various subfields such as composers, choreographers, performers, technical personnel, and more. My discussion of these aspects will be concise, however.

Initially, I took the lead as a composer in our collaboration with Kevin, dictating topics and approaches while soliciting feedback. However, as Kevin shifted his focus to directing dancers and involved three dancers in the process, the dynamic changed. He became more involved in directing movements, leading to a rebalancing of power dynamics. Kevin encouraged me to direct dancers and empowered them to choreograph

their movements or engage in music improvisation, fostering a fluidity in roles that deepened my understanding of choreography and the dancers' appreciation for music improvisation.

In my collaboration with the trio of dancers as a composer, I often solicited their opinions on the music, typically asking, "What do you feel about the music?"

Conversely, in my capacity as a choreographer, I communicated specific expectations to guide their movements, frequently initiating discussions with phrases like, "I felt... Could we try...?"

During rehearsals, I provided Xenia with a violin part.¹⁵ However, she requested a full score during our initial rehearsal to ensure synchronization with the fixed media. Although I attempted to move the initial violin notes into the fixed media for ease of synchronization, Xenia insisted on adhering to the original version. The sole modification I insisted upon was in the opening measures of "Percussive," where adjusting the violin's role was necessary for seamless integration. Figures 16 and 17 illustrate the original and revised versions respectively.

The dynamics between collaborators, while always respectful, were often difficult to navigate and required compromises. By sincerely keeping an open mind and having good communication through complete discussion for our agreement and disagreement, I not only gained precious collaborative experience during the process but also achieved a

¹⁵ In "Growth," "Unison Trio," and "Growth 2," there was another unmeasured version due to its freedom of time. Xenia chose to read the measured score ultimately. I realized that a score without bar lines may appear free in time, but sound constrained. Conversely, a score with bar lines may seem constrained in time, but sound free.

satisfactory performance, leading to a future willingness to collaborate with dance artists again.

$\text{♩} = 352$ (, $\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

pizz.

Violin

p *mp*

Drum Machine

$\text{♩} = 352$ (, $\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

The fixed media randomly highlight some of the notes in the violin part.

Fixed Media

mp

Figure 16. The first five measures in the original version of “Percussive”

$\text{♩} = 352$ (, $\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

pizz.

Violin

mp

Drum Machine

$\text{♩} = 352$ (, $\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

The fixed media randomly highlight some of the notes in the violin part.

Fixed Media

p *mp*

Figure 17. The first five measures in the revised version of “Percussive”

Personal Growth

This collaboration provided me with invaluable lessons in effective communication and the art of compromise, broadening my vision in the dance field while making my music distinct through a different approach, interaction with the dancers, and a deeper knowledge of Ableton Live.

Working on *Growth* expanded my scope in the dance field. I learned that dancers generally prioritize visual elements on stage, necessitating careful consideration of stage aesthetics. Therefore, any cords on the stage, as we commonly see in an electroacoustic concert, are not permitted in a dance performance. Whether the costumes of all performers on stage, including the violinist's, match the feeling of the dance show is crucial as well. Additionally, lighting plays a significant role in a dance program. Different colors of lights and their combinations will influence the feeling of the performance completely. Consequently, it is not ideal to set up a laptop from an audience seat as electroacoustic equipment because the light from the laptop might impact the experience for the audience to appreciate the performance. Moreover, unlike in music, where performances often mark project completion, dance works are continually evolving even after the premiere. Hence, dancers put a lot of effort into group rehearsals, yet musicians tend to focus more on independent work and rehearse in an ensemble just a few times.

This collaboration inspired a change in my music composition practice. I employed a lot of improvisational skills in crafting the violin part by recording the

improvisation on the MIDI keyboard and editing it afterward, resulting in a livelier, less rigid musical expression unconstrained by traditional meters.

It also made the sections of my music more distinguishable for the dancers after my interaction with them. An illustrative example is evident in the choreography of “Growth.” When I wanted the dancers to shift in alignment with the sections of the music, they told me it was hard for them to distinguish between different sections. In addition, it was difficult for them to shift their movement right after they heard a change in the music. In response, I accentuated section boundaries by implementing strategies such as lengthening notes and incorporating extended pauses immediately preceding section transitions. These adjustments aimed to provide clearer cues for the dancers, facilitating seamless alignment of movement with musical dynamics, as depicted in Figure 18.

The image shows a musical score for three instruments: Violin (Vln.), Grand Violin (G. Vln.), and Fiddle (FM). The score is divided into two systems. The first system starts at measure 47, marked with a box labeled 'B'. The Violin part has a long rest. The Grand Violin part plays a melodic line starting with a piano (*p*) dynamic. The second system starts at measure 53, marked with a box labeled 'C'. The Violin part has a long rest. The Grand Violin part continues its melodic line, with a red box highlighting a specific measure. The Fiddle part has a long rest. Dynamics include *pp* (pianissimo) for the Grand Violin and Fiddle parts.

Figure 18. A long pause before section C in “Growth”

This project further distinguished my music from previous compositions, particularly through my utilization of Ableton Live to compose the fixed media element for each movement. Guided by Professor Dicke's hands-on demonstrations and my own experimentation, I delved into Ableton Live's array of instruments such as Drift, Analog, Operator, and Wavetable, as well as various audio effects including Reverb, Shifter, LFO, Beat Repeat, EQ eight, and Auto Pan. This exploration enriched the sonic palette of my music, a pursuit I intend to continue.

I would like to collaborate with a solo choreographer/dancer and utilize real-time audio effects processing next time. I may also consider putting some choreographic notes on the score. I will write more music for dance to bridge the gap between music and dance for art lovers and the general population.

In a word, the collaboration facilitated the development of communication skills, expanded my knowledge of the dance field, and introduced me to new musical vocabulary. My future composition research pursuits include a solo choreographer/dancer with live processing, hoping to bridge the gap between music and dance among art lovers and ordinary people.

