# UNIVERSITY OF OKLAHOMA GRADUATE COLLEGE

### A PERFORMER'S GUIDE TO ADAM CUTHBÉRT'S WORKS FOR SOLO TRUMPET AND ABLETON SOFTWARE

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# A PERFORMER'S GUIDE TO ADAM CUTHBÉRT'S WORKS FOR SOLO TRUMPET AND ABLETON SOFTWARE

# A DOCUMENT APPROVED FOR THE SCHOOL OF MUSIC

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#### TABLE OF CONTENTS

Acknowledgementsiv
List of Tablesvii
List of Figuresviii
Abstractix
Chapter 1: Introduction
Purpose of the Study
Scope and Limitations of the Study
Survey of Related Literature
Chapter 2: Historical Context
Overview12
Early Innovations in Electronic Sound
Advent of Magnetic Tape14
Synthesizers and Digital Sound
Personal Computers, Laptops, and Digital Audio Workstations27
Chapter 3: Discussion of Technology
Overview30
Hardware30
Software34
Completing the Performance Setup
Chapter 4: Analysis of Works
Overview49

scarlet rising moon (2008)	45
rikai (2009)	49
no hipster hats (2011)	54
sonata for trumpet and launchpad	58
Chapter 5: Interview Summaries	
Overview	73
Performers	73
Adam Cuthbért	78
Chapter 6: Conclusions	84
References.	88
Appendix A: Performer Interviews	
John Adler	90
Christopher Degado	108
Elizabeth Jurd	126
Samuel Wells	139
Appendix B: Interviews with Adam Cuthbért	
Interview #1	155
Interview #2	191
Annendix C: IRR Outcome Letter	232

#### **List of Tables**

Table 1	48
Table 2	52-53
Table 3	56-57
Table 4a	67-68
Table 4b	69-70
Table 4c	71-72

### **List of Figures**

Figure 1.0.	
Figure 2.0.	21
Figure 3.0	36
Figure 3.1	36
Figure 4.0.	41
Figure 4.1.	41
Figure 4.2.	42
Figure 4.3.	42
Figure 4.4.	44
Figure 4.5.	46
Figure 4.6	51
Figure 4.7	55
Figure 4.8	60
Figure 4.9	61
Figure 4.10	64
Figure 4.11	64
Figure 4.12	66

#### **Abstract**

Adam Cuthbért has established himself as a composer worthy of study through his prolific interactions with a wide range of performers and organizations of national and international renown. High profile groups such as the Friction String Quartet, Third Coast Percussion, and Bang on a Can All Stars have performed his works, and the New York Times, the San Francisco Chronicle, and National Public Radio have reviewed his compositional output. Also a trumpeter, Cuthbért has composed four works for solo trumpet and Ableton Live software, with the most significant of these works being an interactive sonata over 35 minutes in length. However, the unique nature of these works provides challenges for an interested performer.

This will address Cuthbért's works through providing a historic context for the pieces, an in depth guide to the physical setup as well as the software used in performance, analysis of the works themselves, and interviews with several performer of these works in addition to an interview with the composer. Analysis will include pedagogical and technical demands for the performer as well as musical analysis using Brian Fennelly's *XYE* system of analysis of sound in order to garner an understanding of the structure of these works.

#### **Chapter 1: Introduction**

#### **Purpose of the Study**

Music composed for solo trumpet and electronically generated sound is a somewhat narrow genre that exists largely within the confines of academia. Pieces written in this way are commonly referred to as works for "trumpet and electronics". For the remainder of the document, the phrase "trumpet and electronics" will refer to those works. Works for solo wind instruments and electronically generated sound have had several phases of popularity since their conception in the mid-twentieth century. Within the repertoire for solo trumpet and electronics, the vast majority of the pieces written from the 1960s to the present involve fixed media of some nature. Pieces that utilize live sound manipulation or that require performers to interact with software in live performance are rare for trumpet, but the creative output of adventurous composers has begun to actively expand this corner of trumpet literature. A prime example of this expansion can be found in the catalog of composer Adam Cuthbért.

Cuthbért (b. 1988) has established himself as a composer worthy of study through his prolific interactions with a wide range of performers and organizations of national and international renown. He is a New York based composer, sound designer, and record label co-owner who works extensively with music for acoustic instruments and electronically generated sound. His music has been performed broadly in both academic institutions and other performance venues such as at the Center for New Music (San Francisco, CA), Kingston University (London), and Massachusetts Museum

<sup>&</sup>lt;sup>1</sup> Barth, Michael Edwin. "Music for Solo Trumpet and Electronics: A Repertoire Study" (Toronto: University of Toronto, 2011).

of Contemporary Art. Prestigious new music ensembles such as Friction Quartet, Third Coast Percussion, and Bang on A Can have also performed Cuthbért 's music, and numerous media outlets such as the New York Times,<sup>2</sup> National Public Radio,<sup>3</sup> and the San Francisco Chronicle have reviewed his work<sup>4</sup>. Cuthbért's biography will be addressed in detail in Chapter 5 and Appendix A.

While his body of work includes compositions for a large variety of acoustic instruments and ensembles with electronic sound, the trumpet seems to hold a prominent position in his output, and for good reason: Cuthbért studied trumpet during his undergraduate degree at Grand Valley State University. Cuthbért has written four complete works and one incomplete work for trumpet and Ableton software, all of which require the performer to interact with Ableton and Launchpad (the most popular physical interface designed for use with Ableton software). The largest of these works is the substantial *sonata for trumpet and launchpad* (2013), which is in three movements and requires a minimum of 35 minutes to perform.

These works rely on the use of Ableton software, both in live performance and in their composition. Ableton is a popular music production software, frequently used by commercial musicians and DJs for sound design and live performance. Cuthbért's title for his sonata alludes to Launchpad, which is the most popular physical interface for Ableton in live performance but does not create musical information independently

 $^2$  La Rocca, Claudia, "Movements on a Scale That's Cozy: 'Chamber Works I: Intimate Daces for a Small Space," New York Times, May 14, 2014, accessed February 8, 2018,

http://www.nytimes.com/2012/05/15/arts/dance/chamber-works-i-intimate-dances-for-a-small-space.html.

<sup>&</sup>lt;sup>3</sup> Huizenga, Tom, "Review: GVSU New Music Ensemble, RETURN," National Public Radio, October 19, 2017, accessed February 8, 2018, https://www.npr.org/2017/10/19/558363708/first-listen-gvsu-new-music-ensemble-return.

<sup>&</sup>lt;sup>4</sup> "Long Bio," Adam Cuthbért, accessed January 15, 2018, http://adamCuthb.com/long-bio.

from the software. The technical workings of these devices and a performer's guide to their usage in the context of this body of work will be discussed in detail in Chapter 3.

Despite his youth and brevity of career, a study of Adam Cuthbért's music such as the one proposed here is warranted for several reasons. First, his music has been performed by some of the highest profile new music ensembles in the country. Bang on A Can, who have performed Cuthbért's pieces, have an established reputation as "the country's most important vehicle for contemporary music" according to the *San Francisco Chronicle*. They have been closely associated with luminaries of contemporary music such as Steve Reich, Terry Riley, Ornette Coleman, and many others. Less established, yet very active and high profile groups like Friction Quartet and Grammy winners Third Coast Percussion have found Cuthbért's works to be compelling enough for performance. To that point, *The San Francisco Chronicle* reviewed Friction's premier of "Universe Explosion" by Cuthbért by saying "it was hard to resist the vigor and inventiveness of his writing." The Dutch music blog

"In New York, operating in the realm between classical and experimental and electronic music that's so well-established in that city, there's a young composer whose music is – to resort for once to a much-misused word – ravishing in its smooth sonic beauty."

Cuthbért has established himself as a composer worthy of study through his prolific interactions with a wide range of performers and organizations of national and international renown.

<sup>&</sup>lt;sup>5</sup> "Bang On A Can All Stars," Bang On A Can, accessed February 6, 2018, http://bangonacan.org/bang on a can all stars.

<sup>&</sup>lt;sup>6</sup> Joshue Kosman, "Friction Quartet Finds the Potential for Abbrassiveness," December 6, 2014, accessed February 6, 2018, https://www.sfchronicle.com/music/article/Friction-Quartet-finds-the-potential-of-5940757.php.

<sup>&</sup>lt;sup>7</sup> "Adam Cuthbért," December 14, 2012, accessed February 8, 2018, https://musicuratum.com/2012/12/14/adam-Cuthb/.

Cuthbért's use of technology is intriguing and seemingly singular in the field of trumpet and electronics. All of his works for trumpet and electronics rely solely on Ableton for the electronic aspect of their composition. Ableton software is not the main choice of electronic music composers of contemporary classical music. That distinction goes to Max, which is widely used by academic composers of electronic art music. A quick look at the websites of each software company shows this plainly. The homepage of Max features quotes from several prominent academics and the statement that it is used at over 1500 institutes worldwide, while the Ableton site is focused on commercial music production. Secondly, in the narrow field of music for trumpet and live electronics, Cuthbért's works are unique in their use of Ableton. The few other works that are easily available to the public that are composed for trumpet and live electronics are composed using Max. This compositional choice will be further explored in Chapter 5 and Appendix A during his interview.

This document will conduct an examination and discussion of Cuthbért's four complete works for trumpet and Ableton software. This will include the technical requirements for the trumpet performer (range, articulation, and other demands for the trumpeter), a brief discussion of the formal aspects of these works, the technological requirements for performance and how to utilize the required technology, as well as a succinct discussion of the design and function of Ableton Live software. It will also provide a historical context for the importance of Cuthbért's works, as well as interviews with Cuthbért and several performers of his works.

In order to provide context for the works to be examined, Chapter 2 of the document will provide a brief history of works for solo acoustic instruments and

<sup>&</sup>lt;sup>8</sup> "Home," accessed February 8, 2018, https://cycling74.com/.

electronically generated sound, with focus on works for solo trumpet and electronics. Through early pieces for live instrument and fixed media, like Mario Davidovsky's "Synchornisms No. 1" for flute and electronic sound (1962) and Henk Bading's "Chaconne" (1965) for trumpet and electronic sound, through the height of trumpet and tape works that were written extensively in the 1970s and 1980s, to the popular works of Meg Bowles from the mid-1990s through the 2000s, the history of the genre will be established in this chapter.

As stated earlier, Chapter 3 will be a discussion of Ableton software outside the context of Cuthbért's body of work. This will include a concise primer on how the technology functions and how it is commonly used by composers and producers of electronic music. Also included in this chapter will be a guide for performers in the technological requirements for running this software and Launchpad, as well as instructions for its use in Cuthbért's works. The goal in this chapter is to provide an understanding of specific technology for a performer seeking to utilize this unique repertoire.

The works of Adam Cuthbért will be directly addressed in Chapter 4. This chapter will consist of a discussion of the four complete works for solo trumpet and Ableton software from a performer's perspective. Included in this discussion will be technical requirements for the performer (range, multiple tonguing, difficult intervallic content, etc.) as well as descriptions of the content of the piece as a whole (form, tempo, dynamics, etc.). Chapter 4 will clearly address each work by Cuthbért, with the intent of informing trumpet performers on the characteristics of each work while also providing pertinent performance information.

In order to address the difficulties of discussing works in which the construction of the piece relies less on a traditional score and more on live sound manipulation and software effects, a method of analysis must be used. For the purposes of this study, the method of analysis outlined by Brian Fennelly in his essay "A Descriptive Language for the Analysis of Electronic Music" will be utilized. Known as the XYE system, Fennelly's method addresses sound in a complete and formulaic fashion. To quote Fennelly, "With the absence of available musical scores, the aural experience is the single point of departure for the analysis of electronic music." However, analysts need specific tools for this type of analysis, and Fennelly's system provides these tools. In the formula developed by Fennelly,  $X_S$  defines the timbre (X) and the range (S) of a given sound,  $Y_C$  describes the attack (Y) and continuation (C), and E describes the enhancement of the sound. The use of this results in the formula in its most basic form:  $X_SY_CE$ . Fennelly provides more detail in expanding this formula through the use of subscripts to define more secondary characteristics of the sounds, with the final version of possible descriptors being  $X_{Sr}^{t}Y_{Cd}^{i}E$ . Chapter 4 will further examine this analytical tool and define parameters for its use in this study. For an example of this analysis, the first 25 seconds of John Adler's recording of Cuthbért's *rikai* in Figure 1.0.

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<sup>&</sup>lt;sup>9</sup> Brian Fennelly, "A Descriptive Language for the Analysis of Electronic Music," in *Perspectives on Notation and Performance*, ed. Benjamin Boretz and Edward T. Cone (New York: W. W. Norton & Company, Inc, 1976), 117-133.

<sup>&</sup>lt;sup>10</sup> *Ibid*.

#### Figure 1.0

Synth = Synthesizer

Trpt = Trumpet

#### Solo:

 $Trpt_{MH4}D_a{}^mr$   $Trpt_{MH4}D_a{}^mR$ 

**Timing:** 

0"\_\_\_\_\_11"\_\_\_\_\_\_25"

#### **Accompaniment:**

 $Synth_{MH4}C^{m}_{fL}R,Phs$ 

This graph shows that the trumpet is in the mid-high range, using a steady state of medium dynamics, with the added effects of reverb. At the 11" mark, the trumpet's reverb changes to a heavier reverb effect, with the rest of the characteristics unchanged. The accompaniment is a synthesizer in the mid-high range playing long durations with a fluctuating medium dynamic. Phaser effects and heavy reverb also affect it.

The challenges of performing works that are heavily reliant on technology in a live performance can be many, and are often not obvious to the observer. Chapter 5 of this document will consist of summaries of interviews with performers of these works, and will address the experiences garnered in their performances. Because these works utilize a very specific type of software, and occupy a specialized niche of the repertoire for trumpet and electronics, the composer and performers of these works will each have

a unique perspective that is worthy of examination. Complete interview transcripts will be located in Appendices A and B.

This study will pursue the following primary goals: to provide historical context for works for solo trumpet and software by Adam Cuthbért; to give a technical overview of Ableton software, including how a performer would use this software in the context of Cuthbért's pieces; an examination of the works themselves, with an emphasis on the performance of said works; and, interviews with Cuthbért and performers of these works. The interviews were conducted to document the creation and performance of these works, while also helping any future performers in their pursuit of these pieces.

#### **Scope and Limitations of the Study**

This document will provide an examination of the four complete works for trumpet and Ableton software by composer Adam Cuthbért. This study is not an exhaustive examination of his complete creative output. While comparisons to contemporaneous works for trumpet and electronics may be used, this will not be an in-depth direct comparison of these works to the other pieces. This study will briefly discuss the design and use of technology utilized in the performance of these works, but an exhaustive discussion of the technical design or construction of these technologies (including software, computer systems, and various aspects of sound systems) is beyond the perimeters of this document. While this study will discuss Cuthbért's biography and the historical origins of each of his works, it is not an exhaustive biography or history of Cuthbért's life. Also, this study will provide a brief history of music for solo instruments and electronics, focused on the history of music for trumpet and electronics;

however, this history will be general in nature and is not intended to be a history of electronic music or music for live acoustic instruments with electronics. This area of music history has been prodigiously covered by other authors, and is beyond the perimeters of this document. While this document will include interviews of Cuthbért and the leading performers of his works, it is not intended to be an exhaustive list of every performer or performance of his works for trumpet and Ableton.

#### **Survey of Related Literature**

This portion of the document examines literature related to music for solo trumpet and electronics. Literature that details the history and use of electronic music and electroacoustic music is prolific and widespread. Examples include recent publications such as Peter Elsea's *The Art and Technique of Electroacoustic Music* (2013), or Thom Holmes's *Electronic and Experimental Music: Pioneers in Technology and Composition* (2004). While there is an enormous amount of literature relating to electronic music, literature that discusses music for trumpet and electronic accompaniment is quite rare. This area of research is relatively new, and has had few publications. In total, only two dissertations have been written about this specific research field. While recordings of solo trumpet with electronic accompaniment do exist, Adam Cuthbért's pieces for this genre have not been commercially released. <sup>11</sup>

The most exhaustive discussion is Michael Barth's 2011 DMA dissertation entitled "Music for Solo Trumpet and Electronics: A Repertoire Study." In this document, Barth explores the genre as a whole through an exhaustive list of pieces in

<sup>&</sup>lt;sup>11</sup> Although they have been recorded by John Adler, these recordings are still in editing and will be released at a future, unnamed date

existence and an in-depth study of four works that he characterizes as representative of the main styles of the genre. These four pieces include *Ada, My Dear* for Trumpet and Tape by Peter Hatch, *Modes of Interference* for Trumpet and Live Electronics by Agostino Di Scipio, *Ricercare Una Melodia* for Trumpet and Tape Delay by Jonathan Harvey, and *Extentions* for Trumpet and Multi-Track Tape by David Cope. Barth's document does not, however, make any mention of Adam Cuthbért or any works that utilize Ableton Live. This work does provide a model for analyzing these types of works though examining performative issues like range and extended techniques, as well as discussions of technology used in performance, and structural analyses of each work.