CHAPTER FIVE: CONCLUSION

Let us revisit the research questions and objectives posed in Chapter One:

1. Does the inclusion of dance foster novel cognitive processes or creative methodologies?
2. Does the combination of music and dance inspire a cohesive artistic experience?
3. What methodologies are effective for directing dancers?
4. What are the distinct concerns inherent in music and dance?
5. How can strategies for negotiation and compromise be effectively employed amid discord?

The inclusion of dance creates novel cognitive processes and creative methodologies by considering how to integrate music and dance. Regardless of whether the music precedes or follows the dance, the dancers engage in a process of visualizing the music, which in turn stimulates cognitive processes and prompts the development of creative methodologies.

Furthermore, the amalgamation of music and dance cultivates a cohesive artistic experience. While it remains possible for music for dance to execute musical movements without integrating dance, or vice versa, the resulting expression lacks depth. This was evidenced when a dancer was absent during rehearsals or when the violinist was unavailable until shortly before the performance. In such instances, the essence of the piece was compromised.

Moreover, directing dancers continues to pose challenges. However, through collaboration with the choreographer and delegation of communication tasks to Kevin, I have learned to navigate this complexity. Although at times Kevin's input may overshadow my own, the experience of directing dancers has provided valuable insights into choreography and the realization of desired movements.

Additionally, the respective concerns inherent in music and dance encompass practicality versus aesthetics and performance versus process. While prioritizing aural practicality and the performance may suffice for a concert, dance performances emphasize visual aesthetics in the development process. Thus, open exchange and collaborative problem-solving necessitate these concerns.

Lastly, negotiation and compromise are inevitable aspects of collaborative projects. Fortunately, despite occasional discord, we were able to achieve equilibrium, facilitated by mutual respect and mutual trust for each other's professionalism, knowing that we were creating a collective piece and that both music and dance are indispensable.

In light of the research questions and objectives, our nine-month process culminated in a performance and subsequent reflection on both process and outcome. This collaboration enabled me to broaden my repertoire, enhance my proficiency in fixed media, and refine my ability to integrate music and dance, thereby enriching the performance. Additionally, insights gleaned from this collaboration offer valuable guidance to those interested in music-dance collaborations, shedding light on various approaches and considerations.

While music-dance collaborations are increasingly prevalent in the 21st century, accessibility to performance videos remains limited, hindering comprehensive understanding solely through written documentation.¹⁶ Future research avenues may explore techniques for musicians to incorporate clear movements while performing, for dancers to leverage virtual technology, and for audiences to be directed as either musicians/composers or dancers/choreographers in the creative process.

¹⁶ Therefore, I put the video link for *Growth* here at <https://drive.google.com/drive/folders/1JVCp5SrtQSry8UDVV9oeSTtbNzz6NI0z?usp=sharing>.

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APPENDIX A: PROGRAM FOR *GROWTH*

UNIVERSITY OF CALIFORNIA, RIVERSIDE

Department of Dance and Department of Music present

Growth:

Co-directed, created, and performed by **Chen-Kang Kao**, Music Ph.D. candidate in Composition, and **Kevin Wong**, Dance MFA candidate in Experimental Choreography; created and performed in collaboration with **Em Berdeja**, **Zoe Foy**, and **Tyra Logan**; with guest violinist **Xenia Deviatkina-Loh**

Ian Dicke, Music Ph.D. Committee Chair
Joel Mejia Smith, Dance MFA Committee Chair



Wednesday, March 13, 2024
7:30 P.M.
Performance Lab (ARTS 166)
Free and Open to the Public

Land Acknowledgment

Miyaxwe (mee-yahh-weh, hello) — In the spirit of Rupert and Jeanette Costo's founding relationship to our campus, we would like to respectfully acknowledge and recognize our responsibility to the original and current caretakers of this land, water and air: the Cahuilla, Tongva, Luiseño, and Serrano peoples and all of their ancestors and descendants, past, present and future. Today this meeting place is home to many Indigenous peoples from all over the world, including UCR faculty, students, and staff, and we are grateful to have the opportunity to live and work on these homelands.

Here in the Department of Dance, we extend this to acknowledge the multiple fraught histories of this land. We recognize what was taken for this University to be built, including the enslaved labor and ongoing exploitations that have contributed significantly to the wealth in the U.S. that helped found the University of California, and the migrations and immigrant labor that have contributed significantly to this area. We register that members of our community have benefitted, and continue to benefit, from the use and occupation of this land since the institution's founding in 1907. We also acknowledge the ancient relations of friendship, kinship and alliance between various local Native communities, and visitors to this region.

This acknowledgment is part of our Department's commitments: to confront exclusions and attempted erasures of Indigenous, Black, and Brown peoples, and others; to accept/embrace/acknowledge peoples' bodies in their wide range of capacities, abilities, forms, and qualities; to be radically inclusive of queer peoples and bodies in the world and in our field; to support peaceful human mobility across land and waters for all; to being good guests as we travel; to being in respectful relationship to the land wherever we are; and to building relationship with one another—including, for those of us who are not Native to these lands—becoming good allies, and accomplices. We continue to work creatively towards enacting practices and policies that register these histories and strengthen these layers of knowledge and ways of being.

The Music Department also acknowledges that it was founded upon exclusions and erasures of many Indigenous peoples. This acknowledgment demonstrates a commitment to beginning the process of working to dismantle the ongoing legacies of settler colonialism. Truth and acknowledgment are critical to building mutual respect and connection across all barriers of heritage and difference. We begin this effort to acknowledge what has been buried by honoring the truth. Please take a moment to consider the many legacies of violence, displacement, migration, and settlement that bring us together here today, and join us in uncovering such truths at any and all public events.

—*Achama* (aw-chem-ahh, thank you)

A letter from the Co-Directors

Since April 2023, we have been probing at what it means to collaborate between musicians/composers and dancers/choreographers. We developed our working relationship through a shared interest in improvisation, playing with music composition and choreographic prompts/scores to understand each other's creative impulses, habits, and curiosities. One of our very first inspirations was from Cloud Gate Dance Theatre, a contemporary dance company that merged different Chinese dance and music aesthetics. We worked through concepts like meditation, Tai-Chi, chaos, and timbre/quality as a launching ground for bridging our independent decision-making thinking. To expand what we felt could help each of us grow in our own artistic research, we explored how movement can instill musical elements like loudness and softness and how sound can become physicalized in space. Focusing on the fixed media Chen-Kang composed and Kevin's movement aesthetic developed across multiple iterations of a soundscore, both of us were reflecting collectively to get closer to what our choreo-sonic world was.