The second document written concerning solo trumpet and electoacoustic accompaniment is Steven Siegel's 2017 DMA document entitled, "A Performer's Guide to Works for Trumpet and Synthesizer by Meg Bowles." While this dissertation is much more narrow in scope than Barth's work, Siegel provides a useful format for discussing the complete works of a prominent composer of this type of music. Siegel examines all four of Bowles' works for trumpet and synthesizer individually, and also provides a biography of Bowles and interviews with Bowles and prominent proponent and performer of her works, David Bilger (Principal Trumpet, Philadelphia Orchestra).

The final publication regarding solo trumpet and electronics is an article for the International Trumpet Guild Journal written by Jason Dovel in 2012. Entitled "A Guide to Literature for Trumpet and Electroacoustic Accompaniment," Dovel's article is essentially list of pieces for solo trumpet and electronics accompanied by some

guidance for repertoire choices at beginning, intermediate, and advanced levels of experience with this genre.

In conclusion, this study will be a guide to the complete works of Adam Cuthbért for solo trumpet and Ableton Live software. Special emphasis will be placed on the performance aspects of these works such as the technical requirements for the trumpeter and the technological aspects of live performance. For context, a concise history of music for solo acoustic instruments and electronics, with a concentration on works for trumpet and electronics, will be provided. Additionally, a discussion of the design and use of Ableton software will be provided. Finally, interviews with Adam Cuthbért, John Adler, and other trumpet performers of these works will be conducted and transcribed.

#### **Chapter 2: Historical Context**

#### Introduction

The history of music for trumpet and electronics is inseparable from the history of electronic sound. The development of sound generated by electronics, and in turn the rise of electronic music, is tied directly to the development of technology.

Technological advances accelerated at a staggering rate during the twentieth century, and the field of electronic music serves as a nearly direct mirror of these new ideas, techniques, and inventions. Innovations in electronic music, therefore can be divided into several periods: early innovations in recorded and electronic sound, the invention of magnetic tape, the rise of digital sound, the ubiquity of computers and their influence, and the continued evolution of electronic music in the contemporary era. The following chapter will be a brief discussion of each of these time periods, giving examples of musical trends and important works for electronic music generally as well as examples of pieces for trumpet and electronics that reflect those trends. This structure is created with the overarching intent of establishing a historical context for the works of Adam Cuthbért for solo trumpet and software.

#### **Early Innovations in Electronic Sound**

Although not electronic, the seeds of electronic sound were planted by the earliest efforts in recording live sound. Leon-Scott's invention of the phonautograph in 1857 recorded acoustic sound, but could not provide playback. Edison's more famous phonograph, invented in 1877, was able to provide playback, but was entirely acoustic at its start. However, this technology enabled future versions of recorded sound that

would eventually be electronic in their operation. The telephone, invented in 1876, used the first carbon microphones to transmit acoustic sound via electrical impulses. In 1898, Valdemar Poulsen's wire recorder was invented and became the first analog electrical recording device, but was not used for musical purposes. It was intended as voice recorder.

The first electronic musical device (not including electronic devices that made noises<sup>12</sup>) came in 1897 with Thaddeus Cahill's Telharmonium, which used electricity to generate tones and utilized conventional keyboard manuals to control the machinery. The device was quite impractical however, given its gargantuan size. When Cahill moved his device from Washington D.C. (where it was originally built) and New York City for concerts in 1906, the move required over 30 railcars. Together with the Italian Futurist composers such as Francesco Balilla Pratella and Luigi Russolo of the 1910 and 1920s and their early avant-garde experiments with unconventional instruments and sounds, Cahill's invention gave rise to the compositional imagination of the next generation of composers.

The invention of the vacuum tube in 1907 created a massive expansion of electronic musical possibilities. The vacuum tube essentially enabled amplification of electronic signals, which made modern electronic sound possible. Radio broadcasting, microphone amplification, speakers, and more, were enabled by this technological breakthrough. Between 1920 and 1945, there was a substantial increase in technology that related to sound, sound transmission, and the first truly successful electronic instruments such as the Theremin and the *Ondes Martenot*. Composers such as Edgard

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<sup>&</sup>lt;sup>12</sup> Nick Collins, Margaret Schedel, and Scott Wilson, *Cambridge Introductions to Music: Electronic Music* (Cambridge: Cambridge University Press, 2013), 3.

Varesé, Oliver Messiaen, and Henry Cowell began incorporating these instruments in numerous works that also utilized conventional instruments. These compositions include orchestral pieces such as the influential Varesé's *Amériques* (1918-1921) and Messiaen's *Oraison* (1937)<sup>13</sup>.

Early experiments in using prerecorded sounds and acoustic instruments began with the use of turntables, wire recorders, and other early recording equipment. One of the earliest pieces of this type of music is Paul Hindemith's *Trickaufnahmen* (1930) for turntables, prerecorded marimba, and cello. John Cage's *Imaginary Landscapes No. 1* (1939) relies entirely on the manipulation of prerecorded sounds through the use of turntables. Experiments manipulating prerecorded sounds dramatically increased with the invention and widespread use of magnetic tape after the Second World War.<sup>14</sup>

#### **Advent of Magnetic Tape**

The first tape recorders available for public consumption were produced by AEG in 1933, but these devices used paper tape. In 1948, 3M created the first acetate magnetic tape and enabled a revolution in recorded sound. For composers and sound engineers, this singular innovation started the blossoming of electronic music for decades to come. Experiments by Pierre Schaeffer in Paris with *musique concrète*, or music created by manipulating recordings of environmental "found" sounds, began before the availability of magnetic tape, but became much more ambitious and substantial. Sounds could be recorded and changed in a variety of ways, as well as physically spliced together with other recordings. With the assistance of other new technologies such as audio oscillators, variable speed tape recorders, four track tape

<sup>&</sup>lt;sup>13</sup> Holmes, Electronic and Experimental Music, 28.

<sup>&</sup>lt;sup>14</sup> Collins, Cambridge Introductionto Music: Electronic Music, 16.

recorders, and white noise generators, among others, composers were enabled to create works that were previously unfathomable. A young Karlheinz Stockhausen described his brief visit to Pierre Schaeffer's GRM studio in 1952 and his experiments:

First, I recorded six sounds of variously prepared low piano strings struck with an iron beater, using a tape speed of 76.2 centimeters per second. After that, I copied each sound many times and, with scissors, cut off the attack of each sound. A few centimeters of the continuation (remaining sound), which was briefly quite dynamically quite steady, were used. Several of these pieces were spliced together to form a tape loop, which was then transposed to certain pitches using a transposition machine...a few minutes of each transposition were then recorded on separate tapes.<sup>15</sup>

The labor-intensive process of crafting a piece for magnetic tape is demonstrated through this brief quote. The composer frequently not only had to create the sounds to be recorded, but also had to physically manipulate the tape in a variety of ways.

Common tape composition techniques included tape splicing, degeneration of recorded material, tape echo, reverberation, loops, and delay, multitracking, tape reversal, and tape speed manipulation. Numerous composers of renown came to Schaeffer's studio to experiment with tape music, including Darius Milhaud, Oliver Messiaen, and Pierre Boulez. Schaeffer, along with composer Pierre Henry and multidisciplinary theorist Abraham Moles, created an intellectual and practical foundation for electronic music composition for the coming decades.

Following the developments in Paris, particularly at the RTF studio under Schaeffer, the NWDR studio in Cologne, under the direction of composer and musicologist Herbert Eimert, devoted resources to the exploration of electronic music. Influenced by theorist Werner Meyer-Eppler's writings about the possibilities of

.

<sup>&</sup>lt;sup>15</sup> Michael Manion, "From Tape Loops to MIDI: Karlheinz Stockhausen's Forty Years in Electronic Music." Interview. www.stockhausen.org/tape loops.html

<sup>&</sup>lt;sup>16</sup> Holmes, Electronic and Experimental Music, 173-188.

electronic music and the serialist composers of the Second Viennese School, the NWDR studio focused on generating and manipulating tones for their tape compositions. This resulted in a very different musical result that was more firmly rooted in traditional art music, in stark contrast to the *musique concrète* of the RTF studio in Paris. The NWDR studio became a focal point for composers in Europe, including Giorgi Ligetti, Cornelius Cardew, Henri Pousseur, and Karlheinz Stockhausen.

Stockhausen's brief experiments with Pierre Schaeffer in Paris became a launching point for his electronic compositions, and after working heavily in Cologne, produced the first compositions written completely for sine waves. His works *Studie I* and *Studie II* (1953) were serialist and created entirely electronically. Stockhausen's remarkable creative output spans the entirety of post-Second World War electronic music, including works composed for trumpet and fixed media. These important pieces will be discussed later in this chapter.

In Milan, another prominent electronic music studio rose to prominence.

Founded in 1955 and directed by composers Luciano Berio and Bruno Maderna, the Studio de Fonologia Musicale under the umbrella of Italian public broadcasting became the one of the best-equipped studio in the world for a period. Pieces like *Scambi* (1957-1958) by Henri Pousseur, which was created entirely by filtering white noise, show the innovations in Milan because of the investment made by the state. In the United States, studios were not state-sponsored as with Europe. As a result, individuals working independently made innovations without adherence to strict philosophical parameters.

Bebe and Louis Barron, operating out of their home, created the first electronic music

studio in the United States. Their work, *Heavenly Menagerie* (1950), was the first piece for magnetic tape composed on the North American continent. They quickly established relationships with avant-garde composers like John Cage, who used the Barrons as engineers on several early works for tape.

The lack of state funding for electronic music in the United States funneled curious composers and audio engineers toward the university system. Composers Otto Luening and Vladimir Ussachevsky were both music instructors at Columbia University, and after the university purchased some tape recorders for archiving performances, began experiments with creating tape compositions with engineer Peter Mauzey. Luening and Ussachevsky's experimentation began in 1951 became the Columbia Tape Music Center, later renamed Columbia-Princeton Electronic Music Center. These early works focused on acoustically generated sounds, using experiments with altering existing musical sound (in sharp contrast to Schaeffer in Paris).

After the 1957 merger with Princeton and the addition of composers Milton

Babbitt and Roger Sessions, the newly renamed Columbia-Princeton Electronic Music

Center became the first institutionally funded electronic music studio in the United

States. It also had the most advanced technological aspects of any studio in North

America, including the earliest synthesizers (on permanent loan from RCA). The result

of this important early studio was significant; influencing a generation of electronic

music composers by giving access to the equipment needed to pursue this music,

bringing electronic music to a wider public sphere through highly publicized concerts in

New York (even a national television appearance after a particularly high profile

concert at the Museum of Modern Art), and the first compositions for tape and live instruments.

Two compositions are foundational to the body of work for live performance of acoustic instruments and electronics. First, *Déserts* (1950-1954) by Edgard Varèse was originally written in Paris at Pierre Schaeffer's studio and revised at the Columbia Tape Music Center. The piece was written for winds, percussion, piano, and electronic tape, and was first performed in a live radio broadcast on December 2, 1954 in France. In that same year, Luening and Ussachevsky composed *A Poem in Cycles and Bells* for tape and orchestra.

In 1960, Mario Davidovsky, student of Milton Babbitt, began his long relationship working at the Columbia-Princeton Electronic Music Center. Davidovsky's unique musical perspective resulted in transformational compositions for electroacoustic music. Eric Chasalow describes Davidovsky's compositions as follows:

In Davidovsky's electronic works, control of articulation becomes more significant. A succession of widely varying articulations can shape an event, a gesture, a motive that can be developed in the course of a piece. The control of articulation also allows the composer to choose what, if anything, feels like a downbeat and the sense of pacing of each episode. This is no small matter. When a live musician performs a piece of music in concert, there are many cues, visual as well as aural, that project the sense of phrasing and pacing to the audience. We take these for granted, and many tape pieces fail to take the need for these cues into account. As he worked in the studio, Davidovsky cannily realized not only that he was creating the actual performance, but also that he needed to find new ways of compensating for the loss of the live musician.<sup>17</sup>

Davidovksy decided to add a live musician back into his works for tape, utilizing the flute for his *Synchronisms No. 1* (1962). This work is twelve tone in construction, and is widely regarded as one of the first works for a solo instrument and electronically

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<sup>&</sup>lt;sup>17</sup>Eric Chasalow, "Mario Davidovsky: An Introduction," http://www.ericchasalow.com/pdfs/davidovskyintro.pdf. Accessed July 15, 2018.

generated sound. Davidovsky brought a level of sophistication to his composition of this work that had not been seen previously in regards to the interaction of the fixed media and the live performer. Chasalow, himself a Davidovsky student and product of the Columbia-Princeton Electronic Music Center, continues:

It was natural for composers to begin to think about combining electrical sounds with live instruments. It is for his work in the area that Davidovsky is certainly best known. His series of Synchronisms pieces, beginning with Synchronisms #1 for flute and electronic sounds in 1962, had an immediate impact. Here is music in which live and electronic forces reinvigorate one another in surprising ways. In these pieces he achieved the first true "hyper-instruments," where the live and electronic modulate one another and become something totally new, joined in one expanded acoustical space; a kind of musical virtual reality. <sup>18</sup>

Davidovsky won the Pulitzer Prize in 1971 for his *Synchronisms #6* for piano and electronic sound, and had a long association with of the Princeton-Columbia Electronic Music Center, where he was director from 1981-1993.<sup>19</sup> He continued to write Synchronisms until 2006, but most of his creative output since the 1970s has been for acoustic instruments.

The earliest piece for trumpet and electronics listed by Michael Barth in his seminal work *Music for Solo Trumpet and Electronics: A Repertoire Study* is Henk Bading's *Chaconne* from 1965. Badings (1907-1987) was a prominent composer in the Netherlands, as well as throughout northern Europe, having received major commissions from the Vienna Philharmonic and the Royal Concertgebauw Orchestra on the occasion of their sixtieth anniversary<sup>20</sup>. He was also associated with the Phillips studio (in which Varesé had composed his famous *Poem electroniqué* in 1957),

<sup>19</sup> Noel B. Zahler, "Davidovsky, Mario," <a href="https://doi-org.ezproxy.lib.ou.edu/10.1093/gmo/9781561592630.article.07281">https://doi-org.ezproxy.lib.ou.edu/10.1093/gmo/9781561592630.article.07281</a>, Accessed July 19, 2018.

<sup>&</sup>lt;sup>18</sup> Chasalow, "Mario Davidovsky: An Introduction."

<sup>&</sup>lt;sup>20</sup> "Henk Badings," <a href="http://donemus.nl/henk-badings/">http://donemus.nl/henk-badings/</a>, Accessed July 19, 2018.

especially after Phillips donated the studio equipment to the University of Utrecht, where Badings held a teaching position. His experimental work in tape music during the 1950s and 1960s brought him international attention, but he also composed enormous amounts of music for nearly every genre as well. *Chaconne* (see Figure 2.0) is composed for trumpet and tape, and reflects Badings traditionalist roots while also exploring atonality and the new sounds found in the manipulation of magnetic tape. The piece is a single movement requiring 12' to perform, and composed much in the same vein as the traditional chaconne. The sustained, organ-like bass is provided by the tape, but also includes numerous electronically generated glissandi and effects. Rhythmically, the piece is written in continually shifting meters, with the long sustains of the tape contrasted by virtuosic atonal fanfares in the solo trumpet. This style of writing for trumpet and electronics, namely the trumpet interjecting over a more sustained and ethereal electronic accompaniment, seems to be characteristic of numerous works for trumpet and fixed media for the next three decades.

Figure 2.0



#### **Synthesizers and Digital Sound**

Simultaneous to the rise of tape music and the famous early studios in New York, Paris, Milan, and Cologne (other noteworthy studios were in existence, especially on the West Coast of the United States, at the University of Illinois, Japan, South America, and others), engineers were making strides toward creating more versatile and stable electronic instruments that would eventually lead to the complete digitalization of electronic sound production. This happened gradually, but there were several watershed moments in this process. Three main points contributed to this change: the continually diminishing size of electronic components as the 20<sup>th</sup> century progressed, digital signal processing, the digital technology associated with the rise of the computer.<sup>21</sup>

The RCA synthesizer, mentioned earlier in relation to the Princeton-Columbia studio, was the first true sound synthesizer that actually produced all of the aspects of sound (not merely a vacuum-tube electro-mechanical keyboard). This synthesizer was could be programmed with punched paper tape input, and was capable of controlling most aspects of musical sound. Milton Babbitt's 1964 work *Philomel* for soprano and tape is an example of the RCA synthesizer's use. It was, however, enormous and difficult to master. In 1964, using voltage control and solid-state electronics instead of vacuum tubes Robert Moog had assembled an analog synthesizer. In 1967, Moog heavily marketed his synthesizer at the Monterrey Pop Festival and the instrument quickly become iconic to a wide audience. This was in no small part due to Wendy Carlos' hugely successful 1968 album *Switched on Bach*, which consists of Bach transcriptions performed entirely on Moog's synthesizer. Soon after Moog's success,

<sup>&</sup>lt;sup>21</sup> Collins, Cambridge Introduction to Music: Electronic Music, 65.

<sup>&</sup>lt;sup>22</sup> *Ibid*, 67.

other companies began creating commercially available synthesizers, including the British company Electronic Music Studios (EMS) and ARP (Alan Robert Pearlman). <sup>23</sup> Donald Buchla, himself a musician, created a more "musician friendly" solid-state synthesizer that was commercially available as the Buchla 100. Developed in parallel to the Moog, Buchla's synthesizer was envisioned as a standalone instrument and was known for its powerful and versatile programming options, as well as its lack of traditional keyboard manual.

Karlheinz Stockhausen, whose career spanned nearly all of the technological developments in electronic music, used the EMS Synthi for *Sirius* (1975-1977), which was the composer's first serious use of the synthesizer as well as a significant work that heavily featured the trumpet. The 96-minute work is written for trumpet, soprano, bass clarinet, bass, and 8-track tape. Commissioned as part of the United States Bicentennial celebration, it was premiered in Washington, D.C. with Markus Stockhausen (Karlheinz's son) as trumpet soloist. This work is not an opera but is most certainly in the realm of musical drama. Based on the seasons and astrological symbols, each soloist is representative of an individual season and symbol<sup>24</sup>. The work is based on the concept of a wheel with twelve melodies (one for each month), of which four were considered focal points. The main melody of the *Aries* movement was a trumpet solo lasting slightly more than 16', which Stockhausen later made into a stand-alone piece.

For a solo performance of *Aries*, Stockhausen requires the trumpet soloist to perform from memory on a C trumpet, and adjust the tuning of the instrument to the intonation of the tape when the score indicates. The trumpet part is demanding, both

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<sup>&</sup>lt;sup>23</sup> Collins, Cambridge Introductionto Music: Electronic Music, 67.

<sup>&</sup>lt;sup>24</sup> Albrecht Moritz, "Sirius (1975-1977)," <a href="http://home.earthlink.net/~almoritz/sirius.htm">http://home.earthlink.net/~almoritz/sirius.htm</a>, Accessed July 19, 2018.

musically and physically, with frequent tempo changes, specific moments that must be exactly coordinated with the tape, and a range that exceeds C6 for extended periods of time. Stockhausen also includes precise performance instructions for how to set up the tape and speakers (see figure). Given Stockhausen's stature in the history of electronic music and music in general, this work is foundational for trumpet and electronics. It is also considered one of the most challenging works for the instrument, according to trumpet virtuoso and recording artist Edward Carroll's list of "extreme repertoire." 25

The 1960 and 1970s were fertile ground for experimentation with electronic music and acoustic instruments, maybe most readily personified by the work of jazz trumpeter Don Ellis. Ellis was an accomplished composer, trumpet performer, and jazz musician of substantial training, and his utilization of amplified trumpet sound that was affected by a wide range of guitar effect pedals and ring-modulated synthesizers. His work also used microtonal elements, complex meters, and unusual instrumentation. His popular recordings *Autumn, Live at the Filmore*, and *Tears of Joy* transformed a generation of trumpeters' perception of the possibilities of amplified and electronically affected trumpet in a live performance situation.<sup>26</sup>

The development of computers and their use in music, happening in parallel with the developments in tape music and synthesizers of the 1950s and 1960s, became the foundation of electronic music's massive leaps forward in the 1970s and 1980s.

Max Mathews, an engineer at AT&T's Bell Labs, created a computer program (*Music I*) that could synthesize notes in 1957. Following that development, which was

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<sup>&</sup>lt;sup>25</sup> Edward Carroll, "Extreme Repertoire," http://edwardcarrollmusic.com/repertoire/, Accessed July 19, 2018.

<sup>&</sup>lt;sup>26</sup> Robert H. Dickow and Barry Kernfeld, "Ellis, Don (ald Johnson)," https://doi-org.ezproxy.lib.ou.edu/10.1093/gmo/9781561592630.article.J138000, Accessed November 4, 2018.

pragmatically small yet paradigm-shifting in the long view, Mathews continued his software development with other versions of *Music* as well as other software throughout the decade. He is widely considered one of the founding fathers of computer music.<sup>27</sup>

Lejaran Hiller, however, composed the first piece of music written with the help of a computer, at the University of Illinois. Hiller used computer programs to make decisions in the composition process, which ultimately resulted in the composition of pieces like *Illiac Suite* in 1957. Other prominent early composers experimenting with computers in their compositions include Iannis Xenakis in Paris, Peter Zinovieff in England, and Gottfried Michael Koenig in Cologne. However, perhaps the most influential discovery came from John Chowning at Stanford University. After visiting Max Mathews and learning about his *Music IV* software, Chowning began experimenting with new methods of digital sound synthesis that resulted in much more naturalistic timbres. He patented his methods and sold the patent to Yamaha in 1975, which would eventually lead to the development and release of the DX-7 digital keyboard in 1983. The enormous sales of this keyboard made digital sound synthesis a household item.<sup>28</sup>

During the dramatic increase in electronic sound generation of the 1970s and 1980s, numerous pieces for trumpet and electronics were produced. These works were generally for trumpet and tape, but there were experiments in trumpet and live sound. For example, Jouni Kaipainen's work *Altaforte*, *Op. 18* (1982) for trumpet and live electronics. This piece of nearly 12' was recorded by Jouko Harjanne on his 1999 album *Total Trumpet*. However, based on the survey of pieces for trumpet and

<sup>&</sup>lt;sup>27</sup> Holmes, Electronic and Experimental Music, 296.

<sup>&</sup>lt;sup>28</sup> *Ibid*, 301.

electronics compiled by Barth, the vast majority of these works were for trumpet and fixed media. In addition to pieces for fixed media and live electronics, Barth also recognizes that there are two other categories of electronic accompaniment for trumpet: tape loop or delay, and pre-recorded tracks of trumpet performances. These last two types are much less frequent than tape or live electronic accompaniment, but nonetheless worth of note.

It should be recognized that electronic music gradually became part of popular culture from the 1950s through the 1980s directly because of the use of electronic techniques in popular music, film, and eventually video games. The use of tape music effects and synthesizers, not mention the ubiquitous use of electric guitar and various guitar effects, in recordings by artists like the Beatles, the Beach Boys, Brian Eno, and Pink Floyd, and many others, made electronic music fashionable and commonplace. Electronic music effects in soundtracks for movies like Hitchcock's *The Birds* and Kubrick's A Clockwork Orange, and later movies like Tron's entirely digital synthesizer score by Wendy Carlos, among many others, also brought electronic music into the mainstream during the 1960s-1980s. The synth-pop and new wave bands of the 1970s and early 1980s were at the peak of popularity due to heavy play on MTV, which launched in 1981. Bands like Kraftwerk, Duran Duran, and the Eurhythmics had massive popular hits during the 1970s and 1980s with music consisting of electronic sound. The rise of other popular styles of music such as house, techno, and other forms of electronic dance music (EDM) with its prolific use of sampling, drum machines, loops, and a multitude of electronic effects, became very influential. The history of each of these genres is substantial and complex, far beyond the scope of this discussion (for a

hint at the complexity of EDM styles, see figure). For our purposes, it should be noted that this history of pop music, film, and electronic music is deeply interwoven and dense.

#### Personal Computers, Laptops, and Digital Audio Workstations

The early 1980s not only brought about the best-selling Yamaha DX-7 digital synthesizer, but also two revolutionary technological developments: the microprocessor and the creation of a common electronic music language with the creation of MIDI. The microprocessor was in development in the 1960s and 1970s, but came into common use in the 1980s, and allowed computers to be much smaller and commercially viable. 1984 was a watershed moment in the history of technology, and electronic music in particular. That year saw the introduction of the Apple Macintosh computer and the creation of MIDI, or Musical Instrument Digital Interface. MIDI was the result of several prominent electronic instrument manufacturers agreeing to a common mode of communication for electronic instruments. This allowed for a rapid expansion of electronic instruments' useful applications, as well as the creation of a multitude of software instruments. Of particular note to the current dialogue would be Morton Subotnick's 1988 work *And the Butterflies Began to Sing* for string quartet, bass, MIDI keyboard, and microcomputer.<sup>29</sup>

Into the 1990s, the Personal Computer (PC) became a household item, and software for the ability to produce music increased exponentially. The creation of compact discs and the mp3 format transformed the ability to store data in smaller and smaller physical devices. For composers, the creation of software in which sounds can be easily manipulated was of no small consequence, and eventually made the process of

<sup>&</sup>lt;sup>29</sup> Holmes, *Electronic and Experimental Music*, 319.

electronic composition widely accessible to the general public. Music composed for trumpet and electronics became readily available at the university level with works like Meg Bowles's 1996 composition *Night Sun Journey*. Commissioned and recorded by Philadelphia Orchestra principal trumpet David Bilger, Bowles has written several pieces for trumpet and fixed media. These works have a very ambient quality reminiscent of admitted influences Brian Eno and Arvo Pärt, with electronic textures that gradually change underneath a more active trumpet part. The trumpet is required to play quite a wide range, from C6 to G3, and utilize mutes throughout this work.<sup>30</sup>

By the turn of the century and into the present day, the miniaturization of technology has led to the proliferation of smaller computers like the iMac (which featured only a monitor and a keyboard and premiered in 1998), as well as cellular telephones, smart phones, and laptop computers as common items. Digital Audio Workstations (DAW) like Protools and Ableton Live, capable of recording, editing, and generating infinite sounds, became powerful tools for recording engineers, music producers, and composers. Music notation software, like Finale and Sibelius, became the industry standard for notation, and the use of these technologies are part of most universities' music curriculum. Composers of electroacoustic music have risen to prominence, like the Chicago Symphony Orchestra's current Mead Composer-In-Residence Samuel Adams (b.1989). Performer/composers like Marco Blaauw, whose works include pieces for trumpet and live electronics, has recently performed on the

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<sup>&</sup>lt;sup>30</sup> Steven Siegel, "A Performer's Guide to Works for Trumpet and Synthesizer by Meg Bowles," DMA document, (University of Kentucky, 2017), 9.

<sup>&</sup>lt;sup>31</sup> "Samuel Adams," https://cso.org/about/performers/composers/samuel-adams, Accessed July 22, 2018.

BBC proms. He also teaches internationally, including affiliations with institutions like the Royal Conservatory at the Hague, and has recorded prolifically.<sup>32</sup>

In this environment of technological and electronic music saturation, it is no surprise that instrumentalists are composing electronic music for themselves and other instrumental performers. Beginning in 2008, Adam Cuthbért began experimenting with combining his major instrument, the trumpet, and Ableton Live software. The following chapters will provide an in-depth discussion of Cuthbért's works for trumpet and Ableton, as well as provide useful perspectives for performers of these works.

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<sup>&</sup>lt;sup>32</sup> "Marco Blaauw," http://marcoblaauw.com, Accessed November 4, 2018.

## **Chapter 3: Discussion of Technology**

#### Overview

For the performer of Adam Cuthbért's music for trumpet and Ableton Live, a basic understanding of the required technology is essential for performance. The technology utilized by Cuthbért can be broken into two categories: hardware and software. The hardware portion includes a microphone, an audio interface, the mixing board, laptop computer, speakers, and all of the cables required to connect each aspect of this assemblage. The software involved with Cuthbért's music is Ableton Live, a popular digital audio workstation (DAW). This chapter will provide guidance for the performer of Cuthbért's pieces, but is in no way an exhaustive guide to either the hardware or the software addressed here. There are many other resources that address the enormous details involved with both of these areas of technology, all easily available for the inquisitive performer. However, an understanding of the technology involved in Cuthbért's works is crucial for a successful performance. This is especially true for sonata for trumpet and launchpad (2013), which requires the performer's interaction with both hardware and software in performance, but will be useful for performances of his other works.

#### Hardware

In order to perform Cuthbert's works, the following hardware components: microphone, microphone cables, mixing board, audio interface, laptop, speakers, and, for the sonata, an in-ear monitor for a "click" track, and a Launchpad or similar device for interacting with Ableton Live. Each of these components, perhaps with the exception of the Launchpad, do not require brand-specific devices. However, Cuthbert

has recommendations (Appendix A) for specific products that work well for his purposes and are also affordable. For the microphone Cuthbert suggests the Shure SM 57, which is a very commonly used microphone that is typically used for instrumental amplification. This microphone is a dynamic microphone that uses a cardioid pickup pattern and is priced at roughly \$100. All of these qualities make it ideal for trumpeters who are not using microphones in their daily musical experiences. There are negatives about the SM57 microphone, however. Several performers have expressed issues with the stationary nature of the microphone (see Appendix A), and the difficulty of maintaining a steady trumpet angle in order to be picked up by the microphone. Most importantly, feedback on this microphone makes it difficult to use effectively.

In order to combat this issue, a variety of microphone options are available. Cuthbért prefers the Yamaha Silent Brass practice mute, as it contains a microphone pickup, and effectively isolates the trumpet sound from the electronic accompaniment. John Adler prefers a microphone that clips onto the bell of the instrument, and uses a model AMT-800 available from Applied Microphone Technology. The major detraction from Adler's preference is the cost: the AMT-800 costs \$700, which is quite expensive for many performers (especially those who do not heavily perform electronic music). Adler's specialization in electronic music, both contemporary classical music and jazz, necessitates this expense, but this expense would have deterrent effect for an undergraduate student or even a non-specialized professional.

In order to connect all aspects of the sound production to speakers of any type, a performer is required to use an audio interface with USB connection capabilities. This device serves several purposes, both with the input and output of digital sound. First,

the performer's microphone connects via the interface to the computer through USB connection, where the acoustic sound is manipulated in a variety of ways by the software. Once sound is processed by Ableton Live, the performer's sound, added effects, and preprogrammed musical material is sent out through the audio interface to the speaker system. In the sonata in particular, there is the added output of a "click" track, which is effectively a metronome for the performer only. This track is not heard by the audience, and instead is sent to an in-ear monitor of some type for the performer to maintain rhythmic alignment with the piece. For this, the Focusrite 2i4 has a monitor headphone that works well and is less than \$200.

Cuthbért's sonata for trumpet and launchpad makes a direct reference to the device known as a Launchpad as the second instrument in the traditional chamber music setting of a sonata. This, however, is somewhat incorrect. The Launchpad is merely a device for triggering preprogrammed musical effects or events, not an acoustical musical instrument in any normal sense. Laid out in an 8x8 grid, the Launchpad is connected directly to the laptop through a USB port and consists of lighted buttons that correspond to the programming of Ableton Live. It is relatively inexpensive, priced in the \$100-200 range. The buttons of the Launchpad light up when musical information is detected in the corresponding software. This will be discussed further in the next section, but suffice to say that the Launchpad enables performers to trigger musical events in a live setting with ease and expediency. Simply pressing a button on the Launchpad versus attempting to use a cursor to find any given event in the Ableton Live software interface is quick and less prone to performance-inhibiting errors. There are three versions of the Launchpad (made by Novation): Launchpad Mini, Launchpad, and

Launchpad Pro. Each model comes with a copy of Ableton Live Lite, the introductory software for Ableton Live. All three of the Launchpad varieties are capable of executing Cuthbért's music.

Regarding speaker systems, Cuthbért's music is heavily influenced by his work as a DJ and sound designer, which necessitates the use of a large sound system (see Chapters 5 and 6 for more information). Because of this need, a mixing board of some type is required. There is a way array of options in regards to sound systems (far too many variables to be encyclopedically addressed here), but the desired effect is that of a house DJ in a dance club. Most universities and colleges will have sufficient audio equipment to create this effect, but this could be a rather large obstacle for those outside of the university system.

A laptop computer will be requisite for the use of Ableton Live in performance. For the latest version of Ableton Live (Live 10), either Mac or PC computers are capable of running Live 10. Mac laptops must have the following: OS X 10.11.6 or later, Intel Core i5 processor or faster, 4 GB RAM (8 GB or higher is preferred), 3 GB of disk space for basic installation (8 GB or more recommended). Similarly, PC laptops must have Windows 7 (SP1), Windows 8, or Windows 10, Intel Core processor or faster, 4 GB RAM (8 GB or more recommended), and 3 GB or more of disk space for installation. USB ports are required for both types of laptops.<sup>33</sup>

Of course, more commonplace items are required for the performance of these works. In order to keep the laptop, Launchpad, and audio interface within reach of the performer, a table of some sort is essential. The final component of this "rig" is comprised of the cables with which it is connected. For the microphone, a standard

<sup>&</sup>lt;sup>33</sup> Ableton Manual, https://www.ableton.com/en/manual/welcome-to-live, Accessed August 10, 2018.

XLR male-to-male cable will be used to connect from the microphone to the audio interface. The interface itself comes with the required USB cord, as does the Launchpad. From the audio interface to the mixing board, standard balanced ¼" cables will suffice to run out of the "balanced" left and right outputs. The in-ear monitor will require a 1/8" plug-in (standard for most in-ear monitors), and will run out of the monitor output of the audio interface.

#### **Software**

Ableton is a software company based in Berlin, and was founded in 1999 by Gerhard Behles, Robert Henke, and Bernrd Roggendorf. The computer program Live, launched in 2001, is the main product offered by Ableton (or Ableton AG, officially). Live is a digital audio workstation (DAW) that is capable of recording (live or digital) and manipulating MIDI instruments, with an emphasis on live performance. Essentially, Live operators perform with the software as other performers might use a traditional instrument.<sup>34</sup> Ableton Live can run simultaneously alongside other DAW platforms, and with the addition of Max for Live, Live can utilize the visual coding language of the popular program Max/MSP.