Chen-Kang knew he wanted to expand his role from being a musician/composer to being a director from the very beginning which inspired Kevin to reimagine himself as a co-director rather than a dancer/choreographer. As a way to inspire our own growth, this work now includes undergraduate dance majors Em Berdeja, Zoe Foy, and Tyra Logan, as well as guest violinist Xenia Deviatkina-Loh. The study is a series of structured dance improvisation scores and composed music built from multiple versions of co-directing across disciplines to nurture, represent, challenge, and imagine the process of growth. We are working with multiple levels of directing where power levels may be intentionally unbalanced to see how they impact the collaboration process and product.

"Growth" came from a score Chen-Kang wrote for the violin, fixed media, and dancers. Inspired by imagining a growing seed, it grew from one section to several by motivic development and having a different centered note in the whole-tone scale. In addition to motivic development, some melodies were improvised before they were set in order not to be limited by a regular meter. The dancing scores were built through writing exercises, time/space/energy-based practices, and improvisation with contact/sounds/instruments to locate growth as spurts, tension, expansion, and trajectory. Moving beyond the image of the seed, our goal is to invoke a sensation of growing emotionally, physically, and/or mentally as we embark on this journey created through questioning how musicians/composers and dancers/choreographers can collaborate on a performance.

Chen-Kang Kao and Kevin Wong

Growth

Co-directed, created, and performed by **Chen-Kang Kao**, Music Ph.D. candidate in Composition, and **Kevin Wong**, Dance MFA candidate in Experimental Choreography; created and performed in collaboration with **Em Berdeja**, **Zoe Foy**, and **Tyra Logan**; with guest violinist **Xenia Deviatkina-Loh**

7:10 pm: Pre Show: In-Practice Lead and Support

7:35 pm: Growth

Doors open at 7:10 pm. Showing ends around 8:30 pm. There is no intermission. Please, no flash photography, video, or recording. Remember to silence cell phones and other electronic devices. This work is presented in part by the University of California, Riverside, Department of Dance and created in partial fulfillment of the requirements for the Master of Fine Arts degree in Experimental Choreography.

Pre Show: In-Practice Lead and Support

Chen-Kang Kao, pianist and digital music performer
Kevin Wong, dancer

Chen-Kang and Kevin offer a series of improvisational practices that guided their process into collaboration. Bridging their unique experiences of music and dance, the duo works by leading and supporting each other to answer the question, “How do you make music for dance?”

What is Lead and Support for us?

Lead- A position of initiating the process of satisfying desires and wants. Usually, the lead considers their own wants and needs before thinking about what the support is looking for.

Support- looks for what the lead wants or needs in order to satisfy their desires. Sometimes the support may push the lead to discover new ideas or dive deeper into current ones.

In this iteration, we will use piano and digital music to practice lead and support. Using (non)repetition and changing the parameters to demonstrate a heightened sense of “listening”, the music performer and the dancer create a world together through improvisation.

— Transition —

Growth

Em Berdeja, choreographer, digital music performer, and performer
Xenia Deviatkina-Loh, violinist
Zoe Foy, choreographer, digital music performer, violinist, and performer
Chen-Kang Kao, composer
Tyra Logan, choreographer, vocalist, and performer
Kevin Wong, choreographer

Seawaves crashing, tension and releasing, buzzy and mellow, spurt and repairs, crunchy grapes... An evening of improvisational movement practices exploring the sensation of growth to fixed media and live violin. Growth in this piece is about growing towards a collective whole. A piece where music and dance are aligned.

Artist Bios

Emily “Em” Berdeja (She/Her) is a third year Mexican American undergraduate student at UCR who is double majoring in Anthropology and Dance. In her upbringing, she fell in love with performing through the disciplines of ballet, tap, lyrical, contemporary, musical theater, jazz stylings, and modern dance, while being part of a pre-professional modern team entitled Evolution from 2019-2021. At UCR she feels her spark for the dance arts have re-emerged since the height of the pandemic, allowing her to craft and collaborate in ways that challenge her. She has since performed in UCRiD 2023, and Spring Forward 2023: RITWAL. After graduation, Emily hopes to continue to build herself into a graduate scholar in the field of world arts and culture, and is eager to continue to collaborate with peers and mentors, cultivate dance and perform!

Xenia Deviatkina-Loh

Superb playing and a moving interpretation” Limelight magazine.

Award winning violinist Dr. Xenia Deviatkina-Loh has performed as soloist and recitalist in various venues across Australia, New Zealand, the UK, the US, and China. She also frequently performs with major ensembles and concert series around LA. As of 2021, she is a member of ECHOI — MEC’s ensemble-in-residence. In 2019, Dr. Deviatkina-Loh released her debut album under SHEVA Contemporary. A dedicated pedagogue, she has partaken in tours spanning regional NSW in Australia, regional Washington State, and Los Angeles, giving masterclasses, lectures, and recitals. She has presented at AWMAT (Alliance of Women in Media Arts and Technology) and ACMI (Asian Classical Music Initiative), and was a fellow at the Lucerne Festival Academy, the Atlantic Music Festival, SICPP (Summer Institute for Contemporary Performance Practice), and NMFS (New Music for Strings). Recently, she was invited to serve as a Panelist for the International Grand Music Festival in Indonesia, and the Irvine Conservatory International Music Competition. She was a Teaching Artist at the Beckman YOLA Center, and is currently on staff at UCLA Herb Alpert School of Music. She is also the president of ACMI’s 2024 International Conference, which will be hosted by Mount Saint Mary’s University Los Angeles in April. Dr. Deviatkina-Loh received her Bachelors of Music Performance degree at the Sydney Conservatorium of Music; her Masters of Arts degree at the Royal Academy of Music, London; and her Doctor of Musical Arts degree at UCLA.

Zoe Foy (she/they), two-time recipient of the Marius DeBrabant Chancellor's Performance Award, is a queer artist in their fourth year of undergrad at UCR, majoring in Dance Making. Since arriving in Riverside, Zoe has expanded their movement training and cultivated an emerging improvisational practice, informed by their upbringing, movement knowledge, and ongoing reflections on the meaning of life. She has participated in multiple UCR productions including *UCRiD 2022*, *UCRiD 2023*, *UCRiD 2024*, *Spring Forward 2023: RITWAL* and *Cabaret*. Recent projects include dancing with Peninsula Lively Arts in San Mateo, California at the 2023 *Peninsula International Dance Festival* and performing an original work in February 2024 at The FirehouseJT in Joshua Tree, California.

Chen-Kang Kao earned his master's degree in composition from the department of music at National Taiwan Normal University, where he delved into the study of serial music and its application in his compositions. Awarded a prestigious study-abroad scholarship by Taiwan’s Ministry of Education in 2021, he embarked on his doctoral journey at the University of California, Riverside, focusing his research on the symbiotic relationship between music and dance collaborations. His inquiry encompasses the intricate dynamics of balance between lead and support, process and performance, as well as negotiation and compromise, examining his own role within these collaborations and investigating the mutual benefits for all artists involved, with a particular emphasis on his composer identity. Under the mentorship of Ian Dicke, he has refined his artistic skills. Notable among his commissioned works are *Etus Nate* – for Mixed 4-part Chorus, Flute and Bassoon (2015), *Liberation: Enlightenment* – for Mixed 4-part Chorus and Piano (2017), and *Between Mikrokosmos and Makrokosmos II*. “A Taiwanese in California” – for Piano Solo and Fixed Media (2022).

Tyra Logan is a fourth-year undergraduate student double majoring in Dance and Education at the

University of California Riverside. Tyra has trained in contemporary, modern, Horton technique, jazz, tap, and hip hop for 17 years. She also has three years of contemporary competitive dance experience. During high school, she was captain and choreographer for the Surreal Fidelity dance team for 3 years. At UCR, she choreographed a solo that focused on civil rights titled, *A Change is Gonna Come* and a group dance titled *Reminisce* where dancers went through the emotional journey of their own recollection of memories. Additionally, she has also received the Marius Debrabant Award (Chancellors Performance Award) which is awarded to those with significant contributions in classes within the major that illustrate academic and creative excellence, an aspiration toward professionalism, and a clear sense of passion for the craft. Tyra aspires to further her choreography and dance studies by attending an MFA Dance program after graduation.

Kevin Wong is a Queer Asian-American experimental artist from San Francisco, California with a background in contemporary-modern, hip-hop, and Chinese dance techniques. His work researches ideas of intimacy, desire, and memory through improvisation scores, experimental choreographic approaches, and heartfelt conversations. His goal is to develop an analytical and bodily practice that cultivates a brave space for generating a deeper understanding of the self. Some of his recent explorations include a deep questioning of decision-making within improvisational collaborations between musicians and dancers, an object-based study with his childhood protector Bulbasaur, and technological play with cameras and projections. Within a world of both infinite and finite possibilities of materializing movement within a soundscape, he invites sensing through listening with the full body as a way to discover. As memories are fragile indicators of a future, he activates a deep connection within the self, as the self, to find pleasure. Utilizing the advancement of technology, he exposes the potential shifts from intentional acts of love, care, and tenderness. All this said, he still is constantly questioning why and how we experience intimacy.

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meital yaniv: Marketing Flyer
Anika Sood: Photographer Instagram @anikasoodphoto
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Chin-Sheng Teng: Videographer

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Kevin's Acknowledgement

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UCR Department of Music

Jonathan Ritter, Chair, Department of Music

Greg Renne, Production Manager

Marcelina Ryneal, Financial & Administrative Officer

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Information: performingarts@ucr.edu

DANCE AT UCR EMBRACING BOTH DANCE MAKING AND WRITTEN SCHOLARSHIP -- DANCING AND WRITING ABOUT DANCING

UCR's Department of Dance offers curricula leading to three different degree programs: a B.A. in Dance, an M.F.A. in Experimental Choreography, and a Ph.D. in Critical Dance Studies. These innovative programs continue to influence the fields of dance and dance studies internationally.

THE B.A. IN DANCE

The Dance major at UCR is housed in a department that is distinctive for its outstanding faculty of nationally and internationally recognized artists and scholars who draw from a variety of creative and academic backgrounds, including dance making, choreography, visual art, creative writing, literature, African diasporic ritual cultures, Hip Hop and street dance, Indian diasporic dance, Indigenous studies, digital technologies, performance studies, queer studies, and cultural studies.

The B.A degree requires students to take courses in both Choreography/Dance Making and Dance Studies, and eventually choose one track for their capstone project (i.e. performance-based and research paper respectively). In some cases, students may opt to complete a capstone project in both tracks. The Dance major cultivates rigorous creative research practices as well as critical cultural and historical perspectives on dance, through courses in the studio and in seminars. Students examine notions about aesthetics, compositional processes, the body, gender, race, class, and sexuality as part of ongoing conversations in the field. Students are expected to sustain their movement practice every quarter and can choose from courses in Hip Hop, Modern, Ballet, Jazz, West African, House, Capoeira, Somatics, Yoga, Korean, Hula, Filipino, and Latin American Social Dance, as well as other forms offered by guest artists.

Dance majors, minors and those interested in Dance have multiple opportunities to perform, including in UCR is Dancing and Spring Forward, the annual concerts featuring original choreography and performance projects by students. Students can also apply to tour with the undergraduate ensemble for the Gluck Fellows Program of the Arts. Other opportunities include collaborating with graduate students on their projects, and in some cases with faculty and guest artists on their research.