Performers of these pieces can functionally perform the works with a limited knowledge of Ableton Live. The works have been streamlined to make performance fairly simple, despite the potentially intimidating amount of technology involved. Cuthbert also only rents his works specifically because he offers extensive technological support as needed to the performer, which does mitigate the need for the performer to be an Ableton expert. However, a basic understanding of the software, as well as its interface will help avoid potential difficulties.

Ableton Live has two main screens, which can easily toggle back and forth as needed. The first screen the user encounters is set up in columns and rows (Arrangement View, Figure 3.0), much like commonly used Microsoft Excel. 35 Columns are called "tracks" and divided into audio (recorded material) or midi (software instruments) types. The horizontal rows are called "scenes" in Ableton Live. The individual cells that make up the tracks and scenes are called "clip slots." Clip slots are filled with clips, which are prerecorded musical material. These can be small or large, but they are the basic units used by music producers or composers. They also correspond directly with buttons found on the Launchpad for ease of execution in live performance. The Session View (Figure 3.1) is oriented horizontally and much more closely resembles other recording software interfaces. It is oriented toward being the live platform for creating music with the clips, found in the Arrangement View. 36

Figure 3.0

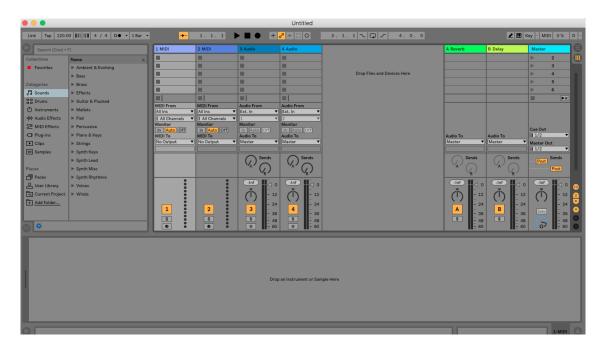
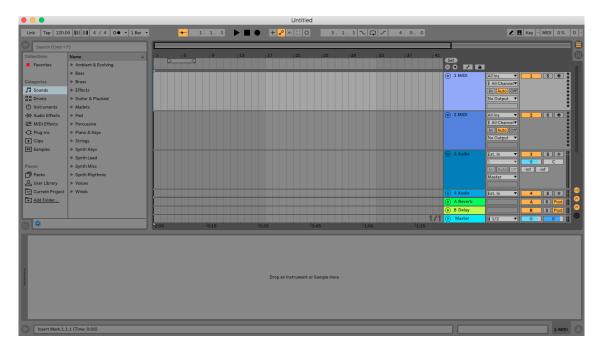


Figure 3.1



Ableton Live has a huge availability of software instruments, which need a MIDI keyboard to control, as well as preprogrammed musical material (bass lines, drum tracks, etc.), and the ability to manipulate any aspect of the programming. Thus, a

producer or composer can adjust filters, tempi, grooves, and any other aspect of musical output as well as recording clips of any musical material they can imagine. The possibilities for knowledgeable producers/composers are nearly infinite, providing fertile ground for creativity. It can also be confusing to the novice, but Cuthbért has mitigated this issue by containing his tracks and scenes to single lines in the software. He has also set up a space for the trumpet track, making performances and practice quite intuitive, especially with some base knowledge of Ableton Live software.

## **Completing the Performance Set-up**

Bringing the hardware and software together is the final step in preparing to perform with the required technology for these works. The microphone, audio interface, Launchpad, Laptop, mixing board, and speaker system need to be connected with their respective cables. On the laptop, Ableton Live needs to be running with the set (the complete package provided by the composer) launched for the desired piece. On the Session screen, the track must have the audio interface (Focusrite 2i4) selected as audio input and output. For *rikai*, *scarlett rising moon*, and *no hipster hats*, this will be sufficient for the entirety of the work. For *sonata*, the perform will be required to trigger scenes and various effects as each movement progresses. Seeing as this aspect of the work is performative in nature, the triggering of scenes will be discussed at length in the analysis of the works found in Chapter 4.

## **Chapter 4: Analysis of Works**

#### Overview

For a complete picture of Cuthbért's works for Ableton Live and solo trumpet, the performer needs several critical data to make informed decisions in regard to programming the works, as well as possible artistic choices in their performances. First, the technical demands for the trumpet aspect of the works must be addressed. These include range, dexterity, endurance, extended techniques, and other basic performance requirements for the trumpeter. Second, a structural analysis of each work will be undertaken for the performer to understand the architecture of the pieces. Third, the performer should be informed of the composer's intentions of each work. The intentions of the composer will be addressed in the interviews (Appendix B), but the other two crucial points will be addressed in detail. Thus, the analysis contained in this chapter will contain two distinct aspects: technical requirements of the performer and a musical analysis.

The structure of Adam Cuthbert's works are quite clear when viewing the trumpet scores to each work, especially in *sonata* and *no hipster hats*, given the nature of "scenes" in Ableton Live. In *rikai* and *scarlet moon rising*, major events are less clear in the trumpet score, and the analyst must rely on their perception of sound to develop a more complete picture of the work. As with much electro-acoustic music, the lack of a full score makes analysis challenging. To this point, a precise method of discussing electronic sound must be employed. Without a system of discussing sound, analysts are forced to resort to comparisons to known sounds and onomatopoeia. The

system of addressing the analysis of sound to be used in this discussion will be the one developed by Brian Fennelly and articulated in his 1967 article "A Descriptive Language for the Analysis of Electronic Music." Despite its age, the system that Fennelly outlines in this article is developed thoughtfully and thoroughly, and is malleable to accommodate any sound detected by the human ear.

Fennelly uses a formula to describe sound, and this formula is also used to identify his system of analysis. The description of any sound can be found in the infinite variations found in this formula:  $X_S Y_C E$  or the more specific  $X_{Sr}^t Y_{Cd}^t E$ . While this formula appears complicated, the basic components of  $X_SY_CE$  are the building blocks of any sound.  $X_S$  accounts for timbre (X) and spectrum (S). X denotes type of sound, which is represented by a number (see figure X). The subscript of S and the further refining r and t gives the spectrum (high, mid, low, and combinations), timbre class (r), and general register placement (t). Y<sub>C</sub> identifies attack (Y) and continuation (C). Attack (Y) is the quality of the beginning of a sound, further refined by the way that sound continues (C) after the attack, or, in other words, how the sound decays, grows, or remains stable. Subscript (i) shows the intensity of attack and sustain, whereas second subscript (d)describes duration. Both of these subscripts modify the relationship described by Y<sub>C</sub>. E is representative of enhancement, which is by far the most open-ended portion of this formula and specifically accommodates the multitude of ways in which an electronic musician can affect the sounds they produce. For a detailed table of how Fennelly has categorized these aspects of sound, see Figures 4.0-4.3.

# Figure 4.0

TABLE I: Timbre X<sub>8</sub>

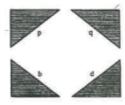
### Timbre type X:

- 1. sine wave
- 2. square or sawtooth wave
- 3. combinations\*
- 4. "natural" (environmental analog)
- 5. white noise
- II 6. combinations\*
  - 7. "natural" (environmental analog)
- I.—pitched, with fundamental or predominant tone
- II.-noise-related
- combinations of several sources perceived as a single unit

#### Spectrum subscript S:

- \$G. full, or nearly full spectrum
- † H. high components only
- # MH. midrange and high components
- + M. midrange only
- ↓ LM. midrange and lows
- L. low components only
- ‡LH. lows and highs only, midrange out
- F\*. fluctuating

<sup>\*</sup> Special cases of F;



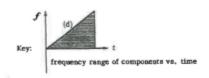


Figure 4.1

Superscript t indicating timbre-class interrelation:

for X classes: 1, 2, 5: class 4 or 7 abbreviations if related to natural timbral types (the timbre first having been defined as 1, 2, or 5)

 class 4 or 7 abbreviations and class numbers 1, 2, 5 to identify timbral qualities

4, 7: class numbers 1, 2, 5 if related, or other class 4 and 7 abbreviations

Second subscript r denoting general registral placement:

- 0 very low
- 1 low
- 2 medium low
- 3 midrange
- 4 medium high
- 5 high
- 6 very high

Approximate boundaries:



Figure 4.2

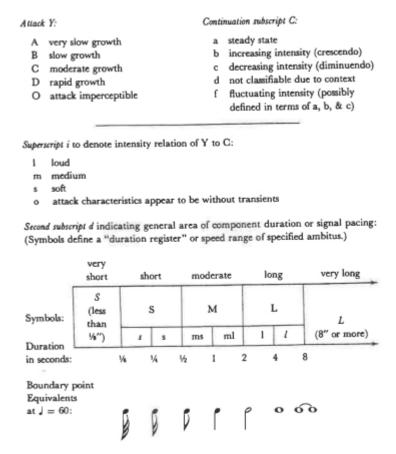


Figure 4.3

TABLE III: Enhancement E

0 "natural" vibrato no reverberation nr "abnormal" vibrato some noticeable reverberation high reverberation reverberation only beating iteration glissando during decay (†1) FB feedback glissando connecting pitch levels (†1) variable speed use of loops AM amplitude modulation other than vibrato FM frequency modulation other than vibrato

Fennelly presupposes that an acoustic instrument could be described with abbreviations, and that abbreviation would be the most specific way to designate timbre, or *X*. For this analysis, Trpt will be used to identify the trumpet. Since Fennelly's article

was published, the availability of sounds created with electronics has expanded dramatically. Because of this, the author has created new abbreviations as addendum to Fennelly's system. For a complete list of abbreviations used in the analyis, see Figure. It should be noted that, especially with the *sonata for trumpet and launchpad*, there is variability in the way the trumpet sound is affected by the software.<sup>37</sup> In the recordings by Adler, Cuthbért was changing sounds during the recording session in as he saw fit, and, similarly, Adler uses his own combination of effects when performing these works. Thus, the analysis provided is based on the recordings listed in the diagrams but the diagrams are not meant to be an immutable model for performance in this specific regard. Adler and Cuthbért, with Adler performing the trumpet solo in all recordings except *no hipster hats*, in which Cuthbért is performing, produced the recordings used in analysis.

It should also be noted that it is not the intention of this analysis to attempt to use *XYE* analysis to describe every sound of each work. That type of analysis is tedious and unnecessary to inform a performer of the contents of a piece. Attempting to completely reverse engineer, so to speak, the electronic accompaniment proves to be exceedingly difficult, given the wide palette of electronic instruments and effects available in Ableton Live, or any other DAW for that matter. The purpose of the analysis undertaken here is to give the performer an understanding of the major musical events of each piece, based on a study of the performer's score and recordings of the works. Thus, there will be a two-part approach to analysis. The first analytical look will address the technical trumpet requirements of each work, and the second will be a structural analysis created through the use of the *XYE* system described above. For the

<sup>&</sup>lt;sup>37</sup> See Appendix A and Appendix B

trumpet-centric analysis, the written score will be the main focus of analysis. For the structural analysis, recordings will be the main source of musical material to be analyzed.

# Figure 4.4

Key of Instrumental Abbreviations

Trpt = trumpet

Synth = synthesizer

SyStr = synthesized strings

SyTrpt = synthesized trumpet

SyB = synthesized bass

DM = drum machine

Brd = bird call

V = human voice

Cym = cymbal

Additions to Enhancement E

Dis = distortion/overdrive

Phs = phaser

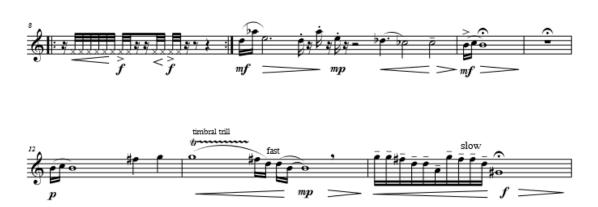
# Scarlet Rising Moon (2008)

The subtitle of this work is "Reflections on Broken Melodies" is appropriate in several ways. The piece toys with several melodic fragments, and the work is unusual for Cuthbert in its lack of rhythmic drive from the software accompaniment. The affected trumpet sound and timbral changes provide the "reflective" aspect of the work, and the entirety of the software's role. For the trumpet, the piece alternates between unmetered and metered sections of melodic material. Written for B-flat trumpet (it has been performed on flugelhorn with Cuthbért's consent), the range and technical demand of this early work is more limited than the other works in this corpus. The range required for the work only covers concert pitches F 3 to A-flat 5, and would be playable by most undergraduate level performers. With few leaps of more than a fifth, the intervallic content is also very attainable for younger performers. Scarlet Rising Moon is one of his shorter works, roughly 7 minutes (variations of this timing are to be expected due to the improvisatory nature of the work). Also, the endurance required is much more manageable than other works of Cuthbért's because of the ability of the performer to dictate the pace of the work.

The piece begins and ends with an echoed fanfare, with the second fanfare being a stylized half-step version of the first conventional short-short-long iteration. This second "broken" fanfare returns several times throughout, and is a primary motive for the work. In measure 8, the performer is asked to perform a rapid crescendo of air through the instrument while quickly moving the valves (Figure 4.5). Different artists performed this extended technique quite differently, and the gesture should be seen as a

point of departure for this measure versus a strict rhythm<sup>38</sup> (see Cuthbért's interview for his ideas on improvisation). Similarly, the "timbral trill" (Figure 4.5) indicated in measure 13 could be performed several ways. On B-flat trumpet, this G5 (concert F5) can be performed with three alternate fingerings (first and third valve, first and second valve, and third valve alone) instead of the standard open fingering. Quickly alternating between these fingerings creates a tremolo effect. There could be other possible ways to create a "timbral trill," however the available recordings of this work indicate an alternative fingering tremolo effect. The only other extended technique required is a slow fall off of the last note. Once again, this would be left to the discretion of the performer in its execution, but the typical technique would be to use a half-valved smear to *niente*.

Figure 4.5



For the performer, this work provides several opportunities to be flexible with melodic material. The unmetered sections from measures 1-17, 33-37, and the ending measures allow for the performer to experiment with timing and size of the gestures

<sup>&</sup>lt;sup>38</sup> See Cuthbért's interview in Appendix B for his ideas on improvisation

within, as well as the space between melodic fragments. Also, the performer can allow the software to fill these spaces. The metered sections of the work from measures 18-32 consist of rhythmic patterns and melodic fragments. In recordings, the performers repeat these cells of material freely, creating a brief sense of pulse and rhythmic build before dissolving into longer sustained melody. Because of this variability, the work provides an air of improvisation and intimacy to the audience and performer alike.

# Table 1: scarlet rising moon Analysis

Solo:					
Trpt <sub>M3</sub> D <sup>m</sup> <sub>fL</sub> R,Dis,Phs		$Trpt_{MH3.4}D^{m}_{fL}R$		$7_{MH}D^{I}_{fs}R,Phs$	
Timing:		1:04	1:08	1:22	1:58
Accompaniment		$Synth_MD^s_{\ fL}R$		5 <sub>MH</sub> D <sup>I</sup> <sub>fS</sub> R,Phs	
	$Trpt_{MH3-4}D^m_{fL}R,Dis$	Trpt <sub>MH3-4</sub> D <sup>m</sup> <sub>fL</sub> R,Dis	,L	Trpt <sub>M3</sub> D	b <sup>m</sup> <sub>bL</sub> R,Dis,Phs
2:20	2:56	3:10	3:27	4:04	4:30 (end
$Synth_{MH}D^s_{fS}R$			Synth <sub>L</sub> D <sup>s</sup>	S <sub>fS</sub> R	

## rikai (2009)

By far, the most frequently performed work by Cuthbért is *rikai*. This is almost certainly due to the simple fact that the piece is the most like a traditional piece for fixed media and trumpet. The electronics are streamlined to a "plug and play" capability, despite the need for the full Ableton software suite. The performer only needs to correctly connect the trumpet microphone to the first two tracks of the Ableton set, and press play. Ableton will change automatically, and there are timings listed in the trumpet score for when events should occur. There is no click track, making the timing of rhythmically complex moments particularly perilous. This is overcome through familiarity with the work and voluminous practice with Ableton. There is also a visual addition to the work in the form of a short film by John David Forslin, which makes for a very effective addition but is beyond the scope of this discussion.

As far as technical requirements for the trumpeter, *rikai* is written idiomatically but presents several challenges for the performer. The piece opens with very simple melodic material, freely performed. As the piece begins its first build, a chant-like melody emerges. This first section is only ascends to B-flat 5 (as written) momentarily, at the first timing cue indicating to arrive at this measure at 1:10 of the performance. As the piece grows more frenetic, the trumpet part becomes more rhythmically unstable and syncopated until a moment of relaxation comes at the 1:52 marker in the score.

The score instructs the performer to "play in strict time now" (around 2:00; see Table 2) as the second section of the piece becomes more rhythmically driven. The trumpet is required to play several eighth note cells of melodic material for 11 measures before sixteenth note subdivisions create challenges in syncopation and technical

facility. The section concludes with a transitional lyrical melody, leading into a broad and free interlude. Starting in measure 31, Cuthbért gives the performer full chords in two measure sections, instructing for the trumpeter to "pick any one of the given notes, or take a rest." In measure 45, the performer is instructed to play "lyrically, steadily breaking through the texture" while performing a metered melody before arriving at the bold melodic statement at measure 53. Here the instructions include to perform "broadly, with declamation" and in unison with the recorded trumpet in the Ableton accompaniment. This continues through the arrival of the most technically challenging section of the work thus far at measure 61. Here, a long string of sixteenth notes, which includes rapid leaps up to a minor seventh is performed in quick succession, building to a climactic moment. From measure 85 to 92, the trumpet is given a long, lyrical line as the intensity of the moment dissipates. In measure 101, sustained notes cover bars at a time and eventually the piece fades with a low F 3 (as written) in the trumpet. Cuthbert gives instructions for the trumpeter to extend the third valve slide and provides alternate fingerings for the A-flat and G that precede the low F (Figure 4.6).