In addition, visiting professional dancers, choreographers, and scholars come to UCR frequently to give special workshops, master classes, and lectures. Dance majors are eligible for the Chancellor's Performance Award, a scholarship of up to \$2,000. Student assistantships and other forms of financial aid are also available. Undergraduate majors may apply for research grants and stipends for summer dance studies. Selected students receive \$1,500 Maxwell H. Gluck Fellowships.

THE DANCE MINOR

Students who minor in Dance receive an introduction to choreography and dance making, movement practice experience in a variety of dance forms and traditions, and exposure to cultural and historical studies of dance that enable them to pursue upper-division courses germane to a particular focus in dance. Students must declare the minor before their final degree check before graduation, by completing a petition with the Student Affairs Office in the College of Humanities, Arts, and Social Sciences. Prior approval by the Department of Dance is required. The minor is noted on the transcript at the time the degree is conferred. See Minors under the College of Humanities, Arts, and Social Sciences in the Colleges and Programs section of the catalog for additional information on minors.

GRADUATE DANCE STUDY AT UCR

Offering the best of two worlds: artistic and academic investigation

UC Riverside's Master of Fine Arts in Experimental Choreography, inaugurated in 2001, offers emerging and established artists a site for intense investigation in dance making, performance, and interdisciplinary embodied practice. Over the course of six quarters, students engage in a series of core composition courses and select critical dance studies courses that focus on and address current and urgent questions in the field, and that center experimentation and interdisciplinarity in their approaches. The final project demonstrates a thorough investigation and committed execution of a specific set of critical questions unique to their cumulative research, and includes a public artist talk and a written reflective/ theoretical document.

The Ph.D. in Critical Dance Studies (inaugurated in 1993 as the Ph.D. in Dance History and Theory) at UC Riverside is widely recognized as the preeminent site for intellectual inquiry into dance, corporeality, movement, choreography, and performance. The Ph.D. program's explicit focus on dance studies and large concentration of Critical Dance Studies faculty distinguish it from doctoral programs in performance studies, theater studies, and cultural studies. At the same time, the program is committed to interdisciplinary models of dance scholarship that draw on a variety of methodological and theoretical approaches. UC Riverside's Department of Dance features an outstanding faculty of nationally and internationally recognized scholars and artists. For more information, visit dance.ucr.edu

UCR DEPARTMENT OF DANCE

PROFESSORS

Cultural Studies, Dance Theory Anthea Kraut
Critical and Indigenous Dance Studies, Iyengar Yoga Jacqueline Shea Murphy
Improvisation, Queer Performativity, Pedagogy Joel Smith

ASSOCIATE PROFESSORS

Dance Ethnography, Political Theory, Black Aesthetics Imani Johnson
Dance Ethnography, Global Political Economy, South Asian Diaspora, Bharata Natyam Anusha Kedhar
Contemporary Performance Practices taisha paggett
Critical Theory, Latin American Mestizo Modernism José Reynoso
Black Performance and Contemporary Practices, Queer Performativity, African Diasporic, Ritual and Resistance Forms Sage Ni'Ja Whitson

ASSISTANT PROFESSORS

Performance Studies, Indigenous and Decolonial Studies, Ontological Critique María Firmino-Castilo
Performance Studies, Transnational Feminist Studies, SWANA Studies Heather Rastovac Akbarzadeh

VISITING ASSISTANT PROFESSOR

Latin American Social Dance Patricia "Patty" Huerta

LECTURERS

Improvisation, Composition, Queer Performance Theory Emily Barasch
Hip Hop Brandon J.
Korean Dance DaEun Jung
West African Dance Makeda Kumasi
Hawaiian Hula Toni Kemehana Pasion

STAFF

Technical Director Tony Shayne

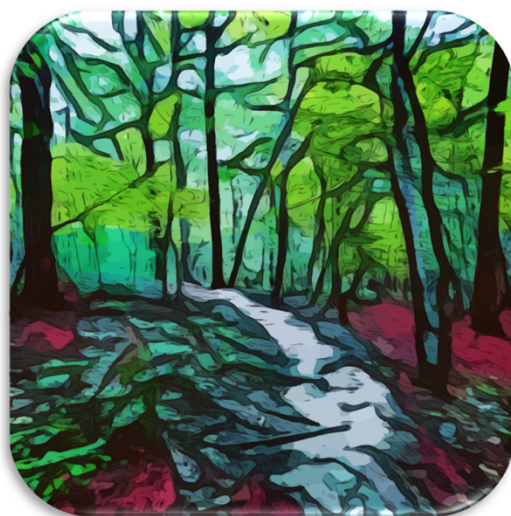
Information

Email: dance@ucr.edu | Website: dance.ucr.edu | Visit dance.ucr.edu/event/ to view our events calendar

APPENDIX B: SCORE FOR *GROWTH*

GROWTH

—for Violin, Fixed Media, and 3 Dancers (2024)



Chen-Kang Kao

Program Notes

This project is a collaboration among music and dance artists, including a composer, a violinist, a choreographer, and three dancers, alongside fixed media. Throughout the process, roles may shift; for instance, the composer might also perform or choreograph, and dancers might also play musical roles, and so forth.

The title "Growth" originates from a score I composed for the aforementioned ensemble. Inspired by the concept of a burgeoning seed, the piece evolves from one section to several through motivic development and different root notes in a whole-tone scale. Various approaches to collaboration are employed, such as composing music before choreography ("Growth" and "Growth 2"), choreography before composing music ("Unison Trio" and "Crunchy Grapes"), integrating sound and movement ("Percussive"), and presenting music without accompanying dance ("Space Growth").

The objective is to evoke a sense of growth—be it emotional, physical, or mental—as we embark on this collaborative journey. Beyond the metaphor of the growing seed, we are eager for all the participants to witness the growth that emerges from questioning how musicians/composers and dancers/choreographers can collaborate in performance.

The sequence of movements within the project is "Growth," "Violin 30" (improvisation while standing in front of a random music stand), "Improve Jam Trio" (without violin), "Unison Trio," "Duet" (without violin), "Percussive," "Tyra Lift" (without violin), "Space Growth" (without dancers), "Crunchy Grapes," and "Growth 2." Throughout the process, we may rearrange elements to foster collaboration. It is an experiment, a process, and an exploration.