The piece ends with an extended section in the challenging meter of 15/16 and technically demanding sixteenth note passages that once again feature rapid leaps throughout. The intervallic demand is less than earlier passages, but the sustained flexibility required in this passage is substantial. In one of the only sections of true chromaticism, the piece ends with a three-note motive in sixteenth notes chromatically planning in an ascent to a final written B-flat 5 (Figure 4.6), which can be performed with a jazz-style fall.

Figure 4.6



# Table 2: rikai Analysis

<b>Solo:</b> Trpt <sub>MH3-4</sub> D <sup>m</sup> <sub>fS</sub> R		$Trpt_{MH3-4}D^m_{fS}r$	Trpt <sub>MH3-4</sub> D <sup>m</sup> <sub>fS</sub> r			
Timing:	1:20	1:56	2:38			
Accompaniment:		$Trpt_{MH3-4D}^{m}_{fM}R,L$	$DM_GD^l{}_{aS}0 \\$			
Synth <sub>MH</sub> C <sup>m</sup> <sub>fL</sub> Phs	$Synth_LC^{m}{}_{fL}R$	$Synth_L C^m_{\ fL} R$	(melodic)			
		Major arrival				
2:59	4:00	Trpt <sub>MH3-4</sub> D <sup>l</sup> aLr 4:204:36	4:56			
$Synth_L C^m_{\ fL} Dis$	$Synth_GC^I_bLDis$	SyTrpt <sub>MH</sub> D <sup>I</sup> <sub>aL</sub> R (with trumpet)	$DM_GD^I_{aS}0 \\$			

Table 2: rikai Analysis

solo/accompaniment

 $Trpt_{MH3\text{-}4}D^m_{\,fS}r$ 

,	overlap	Trpt <sub>MH3-4</sub> D <sup>m</sup> <sub>cM</sub> r	$Trpt_{MH3-4}D^{m}{}_{aL}r$
5:18		6:006	:37
SyTrpt <sub>MH3-4</sub> D <sup>m</sup> <sub>fS</sub> r			Synth <sub>H</sub> D <sup>m</sup> <sub>aS</sub> r Synth <sub>L</sub> C <sup>m</sup> <sub>fL</sub> Dis,r
	Trpt <sub>MH3-4</sub> D <sup>l</sup> bsR	All aspects crescendo	
7:31	7:538:10	8:45 (end)	
$Synth_{MH}D^{I}_{fS}Dis$	$\begin{array}{ll} \text{Synth}_{\text{L}}\text{C}^{\text{m}}_{\text{fL}}\text{Dis}, & \text{DM}_{\text{G}}\text{DI}_{\text{aS}}0\\ \text{(rumble)} \end{array}$		

## no hipster hats (2011)

No hipster hats is a unique piece in Cuthbért's output in that it has only ever been performed by Cuthbért himself, and features several extended techniques in combination with Ableton effects to create quite a different aesthetic from the other works discussed in this chapter. Because the piece has not been refined for publication or even performance by performers other than the composer himself, the use of the Launchpad and Ableton is much more involved for the performer. The score provided to the author by Cuthbért contains twenty-seven "scenes" to be triggered by the performer as well as notes for the use of individual effects that have been preprogrammed into the Launchpad. Needless to say, this piece would require streamlining and revision in order for future performances to occur. Also, the beginning of the piece is designed to be performed with the first generation of Yamaha Silent Brass mute functioning as the microphone for the trumpet. The performer is instructed to strike the mute itself in order to produce rhythmic material for the work (see Figure). According to Cuthbert, the newest form of the Silent Brass does not create the same effect and the piece will need to be re-imagined for the opening section to be effective.<sup>39</sup> The trumpeter is instructed to tap rhythms on the mute and slam the valves in rhythmic patterns for the first six scenes of the piece. The trumpet enters in the seventh scene, and performs long durations of written B-flat 3, E-flat 4, F 4, and B-flat 5 for the next two scenes (circa 5:00 mark; see Table 3). The ninth scene is improvised, based on material from scene 8. Similarly, scene 10 features a shorter, more syncopated version of scene 7-8 and scene 11 is improvised on this material from this (circa 7:45 on Table 3). In scene 13, the trumpet performs increasingly short durations of E-flat major and

<sup>&</sup>lt;sup>39</sup> Cuthbért interview, Appendix B

pentatonic scalar passages until the performer is instructed to "jam" in scene 14. Scene 16 instructs the trumpet to tacet and the score states "DJ time; sheathe horn," clearly a note from Cuthbert to himself about the next several scenes. The trumpet is absent for the next scenes, returning in scene 24 with a diatonic quarter note melody in A-flat major. Scene 25 is improvised again, and scene 26 concludes the trumpet part of the work with a passage of eighth-note triplets of diatonic material in A-flat. This piece is the most conservative of Cuthbert's works in regard to trumpet requirements, but certainly the most involved from a technological perspective, given the density of scenes needed in Ableton.

Figure 4.7

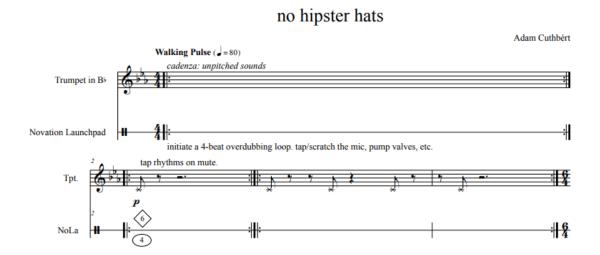


Table 3: no hipster hats Analysis

<b>Solo:</b> 7 <sub>MH</sub> D <sup>s</sup> <sub>fS</sub> R		7 0 0			General Crescendo		
		7 <sub>MH-H</sub> D <sup>s</sup> fsR (fluctuating pitch)			$Trpt_{MH3-4}D^m_{fL}$	R Trpt <sub>M</sub>	Trpt <sub>MH3-4</sub> D <sup>m</sup> <sub>fL</sub> Dis (heavy)
Timing:		1:28	2:15	_3:06	5:16	6:21	
<b>Accomp</b> 7 <sub>LM</sub> D <sup>s</sup> <sub>fS</sub>	paniment:		$\mathrm{DM_HD^s_{fS}0}$	$Synth_{MH}D^{m}_{fS}R$			
	Trpt <sub>MH3-4</sub> D <sup>n</sup>	<sub>fL</sub> Dis (heavy)		Crescendo Conti	nues		
7:30	7:45	_8:30		10:15		12:42	13:18
Synth <sub>M</sub> D	m <sub>fS</sub> R	$SyStr_{MH}D^{m}{}_{fS}R$	;	SyStr <sub>LM</sub> D <sup>m</sup> <sub>fL</sub> R		Synth <sub>H</sub> D <sup>I</sup> <sub>fS</sub> Dis	Synth <sub>G</sub> D <sup>m</sup> <sub>fS</sub> Dis

 $Synth_{H}D^{m}{}_{fL}Dis$ 

Table 3: no hipster hats Analysis

<b>Musical Low Point</b>					
	Trpt <sub>MH3-4</sub> D <sup>m</sup> <sub>fL</sub> Dis (heavy	)			
14:25	14:44	16:4016:55		17:25	
	$DM_GD^L_fSR$	Accompaniment	Synth <sub>LM</sub> D <sup>I</sup> <sub>fL</sub> Dis,R	Synth <sub>G</sub> D <sup>I</sup> <sub>fL</sub> Dis	
	Synth <sub>G</sub> D <sup>I</sup> <sub>fL</sub> Dis,R	Out			
_	Decrescendo to End				
Trpt <sub>MH3-4</sub> D <sup>m</sup> <sub>fL</sub> Dis (heavy	y)				
17:53	19:18	19:18 (end)			
$DM_GD^L_fSR$					
Synth <sub>G</sub> D <sup>I</sup> <sub>fL</sub> Dis,R					

## sonata for trumpet and launchpad (2013)

At 35-40 minutes for a complete performance, Cuthbért's sonata for trumpet and launchpad is the most substantial work he has written for solo trumpet and Ableton Live software. The piece is in three contrasting movements, but is not in the traditional fast-slow-fast movement structure, opting instead for a fast-less fast-slow architecture. This is unconventional (to be fair, the entire work is very unconventional), but is still quite effective. Each movement is divided into scenes that are numbered (these numbers correspond to the Ableton sets, provided by the composer) and are additionally labeled in the score with descriptive titles. In order to perform this work, the trumpeter must use the full Launchpad setup described in the previous chapter. The performer must also "map" several functions from the software onto the Launchpad for ease of performance. There are many ways to map the Ableton sets onto the Launchpad, but, in the author's experience, the simplest process is to enter MIDI-mapping mode in Ableton<sup>41</sup>, then to

<sup>&</sup>lt;sup>40</sup> Chris Delgado Interview, Appendix A

program the "play" button, scrolling up and down, and the "stop" button onto the Launchpad. Each movement is an individual file, and will need to be mapped independently, but each of these functions can be mapped onto the same Launchpad buttons for each movement. Cuthbért has preprogrammed some scenes to automatically transition from one scene to the next, but there are several places where the performer must trigger the advancement of the piece.

The trumpet track of the sonata is equipped with a variety of effects, all of which can be mapped onto the Launchpad in the MIDI mapping mode. These effects are largely left to the discernment of the performer, and can be adjusted during the performance through either the software controls or the microphone gain on the interface. John Adler stated that his use of these effects required much experimentation on his part, with the consultation of Cuthbért, but is never performed the same way twice. The improvisatory nature of the effects on the trumpet in part of the larger improvisatory nature of the piece, and was a conscious choice by the composer.<sup>42</sup>

The opening movement of the sonata is titled "automatic shifter," which alternates between extreme aggression and ethereal beauty. Scene 1 is labeled "attack" and begins with a metrically ambiguous, angular motif that is challenging for any trumpeter. Use of the click track is essential for rhythmic accuracy, but even with the aid of the metronome, the rhythms are difficult to execute. Adding to the challenge is the use of leaps well over an octave, with the widest spanning a written F-sharp 4 to a C-sharp 6 (see Figure 4.8). The next scene is, titled "relax," is automatically triggered by the software and is rhythmically free. Before the performer plays the sustained lyrical lines of the scene, they are instructed to "rest indefinitely." The melody is very

<sup>&</sup>lt;sup>42</sup> Appendix A, Adler Interview

playable, with the only serious difficulty coming from a descending slur of a major ninth that occurs towards the end of the line. After the written melodic statement, the performer is instructed to improvise but is given no addition instruction. In the author's experience, this section works well with a written B-flat major tonality (given the tonality of the accompaniment), but this is left open to the performer. The third scene needs to be triggered by the performer, and the coordination of the start of this scene with the execution of the trumpet part can be perilous. This is because of the timing of pushing the correct button with the left hand while preparing to perform difficult passages with the right hand is an unusually difficult performance demand. The scene is entitled "barrage," and it certainly can feel like an unrelenting onslaught for the performer. The range is very reasonable, but the performer is never given more than a quick quarter rest for the entirety of the scene, and the 48 measures of near-constant eighth notes challenge the performer's concentration, mental agility, and flexibility on their instrument (see Figure 4.9).

Figure 4.8



Figure 4.9



Scene 4 is triggered automatically and is entitled "sleep." It presents the same material from Scene 2, this time transposed up a half step. At the end of the scene, the performer is instructed to rest or improvise. Scene 5, titled "aim," is improvised utilizing a concert B-flat tonic, and must be triggered by the performer. The rhythmic accompaniment grows more active throughout the scene, and finishes with the same bass drum eighth notes that start to piece. The final scene for the movement is Scene 6,

or "chant," is triggered automatically. It features three statements of the same three-note motive in long durations, each in a higher octave. The third statement begins on a written C6 and ascends to E6, giving the trumpeter a substantial challenge in range. Similarly, the ending of the movement circles the top of the staff and culminates is a series of 17 repeated C6 jabs before the movement fades out.

The second movement, entitled "zenbu no hikari," is the longest movement of the piece, taking roughly 13-14 minutes to perform. The scene numbering system continues from the first movement, so the first scene of the movement is Scene 7. Entitled "announce," this scene is written in cut time and is the most overt reference to pop culture in the piece. In fact, Cuthbért stated that the beginning of movement and much of the ensuing material is a direct reference to riff by Kanye West (see Figure 4.10).<sup>43</sup> The main motif of the movement and much of the ensuing material is based on a steady eighth note subdivision and pentatonic fragments. The first scene gradually builds in intensity to a long string of constant pentatonic eighth notes. The notation choices in this section can be confusing, as Cuthbért uses sixteenth notes and sixteenth rests to notate rhythms that are perceived as staccato eighth notes. The next scene, "affirm," is triggered automatically, and is a vamp requiring the performer to improvise before resting momentarily. The written B-flat pentatonic scale is an obvious point of departure for improvisational material, but the score does not limit the improvisational choices of the performer. Scene 9, "admit," features a quarter note augmentation of the original eighth-note rhythms, causing the sudden shift back to eighths to be a dramatic moment that builds to the climax of the scene. For the performer, the syncopation and flexibility required in the second half of the scene is the greatest challenge presented

<sup>&</sup>lt;sup>43</sup> Cuthbért Interview, Appendix B

here. Scene 10 is titled "admire" and is a vamp. Cuthbért instructs the performer to rest, but also gives permission for improvisation. Scene 11, "understand," must be triggered by the performer and consists of long (dotted half notes and longer) melodic statements at the top of the staff, culminating in a line that ascends to written D-flat 6. Again, Scene 12 or "arrange" is a vamp with optional improvisation and is triggered automatically. Scene 13 or "decree" is triggered by the performer and is slightly faster (quarter note=160) than the very well established quarter note=144 groove. For the author, this section presented endurance challenges due to the higher range (up to a written B5, with optional lines up to F-sharp 6), length of the scene, and little rest, combined with the overall length of the movement (Figure 4.11). The melodic material is essentially the same pentatonic-infused material from the first scene, but transposed from B-flat major/G minor to G major/E minor. Scene 14 or "harangue" is triggered automatically, featuring the instructions to "improvise fiercely." No other instructions are given, and the author advises the use of chromaticism in addition to the pentatonic material from earlier in the work. Scene 15, "breathe," is triggered by the performer and the score instructs the performer to rest without improvising. Scene 16 is also triggered by the performer, and is aptly titled "reiterate." Using the original tempo and themes, this time transposed to written A-flat major/F-minor, the segment is a slight variation of the opening scene and smoothly transitions to the last scene, "acknowledge." Scene 17 instructions advise to improvise and fade out, both paced and determined by the performer.

# Figure 4.10



Figure 4.11



The final movement is entitled "still life with synthetic flora," with instructions to the performer of being "fluid, approximate." The performer triggers all scenes in this movement. It is aptly named, with very little in terms of rhythmic material in the accompaniment, and the melodic material being almost entirely diatonic and lyrical.

The scene numbering continues from the previous movements, and begins with Scene 18. This scene is without trumpet, and the score instructs a 60 second vamp here. Scene 19 begins with a *niente* entrance on a written B-flat 3, and stays very dynamically subdued until a *fortissimo* eruption of articulated sixteenth notes in the third line of the score. Scene 20 contains more B-flat pentatonic material, with a *pianissimo* leap of an ascending major ninth providing the only significant technical challenge. Scene 21 contains a series of rapidly repeated C5's. The score also instructs the performer to add delay to the trumpet effects on the software. Scene 22 features the addition of distortion to the trumpet effects and an ascending line to a written B-flat 5. Scene 23, with the distortion removed, contains leaps to written C6 and D6 as well as a delicate melody above the staff that hovers around B-flat 5 (see Figure 4.12). Scene 24 is quite tame technically, and Scene 25 is entirely improvised on a written B-flat tonic, fading out the subdued ending of the work.