Performance Notes

1. The notes in the fixed media are cue-sized and enclosed in brackets.
2. Bluetooth earbuds playing a metronome sound are required in "Space Growth."
3. Except for "Percussive," "Space Growth," and "Crunchy Grapes," the composer will follow the violin and trigger sections.
4. In "Unison Trio," rhythm precision is not essential; instead; focus on the accelerandos and ritardandos.

Growth

for Violin, Fixed Media, and 3 Dancers

Chen-Kang Kao

$\text{♩} = 80, \text{Calm}$

Violin

Ghost Violin

Fixed Media

pp *mp* *p*

constant noise

8

A

14

Vln. *pizz.* *p*

FM *p*

22

Vln. solo with noise in the fixed media
arco *mp*

26

Vln. *mp*

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30 Vln. *f* *p < mf > p*

35 Vln.

40 Vln. *mf* *mp* *pp*

47 **B** Vln. *p*

53 G. Vln.

59 **C** Vln. *pp*

G. Vln. *pp*

FM *pp*

64 Vln.

FM

69

Vln.

G. Vln.

FM

74

Vln.

FM

79

Vln.

G. Vln.

FM

84

cantabile

Vln.

FM

88

Vln.

FM

92

Vln. *p*

FM *p*

96 D

Vln. *p*

G. Vln.

FM *p*

101

Vln.

G. Vln.

FM

106

Vln.

FM

110

Vln.

G. Vln.

FM

115

Vln.

G. Vln.

FM

mp

119

Vln.

FM

5

123

Vln.

FM

3

127

Vln.

FM

131

Vln.

G. Vln.

FM

mp

136

Vln.

FM

mf

141

Vln.

FM

145

Vln.

FM

150

Vln.

G. Vln.

FM

mf

E

155

Vln.

G. Vln.

FM

158

Vln.

G. Vln.

FM

161

Vln.

G. Vln.

164

Vln.

G. Vln.

167

Vln.

G. Vln.

Detailed description: This page of a musical score contains five systems of music. Each system includes staves for Violin (Vln.), G. Vln. (G. Violin), and FM (Fagott).
- System 1 (Measures 155-157): Vln. and G. Vln. play eighth-note patterns with triplets. FM plays sustained chords.
- System 2 (Measures 158-160): Vln. and G. Vln. play eighth-note patterns with triplets and accents. FM plays sustained chords. A dynamic marking 'f' is present. A box containing the letter 'F' is above the Vln. staff.
- System 3 (Measures 161-163): Vln. plays sixteenth-note patterns. G. Vln. plays eighth-note patterns.
- System 4 (Measures 164-166): Vln. plays sixteenth-note patterns. G. Vln. plays eighth-note patterns.
- System 5 (Measures 167-169): Vln. plays sixteenth-note patterns. G. Vln. plays eighth-note patterns.

170

Vln.

G. Vln.

173

Vln.

G. Vln.

175

Vln.

G. Vln.

FM

G

f

178

Vln.

G. Vln.

FM

181

Vln.

G. Vln.

FM

184

Vln.

G. Vln.

FM

188

Vln.

G. Vln.

FM

H

192

Vln.

G. Vln.

FM

ff

ff

ff

pppp noise

Violin 30

for Violin Improvisation and 3 Dancers

Chen-Kang Kao


♩ = 80, Calm
pizz.
p



♩ = 80, Calm
mp



♩ = 80, Calm
mp *f* *p < mf · p* *mf* *mp*



♩ = 80, Calm
cantabile
pp



♩ = 80, Calm
mf *f* *mf*



♩ = 80, Calm

mf

f

♩ = 80, Calm

f

♩ = 80, Calm

f

♩ = 80, Calm

f

rit.
♩ = 96, freely

mf

rit.
♩ = 88, freely

mf

accel. $\text{♩} = 92$, freely $\text{♩} = 100$

mf

accel. $\text{♩} = 112$ $\text{♩} = 120$

mf

rit. $\text{♩} = 112$, freely $\text{♩} = 108$

mf

$\text{♩} = 352$ ($\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

pizz.

p *mf sub.* *p sub.* *mf sub.*

$\text{♩} = 352$ ($\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

pizz.

f sub. *sf* *mp sub.* *f sub.* *mp sub.* *sf*

$\text{♩} = 352$ ($\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

pizz.

p sub. *mf sub.*

$\text{♩} = 352$ ($\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

pizz.

f *sf* *sf* *ff*

♩ = 80, Capriccioso

mf *p*

♩ = 80, Capriccioso

p

♩ = 80, Capriccioso

*mf*³

♩ = 80, Capriccioso

mf

♩ = 80, Capriccioso

mf *f* *mf*⁶

♩ = 60, soft and warm

p *mp*

♩ = 60, soft and warm

p *mp*

♩ = 60, soft and warm

p *mp*

♩ = 60, soft and warm

mp *pp*

♩ = 80, Dusky

f *f*

♩ = 80, Dusky

mp *mf* *mp*

♩ = 80, Dusky

pp

♩ = 80, Dusky

mf *mp* *pp*

Unison Trio

for Violin, Fixed Media, and 3 Dancers

Chen-Kang Kao

$\text{♩} = 60$, freely

Do not play until the dancers stretch their right arms out (fountain movement).

Violin

Fixed Media

f *p*

8 *accel.*

Vln.

F. M.

15

Vln.

F. M.

21

$\text{♩} = 100$ *rit.*

Vln.

F. M.

mp *mf*

29

Vln.

F. M.

34

Vln.

F. M.

39

Vln.

F. M.

A

46

Vln.

F. M.

♩ = 80 accel.

51

Vln.

F. M.

56

Vln.

F. M.

63

Vln.

F. M.

69

Vln.

F. M.

♩ = 120 rit. .

76

Vln.

F. M.

81

Vln.

F. M.

85

Vln.

F. M.

92

Vln.