Figure 4.12



# Table 4a: sonata for trumpet and launchpad, Mvt. I automatic shifter

1. attack			2. <b>relax</b>			
Solo:	$Trpt_{MH3-4}D^{I}_{S}0$		$Trpt_{MH3-4}D^{f}_{mL}r$			
Timing of performance: 0:00		0:281:09		1:58		
Digital Acco	empaniment:					
$BD_{L1}D^I_{\ S}0$	$Synth_{G1-5}D^{I}_{S}Dis$	$BD_{L1}D_{S}^{I}0$ (metric)	$Synth_{G2-4}B^{m}{}_{fL}Phs$		BD <sub>L1</sub> D <sup>I</sup> <sub>S</sub> Dis (unr	netered)
<b>#</b> ¾ <b>,</b> , , ,					Bird <sub>H5</sub> D <sup>s</sup>	<sub>fS</sub> 0
3.	barrage	4. sleep		5 <b>. aim</b>		
Trp	t <sub>MH3-4</sub> D <sup>I</sup> <sub>S</sub> Dis	$Trpt_{MH3-4}D^f_{mL}r$		$Trpt_{MH3-4}D^{f}_{mL}r$		
3:3	0	4:30		6:00	6:23	6:53
BD <sub>L1</sub> D <sup>I</sup> <sub>S</sub> O S	ynth <sub>G1-5</sub> D <sup>I</sup> <sub>S</sub> Dis	$Synth_{G2-4}B^m_{fL}Phs$		$DM_{H}D^{I}_{aS}0$	$V_{LM2}C^{m}_{\ fS}r$	$BD_{L1}D_{S}^{I}0$
				$5_{MH}C^{m}_{fl}0$		
н3 Д	3,3,3,7,3,3,5					
	$DM_GD^I_aSDis$					

# Table 4a: sonata for trumpet and launchpad, Mvt. I automatic shifter

#### 6. chant

$Trpt_{MH3-4}D^{I}_{L}Dis$	$Trpt_{MH-H4-5}D^{I}_{L}Dis$		
8:57	9:35	_10:13	_10:39 (end of recording)
Synth <sub>MH3-5</sub> D <sup>l</sup> ₅Phs	;	5 <sub>MH</sub> C <sup>m</sup> <sub>cL</sub> 0	



#### Table 4b: sonata Mvt. II zenbu no hikari

8.affirm

7. announce

Solo trumpet:

 $BD_{L1}D^I_{\ S}0$ 

$Trpt_{MH3}-4D^{m}_{aS}0$		$Trpt_{MH3-4}D^{I}_{aS}r$	$Trpt_{MH3-4}D^{I}_{fS}Dis$	
Timing:				
0:10		2:15	4:00	
Accompaniment:				
<b>63</b> 11,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<del>]' ,]',]],]'</del>			
SyStrLM1-3CmaMr				
9. <b>admit</b>		10. admire (vamp)	11.understand	
$Trpt_{MH3-4}D^{I}_{S}R$			$Trpt_{MH3-4}D^m_Sr$	
5:11	7:06	7:30	7:54	
$SyStr_{LM1-3}C^{m}_{aM}r$	$SyStr_{LM1-3}C^{m}_{bM}Dis$	SyStr cease	$BD_{L1}D^{I}_{S}O$	

 $Synth_{H4\text{--}5}C^m_{\phantom{m}aM}Dis$ 

#### Table 4b: sonata Mvt. II zenbu no hikari

12. arrange	13. decree	14. harangue	15. breathe	16. reiterate
	$Trpt_{MH3-4}D^{I}_{aS}Dis$	$Trpt_{MH3-4}D^{I}_{S}Dis$		$Trpt_{MH3-4}D^{I}_{s}R$
9:20	_9:37	10:25	11:40	11:50
BD <sub>L1</sub> D <sup>I</sup> <sub>S</sub> O	$DM_HD^I_{aS}O$ SyStr <sub>LM1-3</sub> $C^m_{aM}O$	$DM_{H}D^{I}_{aS}O$ $SyStr_{H}C^{m}_{aM}O$	SyStr <sub>LM1-3</sub> C <sup>m</sup> <sub>aM</sub>	0 BD <sub>L1</sub> D <sup>1</sup> <sub>S</sub> 0
17. acknowle	dge			
$Trpt_{MH3-4}D^{I}_{S}R$				
13:00		13:40 (end of piece)		
SyStr <sub>LM1-3</sub> C <sup>m</sup> <sub>cN</sub>	0,0			

# Table 4c: sonata Mvt. III still life with synthetic flora

18.		19.			20.
Solo:		$Trpt_{MH3-4}D^m_{fL}R$			
Timing:	0:30	1:00			3:23
Accompanin	nent:				
Synth <sub>LM</sub> C <sup>m</sup> <sub>fL</sub> F	₹				$Synth_{LM}C^{I}_{fL}R$
	BD <sub>L1</sub> D <sup>m</sup> <sub>fS</sub> 0 (heart beat)				
$Trpt_{MH3-4}D^m_{fL}I$	21. R,Phs	$Trpt_{MH3-4}D^m_{fL}R,Dis$	22. Trpt <sub>MH3-4</sub> D <sup>m</sup> <sub>fL</sub> Dis		
4:30	5:07		6:00	6:30	
	Synth	n <sub>G</sub> C <sup>I</sup> fLDis	Syn	th <sub>G</sub> C <sup>l</sup> <sub>fL</sub> R,Dis	

# Table 4c: sonata Mvt. III still life with synthetic flora

23.	24.	25.		
$Trpt_{MH3-4}D^m_{fL}Dis,\!R$	$Trpt_{MH3-4}D^m_{fL}R$	$Trpt_{MH3-4}D^m_{fL}$	R,V	
7:40	8:30	8:559:07		
$Synth_{G}C^{I}_{fL}R,\!Dis$	BD <sub>L1</sub> D <sup>m</sup> <sub>fS</sub> 0 (heart beat)	$Synth_GC^l_fLR,\!Dis$		
	$Synth_GC^I_{fLR}$			
		$Trpt_{MH3-4}D^m_{fL}R,Dis$		
11:00	12:09	12:30	13:20	13:40 (end)
Synth <sub>H</sub> C <sup>I</sup> <sub>fS</sub> R	Brd <sub>G</sub> D <sup>l</sup> <sub>fS</sub> Phs,R		Synth <sub>G</sub> C <sup>I</sup> <sub>cL</sub> F	R,Dis

### **Chapter 5: Interview Summaries**

#### Overview

Prospective performers of any single composer's body of work routinely engage in various types of research in order to present compelling performances. The previous chapter's contents are a point of departure for this research, in addition to the score study, intense listening, and consistent practice of the work itself. For the most complete picture of a work or collection of works, performers commonly seek out a composer's musical intent in their preparations. Additionally, it is not only normal but recommended for performers to pursue advise from seasoned experts in a given composer's body of work. In this chapter, the later two subjects are addressed directly. Adam Cuthbért's interview and the interviews of performers of his works will be succinctly summarized here, and the intrepid reader is encouraged to read the entire transcript of each interview found in Appendix A (Performers) and Appendix B (Composer).

#### **Performers**

In order for this discussion to truly be a "performer's guide," the perspective of performers of Cuthbért's works must be taking into account. While the author has performed *rikai* and *sonata for trumpet and launchpad*, limiting the discussion to one performer's perspective can be problematic. Each performer brings a different background in music, technological expertise, and general life experiences. For a more complete picture of a composer's works from a performer's purview, a diverse group of performers must be consulted. Over the course of the summer and fall of 2018, several

performers of Adam Cuthbért's works were interviewed for this document. The complete transcripts of these interviews can be found in Appendix A. For the sake of expediency, the interviews have been summarized in this chapter. The interview subjects were all trumpeters who had performed Cuthbert's works and specifically asked to join this conversation based on their varied backgrounds in the field. Interviewees range from performers who performed one of these works as an undergraduate music education major to professional performers with extensive expertise in electronic music.

Briefly, the pertinent biographical information for each interviewee is as follows. Elizabeth Jurd is a recent music education graduate of Tarleton State University in Stephenville, Texas, where she was a student of Dr. Brian Walker. After graduating in spring 2016, she has moved to Kentucky with hopes of either finding a teaching position or attending graduate school for trumpet performance. Christopher Delgado completed his Doctor of Musical Arts in Trumpet Performance at Rutgers University in the spring of 2017. He earned a Bachelor's of Music at Grand Valley State University and his master's degree at the State University of New York at Purchase. Samuel Wells is a graduate of the University of Missouri in Kansas City, where he completed his bachelor's degree in trumpet performance and composition, as well as Indiana University's Jacobs School of Music. At Indiana, Wells earned a Master of Music in Computer Music Composition and Trumpet Performance. He is a composer and performer of contemporary music, extensively working in electronic and computer music. He currently lives and works in New York City, where he is on faculty at Molloy College. John Adler is currently Associate Professor of Trumpet at University of

Northern Colorado in Greeley, CO. He holds degrees in trumpet performance from University of Nevada-Reno (BM), University of Oregon (MM), and University of Miami (DMA). Adler is Cuthbért's most influential supporter, having both commissioned the sonata and recently completed recording Cuthbert's complete works for trumpet and Ableton Live.

Each interviewee was asked a set series of questions, but the conversations were not constrained solely to the subjects these questions. Interviews were structured as conversations of a more casual nature in order for the interviewees to feel comfortable and free to express their thoughts and opinions. The following questions were asked of all interviewees:

- Please state your name and give a little musical background information. For example, where have you attended school, which degrees have you pursued, what is your current involvement in music, etc.?
- Please discuss your experiences with Adam Cuthbért's works? Which pieces have you performed, and when/where did you perform them?
- What was your reaction to the piece when you performed it, and what was the audience reception?
- How much experience with audio/electronic musical equipment and software did you have prior to the performance(s)?
- Were there any issues that arose during the performance or during the preparation of these works that you would consider unique to these works? How did you handle these issues?
- What equipment do you recommend for these works? This can include trumpet choices and technological choices.

- How do these works compare with other pieces for trumpet and electronics that you have either performed or heard?
- Do you have anything else that you would like to add to this discussion?

Regarding pieces performed, Jurd and Wells had each performed *rikai*, while Delgado and Adler had performed rikai, scarlet moon rising, and sonata for trumpet and launchpad. Jurd and Delgado performed for academic recitals. Jurd used rikai in her senior recital and Delgado performed a complete doctoral recital of Cuthbert's works. Adler has been a strong proponent of Cuthbért's works, having frequently performed rikai and sonata for audiences as part of recital tours at colleges and universities as well as performing these pieces at the 2015 ITG Conference in Columbus, Ohio as part of his presentation on trumpet and electronics. The familiarity with electronic music was wide ranging as well, from no experience with Jurd to a modicum of knowledge with Delgado to technical expertise with Wells and Adler. Every performer used a B-flat trumpet in their performances, and most performers used the Shure SM-57 microphone as well. Adler has a unique set-up that he has developed, using a clip-on microphone by Applied Microphone Technology (AMT). This microphone is made to work in a variety of sonic environments, collecting the most trumpet sound with the least ambient "room" sound, in order to eliminate feedback. It is used by a number of prominent performers in commercial genres.

Several issues arose in discussing performance difficulties. First, on the trumpet technical requirements, several performers experienced challenges is dealing with the large leaps that are often required in both *rikai* and *sonata* (especially the first movement). In *rikai*, another common issue was timing for the trumpet entrances in the

final page of the piece. Elizabeth Jurd conquered this difficult entrance through repeated listenings, and essentially memorizing the accompaniment figures. Sam Wells took issue with this specific problem, and suggested that a more informative score for the performer would solve some of this. As an accomplished composer and composition teacher of music for acoustic instruments and electronics, his expertise offers a valuable critique.

Next, the use of the SM-57 microphone is problematic in performance. The microphone is an excellent choice for amplifying acoustic instruments (especially brass), but the performer must remain quite still in performance in order for the microphone to properly function. The instrument's bell must be centered on the microphone, and the performer must keep the distance between the bell and the microphone very consistent in order to achieve the desired musical outcome. To exacerbate the issue, triggering scenes on the Launchpad with one hand while maintaining the proper microphone alignment with the other can be quite difficult at first. Diligent practice with the microphone and Launchpad is absolutely essential in overcoming this issue. Practice will not circumvent the feedback that is inherent with the SM-57, according to Adler. He has overcome this problem with his clip-on microphone, and Cuthbert also suggests a Yamaha Silent Brass practice mute as a microphone. These two options are much better options for ease of performance, but have some downsides as well.<sup>44</sup>

Audience reception was quite positive in all performers' experiences. Elizabeth Jurd was delighted with the performance and her audience's perceived reception. She likened the music to electronica-infused pop/rock music like that of Radiohead or

<sup>&</sup>lt;sup>44</sup> See chapter 3

something similar, which drew her to the work and made it appealing to other people of her age group. Chris Delgado performed a full doctoral recital of Cuthbért's works, and was pleasantly surprised by the positive feedback on the repertoire that he received from the brass faculty at Rutgers University. He stated that the faculty was suspicious of the music to begin with, but was surprised at its artistic merit and depth. In the author's experience, many audiences have rarely heard contemporary classical music with electronics, and even if they have, they have rarely or never heard live sound manipulation by electronics in a trumpet recital setting. This unfamiliarity leads to excited responses and an actively engaged audience, both very desirable outcomes for a performer. Adler has used the works as the basis for a series of university recital tours, and finds the independence offered by a self-contained, performer controlled accompaniment to be a freeing experience. In contrast to the quick rehearsal with an unfamiliar pianist of unknown abilities, in addition to necessity of limiting repertoire selections based on these variables in accompaniment, the use of a controlled and wellknow electronic accompaniment is appealing to the touring recitalist university professor.

#### Adam Cuthbért

Being able to consult a composer on the many facets of their life and works is an invaluable tool for all performers. For many composers, this means consulting their writings posthumously. For the youthful Cuthbért, communication is easy and frequent. For this discussion, two separate interviews were conducted and transcribed. These transcriptions can be found in Appendix B.

To begin the discussion, the following questions were asked:

- What is your musical background? How did you become interested in composing, especially electronic music?
- Can you tell me about the evolution of your works for trumpet and Ableton?
- Your pieces seem to draw heavily on Electronic Dance Music, video game music, and pop music generally. Can you tell me a little about your musical influences and your compositional choices?
- Why Ableton software? Why not Max? Is this deliberate choice?
- Tell me about working with John Adler on the Sonata. How has your relationship with him played out?
- There seems to be a bit of a recent lag in your output for trumpet and electronics. Is there a reason for this, or is it just the natural ebb and flow of a composer's creative life?
- Can you tell me about the upcoming release of your album with John Adler?
- I've noticed that you rent your trumpet pieces, but don't sell them. Can you tell me more about that?
- What are some common issues you run into with trumpeters performing your works? If you could give a performer some advice, what would it be?

Adam Cuthbért grew up in the suburbs of Detroit, Michigan, where he participated in public school music programs and eventually became involved in band as a trumpeter. During high school, Cuthbért was introduced to Ableton Live in the context of a music technology class and started experimenting with making music for himself using the platform. After graduation, Adam decided to attend Grand Valley State University in Allendale, Michigan to major in music, primarily focused on a traditional

classical trumpet performance curriculum. However, Adam's interest in composition drew him to apply to study with Bill Ryan. He was accepted into the composition studio at GVSU, and pursued a double major of trumpet and composition. During his time there, Adam began substantial experiments with combining Ableton Live and his trumpet. He and other composition students were prone to setting up recitals that were hours long and more akin to a rave than a recital.

Two of the Cuthbért's first pieces for trumpet and Ableton came out of this early work: *scarlett rising moon* (2009) and *rikai* (2010). It was *rikai* that garnered the attention of John Adler, who heard Adam perform this work on a masterclass Adler was teaching while on a university tour. Alder asked Cuthbért to perform something that he had been working on, and he decided to perform his own work. Adler, who was deeply interested in trumpet and electronics, was immediately drawn to this work and began programming it for his own performances. This led to Adler commissioning Cuthbért to write *sonata for trumpet and launchpad* in 2013, after receiving a grant from the University of Northern Colorado to pursue the project. Because of Adler's familiarity with technology, Cuthbért felt able to create a more interactive work for trumpet and Ableton and incorporated the use of the Launchpad. The two worked very closely in the crafting of the project, which started as a short recital piece and evolved into a full sonata of 35 minute or more.

Adam's musical influences are wide and varied, as evidenced in his works. Growing up in the early 1990s, Cuthbért was surrounded with video game and anime culture and their ever-present soundtracks. Of course, popular music was a heavy influence in his early years, as was his time in public school band programs. His ears were opened as he

began his studies at Grand Valley State University to a new sonic world, however.

Nearly simultaneously, Adam began discovering contemporary classical music such as Terry Riley, Phillip Glass, Bang on a Can, etc. through the GVSU New Music Ensemble, while also becoming deeply interested in electronica through his own curiosity. This combination proved to be essential to his compositional voice, which was encouraged though his studies with Bill Ryan and his aforementioned self-produced concerts at GVSU.

Regarding common performance issues for his works, Cuthbért considered there to be three main issues: first, that the performer should make themselves familiar with some basic aspects of Ableton before attempting *sonata for launchpad*. Generally, this lack of knowledge is the biggest hindrance to performances. Also, in a similar vein, this is the primary reason that Cuthbért rents his pieces instead of selling them; Cuthbert needs to provide technical support to most, if not all, performers of his works. The second large issue has to do with microphone gain, and ensemble balance between the trumpet and the electronic accompaniment. Each performance space is different, and the gain of the microphone should be adjusted accordingly.

Third, regarding the sonata, the performer should feel like the written solo part is a point of departure rather than a fixed, immutable work. The piece is written in an improvisatory style, and Cuthbért hopes each performer embraces the improvisational aspects, including the use of electronic effects in the solo trumpet part. The musical nexus of the sonata was Cuthbert's use of Ableton and solo trumpet to accompany rehearsals of a modern dance company. Each rehearsal was an hour in length, and he had to find ways to create an hour of music with a solo trumpet. This required the

development of a variety of effects and sounds in Ableton, which Adam dubbed "the *kuuma* project." This, combined with John Adler's interest and proficiency in improvisation, became the origin of the sonata. Cuthbért also is explicitly uncomfortable with the "authoritarian" nature of the composer/performer dynamic, and wants performers to use their own voice in his works.

Cuthbért's relationship long relationship with Ableton Live was the deciding factor in which software he would use for composition. He considers the use of software for composition to be a language unto itself, and, after roughly 15 years of working with the software, he is able to wield Ableton with the most freedom. He is also attracted to the ability to "sculpt" sound in real time that is offered by Ableton, where as Max MSP traditionally has been more oriented to the preplanning of specific effects. However, Max for Live has recently been added to the Ableton Suite and Cuthbért has expressed interest in exploring the possibilities offered in that software.

The creative collaboration of Cuthbért and John Adler has resulted in the most substantial of Cuthbért's written work for trumpet and Ableton, as well as an yet-to-be released recording of Cuthbért's complete works for this setting. Cuthbert has felt free to write challenging music for Adler, and they seem to be kindred spirits in regard to their affinity for improvisation. Cuthbért fondly reminisced about their recording process, referring to it as a "jam." Adler's use of electronic effects for his trumpet in a jazz setting made him a perfect candidate for collaboration with Cuthbert, and the two were in frequent communication as Adam composed the sonata. Cuthbert is planning to release the album in spring of 2019, but has run into several challenges, including

copyright issues with his use of a Kanye West sample in the second movement of the sonata.

### **Chapter 6: Conclusions**

With this discussion of works for solo trumpet and software by Adam Cuthbért completed, what conclusions can be drawn? How can contemporary performer and teachers use these pieces? How can the academic dialogue on the topics of electronic music and wind instruments continue?

While audiences are receptive to this works in this discussion, and performers of said works find them simultaneously challenging and rewarding to perform, Cuthbert's pieces have received relatively few performances. When compared to more traditional composers who write works for trumpet and piano, such as Eric Ewazen, James Stephenson, or any number of contemporaneous composers active during the past decade, Cuthbért's rates of performance are exceedingly small. This is unsurprising for a variety of reasons. Maybe most importantly, works for acoustic instruments and electronic have been historically less popular than their acoustic counterparts. However, there has been a diminutive yet energetically devoted niche of performers that have dedicated themselves to this genre. The same holds true here.

Because of the highly specific skills required performing works for trumpet and electronics, many performers are unwilling to undertake the education in technology needed to be successful in rendering these pieces for the public. For interactive works such as *sonata for trumpet and launchpad*, the skills required for performance are multiplied dramatically. Knowledge of audio hardware (microphones, mixing boards, etc.) is combined with knowledge of the workings of Ableton Live, which represents a significant time investment on the part of the performer. This is, of course, in addition

to the practice required to execute the virtuosic solo trumpet portion of the piece. The sonata is also heavily reliant on the performer's ability to improvise with conviction, making the work inaccessible to many trumpeters' who are uncomfortable with this skill.

An equal or perhaps greater barrier to entry into Cuthbért's works is the financial burden placed on the performer. The cost of equipment and software can, conservatively, compared to the cost of a new professional trumpet. For students, this is most likely an insurmountable obstacle. For the academic or professional performer, such as John Adler or Samuel Wells, this is an integral part of their artistic output and the investment made in equipment and software will be seen as worthwhile. Obviously, the equipment used in the performance of these works is not restricted to Cuthbert's output, and will have many other uses over the course of a performer's career. To begin this journey into the world of electronic music, the trumpet performer is required to expend heavily of their time, energy, and finances.

In compiling the second chapter of this document, it became abundantly clear that the history of wind instruments and their involvement in electronic music has been documented in a scattering of sources, and mostly only in passing. To the best of the author's knowledge, a complete history of wind instruments and their involvement in electronic music is lacking from the academic discourse, and would be a welcome addition. This would likely be a large project, with expertise needed from brass and woodwind specialists, and potentially requiring multiple volumes. It should be noted that much of the music created for magnetic tape before the advent of digital media are also still only available in analog form, which deteriorates with time. The creation of a

digitized library of historic electronic music would quite literally save many of these works from being lost to history.

Cuthbért's early exposure to Ableton software in a public school music program led directly to his current career. This should give educators pause as they evaluate new curriculum for university music programs. The use of acoustic instruments and electronics is widespread in the United States due to the rapid rise of amplification in competitive marching band programs, yet few university music degrees offer education in this area beyond an elective class in music technology that briefly looks at notation and recording software. There are numerous ways that software like Ableton and basic audio system operation skills can be extraordinarily useful in music education, but many teachers only learn about these technologies after graduation and on the job. Perhaps applied faculty could use works like the ones discussed here as a logical launching point for helping build a music education student's knowledge of audio equipment and the use of digital audio workstations like Ableton Live.

The pressing issue with the works by Cuthbért is public exposure to these pieces, which in turn would generate interest not only in these works, but interactive music for trumpet and software generally. The author is aware of several planned performances of Cuthbért's works by performers who are new to this literature. It is the author's intent to perform these works as frequently as possible, as opportunities for recital tours and festival appearances arise. Cuthbért and the author have already begun discussions for a future commission of a new interactive work for trumpet and Ableton Live, which will be featured prominently in upcoming performances and recordings.

It is hoped that this document will provide a guide for future performers of Adam Cuthbért's music, and electronic music in general, that will aid in breaking down the aforementioned barriers to performances of these works. Not only does this ensure that these pieces will reach a larger audience, it also means that future composers and performers might find inspiration in these works and develop new and exciting artistic expressions through their chosen media. The ubiquity of digital audio workstations and computers in the daily lives of many musicians makes the future use of interactive software for the composition of contemporary classical music an inevitability, and it is the author's hope that this discussion will lead to the continued vitality and evolution of the digital compositional world.

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### **Appendix A: Performer Interviews**

### John Adler Interview

Ben:	Hello?
John:	Hello.
Ben:	Hey John, how are you?
John:	I'm doing okay.
Ben:	Thank you so much for getting in touch again.
John:	Sure.
Ben:	I don't know how it didn't work last time. I don't know why. But it's the first time that's happened. But I've got a redundant system for this time, so whatever, even if it doesn't work, I at least have one version, you know?
John:	Sure.
Ben:	Okay. So, let me get the questions pulled up. I'm sorry to hear that you're sick.
John:	Yeah, it happens with little kids on trips.
Ben:	Yeah. Definitely especially since we just started kindergarten, it's something that we

John: Oh, yeah.

Ben: ... started dealing with, you know? Like we basically spent the first six weeks of that sick, you know?

John: Yep.

Ben: Did you read the consent letter? Are you ok with everything in there?

John: Yep.

Ben: Is it ok if I contact you again if needed?

John: Sure.

Ben: Okay. Go ahead and maybe tell me a little bit about your musical background again.

John: You want like the Cliff's Notes version?

Ben: Sure. Cliff's Notes is good.

John: Undergrad, University of Nevada, jazz studies and classical performance major.

Oregon, master's, TA in jazz and in classical. Doctorate, University of Miami,
they have a TA in jazz and classical degree.

Ben: Great. All right, so could you talk a little bit about your history with Adam?

John: Yeah, I met Adam, I was doing a master class at Grand Valley. He was, I don't know, maybe a junior or a senior or something like that, and he played [inaudible] ... I mean, it wasn't finished yet, it was about halfway done. So I met

him then, I told him I really wanted to stay in contact with him about that piece and future projects should something come up. And a few years after that's when I had moved to Colorado, and I don't remember who exactly contacted who, but I started working with him on rikai and performing that a couple times. And then wrote a grant and got some money to buy Ableton and to commission him to write a whole piece, which turned out to be this 35 minute sonata epic.

Ben: And you originally, you thought you were just getting like a ten minute piece?

John: That's what I thought I was getting, 'cause the commissioning fee wasn't really that large. So I was shocked at the output. He sent me the second movement first, and that I thought would've been totally substantial enough to justify what he got paid. And then he said, "No, actually I got two more things." And I think I got the third movement next, and then the first movement last.

Ben: Cool.

John: As he finished them.

Ben: And what was the process? Did he just send you a complete product, or was there an exchange?

John: No. We went through a few versions. Movement two was the one that was probably the most completed. Most of our back and forth on that was just how he envisioned those open sections working, and what type of sounds I should be trying to incorporate while improvising. And then I would maybe perform it,

and then I would give him my feedback, like I ended up doing more improvisation after this part, because after this section, you know, I'm really tired and just need a break. So it was a lot of kinda stuff like that.

John: The first one was definitely the hardest just to put together. It's the most complex rhythmically. And so we had a decent amount of back and forth on that. But same thing, it was mostly, for me talking to him, it was mostly conceptual, especially about the improvisation. If he had specific ... and I like the fact that he gave me a lot of flexibility. But at the same time, I wanted to [inaudible] if he had some kind of specific sound or even like a dynamic range, or the range of the horn or something like that, that he was kinda envisioning for these improvisation sections.

John: And the third movement actually there really wasn't too much to go players. The only thing, even when we recorded it, the only thing that we ever talked about was the pacing. There's a, I don't remember which section it is, five or six, something like that on the second page where it has some of the more unique sounds that come through, we worked on the pacing and how my lines should leave space for those kind of unique electronic sounds to come through which totally worked in the recording.

Ben: Yeah. I know what you're talking about.

John: Do you know the spots I'm talking about?

Ben: Yeah. Where there's a musical moment that happens that's totally different than anything that's happened previously. Yeah.

John: We worked on the pacing of how that whole thing would play out, but other than that everything was really, really flexible.

Ben: That's cool. Do you use, when you play the first movement you mentioned that it's really rhythmic, do you use a click track when you do that?

John: Yes and no. I used if for not the beginning. I used it for the stuff at the end.

Ben: Okay.

John: So once it got to, and we've gone through different versions of this thing so the numbers may have changed. Whatever the part is that's in like on a B but that's in the F Major improvised section with that repeated C, C#, E thing. I use it on those rests because despite all the time I spent working on my sense of time I cannot count those eight bars of rests with everything else that's going on. I found this to be impossible. So, I definitely use it there.

Ben: Okay. That's good to know.

John: I think the rest of it I don't have it on.

Ben: Okay. You said you performed the Sonata. You've also performed a Rikai. I saw you perform elements of the Sonata and Rikai in 2015 in Columbus at the ITG,

but what are some other performances? Could you tell me a little bit about your experience with performing these pieces?

John: Most of them have been recruiting tours and things like that. I've played 'em in Texas and Michigan and a couple schools in Missouri and of course I've played 'em throughout Colorado. I played 'em here a couple times. Tryin to think if there's anywhere else. I've done the third movement a lot 'cause that's the easiest for people to comprehend. So I guess that's probably about it. I've probably performed all of or part of that piece 10 or 15 times.

Ben: What about your recording with Adam? Could you talk just a little bit about that process?

John: Yeah. He just came out for a weekend and we recorded about four hours

Saturday, four hours Sunday or maybe it was a Friday. I don't totally remember.

I'm trying to remember the order of all this stuff. A couple days, like Scarlet

Rising Moon I had never heard before until the recording session so most of

what we did was actually the very first take where I was sight reading and then

he was doing stuff based off of my sight reading. We did it twice but I think

almost everything we used was from the first take.

Ben: Wow.

John: I thought that was interesting. The piece with the techno track, the same thing, we did that three times and I kinda came up with the idea after listening to 'em and thinking about which one I wanted. I would like to try it with both of them

like with two tracks. We laid them out and thinking we were gonna have to adjust a ton of things and for whatever reason the pacing just worked out. We didn't have to adjust anything and just played two full tracks on top of each other. And it actually worked out pretty cool. Though we adjust a couple volume things and maybe took out thirty seconds of stuff from one track or another, but that was really it. That was all freely, totally improvised. I just found what key I thought it was in and played off of that. There's no music for that.

John: Then we did one, I wanted to make sure we did one piece that was completely improvised. No concept. No talking just go. And that ended up getting split into, was it three different spots. Three different small chunks. Maybe it's two. Might be two smaller chunks. Which ironically turned out to be in the same key as that techno thing which I didn't realize at the time because we did it first. So they're both in that B in a B flat charted B like harmonic major which is kind of a weird key if you're not familiar. It's a harmonic minor scale but with a major third.

Ben: Strange.

John: It was fun to do that free thing. We knew we wanted to include it. We weren't really sure how so Adam came up with the idea of splitting it up into smaller bits and placing it throughout the album. I think we ended up with two four minute parts. The whole thing ended up being like eight and a half minutes long.

Ben: Cool.

John: I'm trying to think if there's anything else notable about that. Let's see here. I did all of the ... so Adam obviously was there doing all the stuff live and so all I was doing was playing trumpet. Which was really nice. They were pretty exhausting recording sessions. Those pieces are on the face quite a bit. Then afterwards over the next six months something like that, we recorded in October. By the end of May we were pretty close to being done. I did all the editing with our [inaudible] gear here and would send Adam things. We would go back and forth but he left that to my purview to get a lot of stuff done. Ironically we had to do very, very little overdub. I might have overdubbed a couple of high things but we took care of it in about minutes [inaudible 00:13:06]. And that was it. Everything else pretty much, it was just figuring out the pacing and which examples and which cuts. Of course mixing it took a lot because you're dealing with a totally different situation. There's not really anything you could do live. Everything has to be done in post.

John: That whole process took about six months. We might have bled a bit over into the next Fall, finishing up and mastering and things like that. And then unfortunately it's kinda sat. I know Adam has been trying to deal with how to get rights to that Kanye sample from movement two and then really figuring out what we want to do release it and then for various complications so we haven't actually been able to play the whole thing live since then which has been kinda weird, but hopefully soon.

Ben: I've listened to all of that. It's what I've been using as my base marker for the musical part of this and it's been really enjoyable. It's also nice to hear how that's different from some of the other recordings that Adam has done of his pieces and what you add to that. Could you talk a little bit about the rig that you use to perform these works?

John: What I've done is by myself it's been obviously laptop, I've got my AMT microphone and they have a pre amp that goes along with that and I use my Mtrack. Is that what's it's called? One second I got it over here. Yeah. MicroBook II as my interface.

Ben: Okay.

John: And then, basically it's that and then I use the Launchpad.

Ben: Cool. You just used the standard Novation in Launchpad?

John: I started also using, let me find it so I can tell you what the exact name of it is.

Oh yeah, the launch control. 'Cause the launch control is helpful 'cause it has knobs and you can get a lot more precise. So I'll use the Launchpad for all the themes going from, and I ended up putting, I already put tape on with numbers so I could remember which number all the buttons are. There's 20 something themes for the whole thing. So I'd use that for the themes and then I would use the launch control to control the reverb and distortion and other sound effects that were going on.

Ben: And you figured that out on your own?

John: Oh we talked about it together, but yeah, basically. I asked Adam if there was a way to get more control and I said I saw that you had this launch control. It was his idea, probably want a little bit of separation. We could probably program the launch control to be able to do everything from that, but it might get overwhelming and confusing in the heat of battle. So it was his idea to keep the themes on the big launchpad and the sounds on the launch control, which I think was a smart thing to do.

Ben: Yeah. That's really cool. We hadn't talked about that in the past so that's a good thing to hear. And it's the AMT 800 or something like that?

John: Yeah. I sent you that email, like whatever that one is. Just the standard trumpet version.

Ben: Okay. That's good. Let's see what else was I gonna say. We've covered ... Are there any issues that you haven't talked about yet that you would consider unique to these pieces?

John: Once I figured out the microphone and the feedback issues. That was huge. Now that I don't have to worry about that anymore then I don't really have any reservations about playing this stuff. You're still dealing with, it's kinda like a pianist, you're still at the mercy of the quality of the instrument that you get. So the speakers or stereo, whatever you're playing in, you're stuck with whatever they have. Sometimes it's been great. Sometimes it's been not so great. You have

to make adjustments based on that, especially because there's so much base and things like that in that piece, it can sound pretty gnarly if you don't have a good sound system but you just have to roll with the punches.

Ben: So you just use whatever house system is available when you're on tour?

John: Yes. First, I have a portable stereo system that I like yet for the cost. I haven't found a need to invest in one of those. Part of the reason that I like this thing is 'cause logistically it's very simple. I can put everything in a backpack and a trumpet case. Hauling around speakers would [inaudible 00:18:43]. I always do make sure I talk to them before hand about doing this, hey, I'm gonna do a recital that's 55 minutes of music for trumpet and electronics so you can you make sure you put me in a room with a good stereo? And usually they get that. Something else that I found, not all those spaces have it, but when possible I like to perform this thing in the dark. I think it adds a ton because everything that you're using lights up. I'm reading the thing off my Ipad so that lights up and the Mac lights up and obviously the launchpads light up. Makes it so they're not just staring at me.

John: I think ideally what I wanna do, and I've talked to Adam about this, but we never really have gotten that far, I'd love to have some type of real time interpretive video that would go along with this. Essentially it would play whatever, it would probably be some type of algorithm or something like that interpreting sound into video effects or something like that.

Ben: Oh yeah.

John: I think that ultimately would be the best experience because then even when it's just the electronics playing you're not sitting at a trumpet player resting his traps on the stage for a minute. You can still watch a video doing something, you know.