F. M.

$\text{♩} = 100$ accel.

96

Vln.

F. M.

101

Vln.

F. M.

107

Vln.

F. M.

B

mf

116 - - - - - ♪ = 140 ♪ = 60

Vln. *pp*

F. M.

Percussive

for Violin, Fixed Media, and 3 Dancers

Chen-Kang Kao

$\text{♩} = 352$ (, $\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

Violin *pizz.*

Drum Machine

Fixed Media *p*

$\text{♩} = 352$ (, $\text{♩} = 144$, or $\text{♩} = 176$), Scherzando

The score shows three staves. The Violin staff is in treble clef with a 5/8 time signature. It contains a single measure of music starting with a pizzicato (pizz.) instruction. The Drum Machine staff is in a drum set notation with a 5/8 time signature and contains a whole rest. The Fixed Media staff is in grand staff notation (treble and bass clefs) with a 5/8 time signature and contains a single measure of music starting with a piano (p) instruction.

5 The fixed media randomly highlight some of the notes in the violin part.

Vln. *mp* *mp* *mf sub.* *p sub.*

F. M. *mp* *simile*

The score shows two staves. The Violin (Vln.) staff is in treble clef with a 5/8 time signature. It contains six measures of music with dynamic markings *mp*, *mp*, *mf sub.*, and *p sub.* The Fixed Media (F. M.) staff is in bass clef with a 5/8 time signature. It contains six measures of music with dynamic markings *mp* and *simile*. The F. M. staff highlights specific notes in the violin part.

Vln. *mf sub.* *p sub.*

F. M.

The score shows two staves. The Violin (Vln.) staff is in treble clef with a 5/8 time signature. It contains five measures of music with dynamic markings *mf sub.* and *p sub.* The Fixed Media (F. M.) staff is in bass clef with a 5/8 time signature. It contains five measures of music. The F. M. staff highlights specific notes in the violin part.

16

Vln. *mf sub.* *p sub.* *mf sub.*

F. M. *mf sub.*

24

Vln. *p sub.* *mf*

F. M. *p sub.* *mf*

32

Vln. *mp*

F. M. *mp*

40

Vln.

F. M.

48 **A**

Vln. *f* *sf* *mf* *sf*

F. M. *f* *mf*

56

Vln. *f sub. sf mp sub. f sub. mp sub. sf*

F. M. *simile*

64

Vln. *f sub. sf mp sub. f sub. sf*

F. M. *f sub.*

72

Vln. *sf sf sf*

F. M.

80

Vln.

Crash
Conga
Tom Low
Tom High
Clap

f p mf

F. M. *mf sub. f p*

88

Crash
Conga
Tom Low
Tom High
Clap

mp pp sub. mp sub. pp sub.

F. M. *simile*

96

Crash
Conga
Tom Low
Tom High
Clap

mp sub. *pp sub.* *mp sub.*

F. M. *mp sub.*

104

Crash
Conga
Tom Low
Tom High
Clap

pp sub. *mp*

F. M. *pp sub.* *mp*

112

Crash
Conga
Tom Low
Tom High
Clap

p

F. M. *p*

120

Crash
Conga
Tom Low
Tom High
Clap

mp

F. M.

128 **B** stamp on the ground

Vln. *p sub.* *mp* *p*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *f* *mp* *p*

136

Vln. *mf sub.* *p sub.* *mf sub.* *p sub.*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *mf sub.* *p sub.* *mf sub.* *p sub.*

144

Vln. *mf sub.* *p sub.* *mf sub.*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *mf sub.* *p sub.* *mf sub.*

152

Vln. *p sub.* *mf*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *p sub.* *mf*

160

Vln. *mp*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *mp*

168

Vln.

Crash
Conga
Tom Low
Tom High
Clap

F. M.

175 C

Vln. *f* *sf* *mf*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *f* *mf*

181

Vln. *sf* *>mf* *f sub.* *sf* *mp sub.* *f sub.*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *mf* *f sub.* *mp sub.* *f sub.*

188

Vln. *mp sub.* *sf* *f sub.* *sf* *mp sub.*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *mp sub.* *f sub.* *mp sub.*

195

Vln. *f sub.* *sf* *sf*

Crash
Conga
Tom Low
Tom High
Clap

F. M. *f sub.*

202

Vln.

Crash
Conga
Tom Low
Tom High
Clap

F. M.

sf sf ff

ff

ff

208 G.P.

Crash
Conga
Tom Low
Tom High
Clap

mp p mf

217 + 8 semitones

Crash
Conga
Tom Low
Tom High
Clap

mp pp sub. mp sub. pp sub.

225 - 8 semitones

Crash
Conga
Tom Low
Tom High
Clap

mp sub. pp sub. mp sub.

233 D

Vln.

Crash
Conga
Tom Low
Tom High
Clap

F. M.

+ 0 semitones

p sub. mf

p sub. mf

p sub. mf

240

Vln.

Crash
Conga
Tom Low
Tom High
Clap

F. M.

mp

mp

mp

247

Vln.

Crash
Conga
Tom Low
Tom High
Clap

F. M.

253

Vln.

Crash
Conga
Tom Low
Tom High
Clap

F. M.

The last three chords are highlighted by the fixed media.

fff

fff

fff

Space Growth

for Violin and Fixed Media

Chen-Kang Kao

♩ = 80, Capriccioso
music starts

Musical notation for measures 1-12. The piece begins with a rest for 12 measures, indicated by "music starts". The notation includes a treble clef, a 4/8 time signature, and a key signature of one flat. The first measure is marked "With click track". The second measure has a dynamic marking of *mf* and a vibrato marking "vib.". The third measure has a triplet marking "3". The fourth measure has an *ord.* marking. The notation includes various note values, rests, and phrasing slurs.

13

Musical notation for measures 13-23. The notation includes a treble clef, a 4/8 time signature, and a key signature of one flat. The first measure is marked with a dynamic of *p*. The notation includes various note values, rests, and phrasing slurs.

24

Musical notation for measures 24-34. The notation includes a treble clef, a 4/8 time signature, and a key signature of one flat. The first measure is marked with a dynamic of *mp*. The notation includes various note values, rests, and phrasing slurs.

35

Musical notation for measures 35-42. The notation includes a treble clef, a 4/8 time signature, and a key signature of one flat. The first measure is marked with a dynamic of *mf* and a triplet marking "3". The notation includes various note values, rests, and phrasing slurs.

43

Musical notation for measures 43-51. The notation includes a treble clef, a 4/8 time signature, and a key signature of one flat. The first measure is marked with a dynamic of *mf*. The notation includes various note values, rests, and phrasing slurs. There are also markings for accents (>> and <<) and a vibrato marking "vib.". The final measure is marked with a dynamic of *f*.

52

Musical notation for measures 52-60. The notation includes a treble clef, a 4/8 time signature, and a key signature of one flat. The first measure is marked with a dynamic of *mf* and a sextuplet marking "6". The notation includes various note values, rests, and phrasing slurs. The final measure is marked with a dynamic of *pp* and an *8va* marking.

Grunchy Grapes

for Violin, Fixed Media, and 3 Dancers

Chen-Kang Kao

♩ = 60, soft and warm

Violin

Fixed Media

p

♩ = 60, soft and warm

p

Detailed description: This system contains the first four measures of the piece. The Violin part is written in a treble clef with a 3/4 time signature. It begins with a half note G4, followed by quarter notes A4, B4, and C5. The time signature changes to 2/4 for the second measure, then 3/4 for the third, and 3/4 for the fourth. The Fixed Media part is written in a grand staff (treble and bass clefs). The bass clef contains a half note G2, followed by quarter notes A2, B2, and C3. The treble clef is empty. The tempo and dynamics are indicated as ♩ = 60, soft and warm, and *p*.

5

Vln.

F. M.

mp

mp

Detailed description: This system contains measures 5 through 8. The Violin part continues with quarter notes D5, E5, F5, and G5. The time signature changes to 4/4 for the sixth measure, then 3/4 for the seventh, and 3/4 for the eighth. The Fixed Media part continues with quarter notes D2, E2, F2, and G2. The dynamics are indicated as *mp*.

9

Vln.

F. M.

p

mp

Detailed description: This system contains measures 9 through 14. The Violin part continues with quarter notes A5, B5, C6, and D6. The time signature changes to 4/4 for the tenth measure, then 3/4 for the eleventh, and 3/4 for the twelfth. The Fixed Media part continues with quarter notes A2, B2, C3, and D3. The dynamics are indicated as *p* for the Violin and *mp* for the Fixed Media.

15

Vln.

F. M.

p

p

A

Detailed description: This system contains measures 15 through 20. The Violin part continues with quarter notes E6, F6, G6, and A6. The time signature changes to 2/4 for the sixteenth measure, then 3/4 for the seventeenth, and 3/4 for the eighteenth. The Fixed Media part continues with quarter notes E2, F2, G2, and A2. The dynamics are indicated as *p* for both parts. A box containing the letter 'A' is placed above the Violin staff at the beginning of measure 15.

21

Vln. *mp* *p*

F. M. *mp* *p*

28

Vln. *mp* *p* **B**

F. M. *mp* *p*

34

Vln. *mp*

F. M. *mp*

40

Vln. *p*

F. M. *p*

45

Vln. *mp*

F. M. *mp*

49

Vln. *p* *mp*

F. M. *p* *mp*

56 C

Vln. *p* *mp*

F. M. *p* *mp*

65

Vln. *p* *mf*

F. M. *p* *mf*

72

Vln. *pp*

F. M. *pp*

Growth 2

for Violin, Fixed Media, and 3 Dancers

Chen-Kang Kao

$\text{♩} = 80$, Dusky

Violin

Ghost Violin

Fixed Media

30 - 60 sec. *f*

constant noise

6

Vln.

F. M.

11 **A**

Vln.

G. Vln.

f

14

Vln.

G. Vln.

17
Vln. *mf*
G. Vln.
F. M.

20 **B**
Vln. *mf*
G. Vln.
F. M.

24
Vln. *mf*
F. M. *mf* *Growth 2 p. 2*

28
Vln. *mf*
G. Vln. *mf*
F. M. *mf*

32
Vln.
G. Vln.
F. M.

Detailed description: This page of a musical score contains six systems of music. Each system includes staves for Violin (Vln.), G. Vln., and F. M. (likely Flute or Clarinet).
- System 1 (Measures 17-19): Vln. has a melodic line with slurs and accents. G. Vln. has a rhythmic accompaniment. F. M. has a sustained harmonic accompaniment.
- System 2 (Measures 20-23): Vln. features a triplet (3) and a quintuplet (5). A box labeled 'B' is above measure 20. F. M. continues with sustained accompaniment.
- System 3 (Measures 24-27): Vln. has a melodic line with slurs and accents. F. M. has a sustained accompaniment. The text 'Growth 2 p. 2' is written above the F. M. staff.
- System 4 (Measures 28-31): Vln. has a melodic line with slurs and accents. G. Vln. has a rhythmic accompaniment. F. M. has a sustained accompaniment. The dynamic *mf* is marked.
- System 5 (Measures 32-35): Vln. has a melodic line with slurs and accents. G. Vln. has a rhythmic accompaniment. F. M. has a sustained accompaniment.

36

Vln.

F. M.

39

Vln.

G. Vln.

F. M.

mp

44

Vln.

G. Vln.

F. M.

49

Vln.

F. M.

p

53

Vln.

G. Vln.

F. M.

58

Vln.

G. Vln.

F. M.

61

Vln.

G. Vln.

F. M.

pp

pp

65

Vln.

G. Vln.

F. M.

pp

69 D pizz. *mp*

Vln.
G. Vln.
F. M.

74 solo with noise in the fixed media arco *mp*

Vln.

78 *mp*

Vln.

82 *f* *p* *mf*

Vln.

87 *mp* *pp* *p*

Vln.
G. Vln.

91 *pp*

G. Vln.
F. M.

30 - 60 sec.