Ben: Right. I think you can load certain light programs, light show programs into Ableton also.

John: Yes. We had talked about doing that. The last time we had left that, which was a couple years ago so it might be possible now. I should actually talk to him about that. [inaudible] memory and would make it kinda unstable. So we didn't really pursue it, but again, that was probably three or four years ago now. It's possible that it might be much improved by now. Might be possible to do.

Ben: Before you started working with Adam, what was your base level electronic music experience, performance, knowledge, that sort of thing?

John: Not much. I did the Cantus on my first CD. I had done a piece for tape or something like that, but nothing really that needed any type of electronics knowledge. When I recorded that CD I did all the editing myself so I had a real thorough knowledge of Logic by the time that was done. Everything was done in Logic for that. Subsequently I did all the editing and mixing for my jazz CD also, which I also did in Logic. So I feel really comfortable with that program,

not so much with Abelton to the same extent. Essentially that was kind of it.

Obviously, I've learned a ton since then.

Ben: I seem to remember you talking a little bit about using guitar pedals and that sort of things?

John: Yeah, sure. I've done a lot of that on my jazz side of things.

Ben: Okay. So it wasn't just baseline nothing, right? There was a decent amount that you had messed around with effects and that sort of thing?

John: Yes. Oh, yeah. I suppose that's true although the timing of this, I started working on Rikai before I really started messing with pedals and things like that.

Ben: Okay. Interesting. Okay. Do you make any equipment changes on the trumpet side of things for these pieces?

John: The Cantus I play on C so if I'm doing the recital, the recitals that I did most often was Rikai and then Cantus and then the Sonata. Between those three pieces it's about 50 to 55 minutes of music. Never took an intermission and the only break really was flexing on my horn when I would talk between the pieces. The whole program ended up being a hare over an hour. Obviously changing the C trumpet for the Cantus and that has a mute in it where none of the other ones have mutes. Just for that concert in general I would use, I tried using more shallow mouthpieces but I didn't like those results so I just ended up going with something with a smaller backbore and a smaller throat. If I play in a 24 throat

on my orchestral things I'll probably play a 27 or a 28 on this stuff. It just makes the upper register things a little bit easier.

Ben: Okay.

John: You don't really need a super big depth of sound because everything's reverbed.

You can just create it electronically. You don't have to sacrifice you're technique.

Ben: Yeah. So you're saying you can turn up the volume on the microphone and not have to play quite so loud.

John: And also the smaller throat helps with the upper register things it just doesn't take as much work. The sound is a little brighter but you can also just crank the reverb up and then the sound doesn't get bright anymore.

Ben: Okay. Yeah, that's cool. One of the benefits, I guess, of having so much control over the sound output coming through the microphone. How does this stuff compare to, you said Cantus, I think that's by Eric Nathan, right?

John: Yep.

Ben: Other pieces that you've performed or heard, how do these pieces compare to them for trumpet and electronics?

John: I think the big differences are, the first, that this was so highly improvised.

Adam was really good about creating a piece that sounds very, very cohesive yet

has these fairly large improvisational sections to them, which I think is great. I haven't run across too much other stuff that actually has that, at least to that degree. Trying to gather my thoughts here. I suppose [inaudible] the other part would be the interactivness which is kinda the same thing. The way that he composed everything to work. Again, I haven't run across too many pieces that really do that to this degree. It's a totally different thing when he is there and it's super, super collaborative.

Ben: Yeah. That's the hardest thing I think, for us as performers of those pieces is to try and mimic what Adam would do himself, which basically we can't, you know?

John: Yeah. And I don't even think about it like that. I think it's a very different experience, you know, different music. And I think you would be, he'd probably tell you, I'm guessing, he would tell you that's kinda the point of it. Is that it's a vehicle to be going on a journey but it should be a very different journey every single time. He doesn't want it to sound the same.

Ben: He talked a little bit about, at one point about being authoritarian as a ... he didn't wanna be an authoritarian composer that you did every sound that you created.

John: I think that works really well with my skill set with such a strong improvisational and compositional backgrounds that it fits. I'm very, very, comfortable with that. I think it works really well.

Ben: Yeah. What else. What would be the audience reception generally?

John: The trumpet players expecting a trumpet recital were more a little bit caught off guard, but I didn't find anybody that didn't have favorable things. Even if they just thought it was really interesting and didn't really get it. The people who tended to be more in the improvisational side or the compositional side tended to really like it.

Ben: Yeah. I think I agree. Even the folks that they might not have been their first choice of listening material I think they still enjoyed it when I've performed those pieces.

John: So much of it just depends on what it is that you're expecting. If you're expecting a trumpet recital this is not the [inaudible] you have to open your ears a bit more to appreciate what's going on.

Ben: I think that's right. Do you have anything else that you wanted to add?

John: Think so. As long as you're feeling good about where things are at?

Ben: You mentioned feedback as an issue and the microphone choices that you ended up with. Will you just expand on that really quickly?

John: What I tried doing was using the SM 57. I found that I had to have, especially with distortion, I really couldn't turn it up to the level that I wanted to without having feedback so I was really having to sacrifice the effects, just because I had to make sure I could play the piece. So then also if I was using longer reverbs they would double up on each other and then that could cause feedback. As soon

as I was able to get the microphone that I could pick up a really good signal and a really low input then that changed everything.

Ben: Okay.

John: I could turn up the effect a lot because my microphone input was so much lower.

But it's also that a microphone is much, much, much smaller and it's going right into the bell. It's designed to not pick up peripheral noise so it's not gonna pick up the other reverbs and things like that from the speakers.

Ben: What do you think about using the silent brass as a pick up?

John: Adam I know does that. I don't like it for a few reasons. I like the mix of live acoustic and electronic sounds. That's one of the things I told him when I did this piece, 'cause he brought up, "you could do some cool things with silent brass." And I said I didn't wanna do that. I wanted something that would be more Concerto like where you're playing live and then you have this interactive other sound. Similar to, if you've ever checked out music by Mason Bates. He does a lot of orchestral things that use electronics in a similar way, where it's a different, just an additional section to the orchestra. So it's kinda what I wanted for this.

John: If I'm playing on some of the jazz things I will not do silent brass, but I'll do a lot of harmonies which gives a similar thing where you're getting probably 90 percent affected sound to 10 percent live sound. It doesn't really have very many characteristics of being classical music but that's still what I was thinking of it

as. Improvised like composed classical music. I wanted my sounds to be a big

part of what was going on. [inaudible] in there. I really wanted that mix of

acoustic and live sound or and affected sound.

Ben: Yeah. That's great. That was something that you had talked about last time that I

wanted to make sure we actually got in there. That's important.

Ben: Okay. Well. I really appreciate this John. It's just, like I said, I was embarrassed

that the last time it didn't work, but hopefully this is all recorded and good. I

don't know what I'll do if it's not. Anyway, I'll let you know how it goes with the

committee and we'll stay in touch.

John: All right. That sounds good.

Ben: Okay. Thank you so much.

John: Yep. Have a good one. Bye.

Ben: Okay. Bye bye.

## Christopher Delgado

BH: Hi, Chris.

CD: Hi.

BH: Did you read everything in the consent letter?

CD: Yeah

BH: Does that sound ok to you?

CD: Yes, definitely.

BH: Cool, can I contact you again if needed?

CD: Of course.

BH: Can you give me your musical background?

SD: Sure. So...Bachelor's, Master's, DMA. So currently, I'm living in New Jersey and I'm freelancing, teaching, and applying for full-time orchestras. I've got a bunch of auditions in September that are going to happen. I work primarily as an orchestral trumpet player, but also as a chamber electro-acoustic player and more recently as a natural trumpet player as well. So I kind of do all ends of the spectrum. My dissertation was on the theoretical orientations of early trumpet playing, or natural trumpet playing. It was about early music, it was about natural trumpet, so that's was my focus. In fact, my dissertation was going to be on Adam's music as well, it was going to be on the electronics, the electroacoustic music and that kind of thing, but just deadlines and requirements and all of that sort of thing. I wanted to finish in my three years, and so I went ahead and did that.

BH: Yeah. Picked a little bit more negotiated path already.

- CD: Right. And the thing was that I was still really happy with the amount that I did on electro-acoustic music anyway, because I did the first fully electro-acoustic recital at Rutgers ever. And it was Adam's music. And it was alongside Adam. Adam performed with me. So that's kind of me as a trumpet player and kind of a scholar as well. That's where I'm at.
- BH: That's really cool. So you just said you did a full recital. What pieces did you play on that recital?
- CD: I did Rikai, Scarlet Rising Moon, and his Sonata.
- BH: That's awesome. Have you done any other pieces, or are those the works that you have experience with?
- CD: I haven't' performed, but I've worked on No Hipster Hats, I don't know if you know that one.
- BH: Yeah.
- CD: It's a pretty cool piece. So the three that I've performed were those.
- BH: So you performed those at Rutgers? Do you remember when you did that?
- CD: Yeah, and I sent you back some of these questions as well, just to get you started. This was September 20, 2016.
- BH: Cool. That's good to know. So when you first listened to Adam's music, first of all, do you know Adam outside of these pieces? How did you meet Adam?
- CD: We went to Grand Valley together. I was a freshman and he was a junior. So the first time I heard these pieces was when they were premiered by Adam.

  Well, not the Sonata, but Rikai, and Scarlet Rising Moon and when he was working with Dan Rhody, I mean, he's still working with Dan Rhody, but before

slash sound was a thing and Cantaloupe Records and he was working on his bachelor's of arts with the composition department at Grand Valley, and so he had these concerts that he did with Dan Rhody and a couple of the other composers, but mainly Dan Rhody, and that's where a lot of these things were premiered. Not just with trumpet, but his compositions with other instruments as well. So I was just a little kid, essentially, and I loved the sounds, I loved everything that was going on. It was a very immersive experience. I remember one concert, and I forget which work it was specifically, I could ask Adam, but there was one where he was calling out for TV screens, and anyone that had a TV, and this entire band room was set up with random TVs that were going off at different times with certain video that corresponded. He was just so creative, that I was very interested in that. And beyond that, of course, Adam and I were friends. We worked together as colleagues, but he's just been a good friend of mine ever since I was a freshman.

- BH: That's great. That's good to know. So your reaction, you just talked about that a little bit, but could you talk about that a little bit more, what the audience reception was when you performed them, or maybe in the premiers? Or just general audience perception?
- CD: I'll talk about it in two ways. First, when I heard it originally, so when Adam played them. When Adam premiered them, no one had ever heard anything like that. The thing is, I think we can kind of understand, with electronic music in general, you kind of had this weird stereotype for a while that it was the boopbop-beep-beep-boop kind of thing, and then you'd have some electronics and

trumpet and electronics and an instrument. It was very like, "tape and trumpet." Or "tape and whatever." And I don't want to say it put a bad taste in our mouth with electronics, but it also wasn't the most immersive thing in the world. And it kind of felt a little contrived at some points. What Adam did with Ableton, as his platform, I think brought people into electronics as an instrument. Now obviously, this didn't just happen with Adam. This was Ableton's creation and all this kind of stuff, but it was the first time, and still I think Adam is the only composer for trumpet, that I think does it on this scale. Where it's like the electronics are really a part- they are an instrument in and of themselves. They work by themselves. So the reactions that we got and that I remember feeling when I heard his works for the very first time, is that I was just so in shock by it, and I'd never heard anything like it. I remember afterwards, asking him to show me the program, and going into the composition studio and seeing how he was doing certain things. And it wasn't even until that point, because it was so new to me, that I realized that it wasn't just tape and trumpet. You know, I went in and that was my first experience seeing Ableton.

BH: Yeah.

CD: Now fast-forward to when I premiered- or when I did the works, I remember everyone who came up to me, and I kind of wrote a little bit about this for you to look at, but I remember all the younger people, and it's a weird kind of division, but all the younger people came up to me and were very excited. Especially about the Sonata. They loved the Sonata. I mean, all of the lights in the second movement of the sonata were a thing. I mean, everyone- it was very

approachable, it was really, really cool, and I also had a light show going on behind me. So it was kind of like this whole thing. And Adam was right there. It was kind of like having a DJ and me, and it was a "thing." People really enjoyed the visual aesthetic, and they really enjoyed getting into the music as well. The older generation that was listening to my recital, and these were the people grading me, obviously. It was interesting, but I think it is also important to note that Rutger's is a very orchestral school, and a very academic school. Now I went to SUNY Purchase for my Master's. If this would have happened at SUNY Purchase, very different reaction. That's not to say that the older generation, or my professors did not like what I was doing, they did very much, but they respected it on a different level, which I thought was interesting. I said this in my notes, that there's layers to Adam's music, I think, that are very appealing, if you are just listening to Adam's music, I think it's very appealing to the listener. There are also layers of a lot of intricacy, that is respectable by a more trained ear, people that have been doing whatever, like Wagner and more research into the theory and all these types of things. So he was very, very well respected by my professors, but they straight up went to me and were like, we don't understand everything that just happened. You know, my panel was the, principal of the Philharmonic in the tuba section, my trumpet teacher, and a very famous horn player, and the assistant director of the department at the time. You got very different remarks, but they were all very respectful of Adam's music. And that was the thing that made me feel really good about the process, that they were very concerned, because no one had ever done an electro-acoustic

performance like this at Rutger's. They were very concerned that it was going to be a lot of tape and trumpet and they were also very concerned that it was gong to be random house music and trumpet. It could have gone either direction. And they were impressed so much with the sophistication of the compositions themselves, and frankly, how hard some of the trumpet playing is, especially in the Sonata. So that was their general reaction, and like I said, the more audience based the reaction, looking into people who were listening to it, I didn't have any bad remarks from people who were listening to it. People really just enjoyed the music.

BH: That's great to hear. I've had similar experiences that, with the reception. I just played Rikai; I've only done that piece, I did it on a guest recital this spring, and that was the piece that everybody talked about. They were asking me about it afterwards, they were really interested in it, the horn professor at the school was like just, wow! We do stuff like that, but it's not like that. It's not like live manipulation of sound, and he was really excited about it. I think you're right-I think in the trumpet world, there's very little that's even approaches what he's doing. So before you did this, you said you started when you were at Grand Valley, working a little bit, Adam showing you the ropes on Ableton little bit.. So can you talk a little bit about your experience with audio and electronic musical equipment and software, and what kind of experiences you had before you dove into working on this music?

CD: So, compositionally speaking, none. When I was, so me working on Ableton back then was mainly using Ableton as a production software, because the thing

about Ableton is that you can do pretty much anything with it. It's pretty remarkable as a program. So before, when Adam was showing me the ropes, he was kind of showing me the ropes on his rig at the time, which if fundamentally different now. It was pretty funny actually Rikai, specifically, he sent me an original file of Rikai, the original one he worked on, and it was a frickin mess! All these random audio files, and it was a disaster. And then he sends me the current one, where there's two lines and it's so easy to use and it's so user friendly! But at the time, before this concert, I was really focusing on using it as a production software. I'm really good with mics, and all those sorts of things, but I had never done the life effects in performance, the true electro-acoustic concert. I had never done that in practice before Just a little bit here and there with my own things, but never to that degree. Especially the Sonata. Because Rikai is one thing but the Sonata is another animal. There's a lot more stuff to do.

- BH: Will you talk a little bit more about the Sonata and what you had to overcome as a performer? What were some of the challenges that you encountered personally?
- CD: There's a couple of electronic things, right? Basically the way the Sonata is set up, and I actually I got my equipment here sequenced to be able to refer to it. So you have the Launchpad of some sorts. I have the Novation launchpad and you have the Novation Launch Control. So you have these two things, right? And so you plug that all into your sound system and all of that kind of stuff. Now when you're going through the Sonata, it's got different cues, and Adam lays

out very, very good instructions when he gives you the score. And that's very helpful. The thing that I had to get used to was really cuing things when they needed to be cued, if that makes sense? And just practicing getting the timings of everything right. Now this was made immensely easier because I had Adam onstage with me! So basically, my setup for the concert, I don't think has been done before, and I don't think it's been done since. Maybe in the recording studio when Adam did this with, what was his name?

BH: John Adler.

CD: Adler, yeah, exactly. But I don't think it's been done like this besides my concert. I could ask Adam. I had my laptop set up, I had all my buttons and these things. And then he had his laptop and he doesn't use an Ableton Push, but it's a similar concept, and so it's just a bigger mechanism. And so we had both of our audio interfaces going through this. Now, this was really, really important, because there was a moment in the concert where one of my audio channels, for whatever reason, cut out. Now thankfully, we had his help. We were able just to reboot it really quick by jumping to the next file. So there was absolutely no hiccup in the show because we had his sounds going and my sounds going and everything was completely fine. But I was, just to get back to the original question, the things that I had to practice a lot, was just the timings of everything. And feeling comfortable taking my hand off the horn I know that sounds like such a trivial thing, but,

BH: Not at all man.

- CD: Yeah, it feels so weird to basically be accompanying yourself. It's also mentally taxing to do that. Because you are accompanying yourself. Not only are you thinking about your own like that you've got to do, in the Sonata in the first movement, you're going up and down and worrying about your rhythm and all that stuff, but at the same time, making sure your levels are good. You know? So these things they just take to really do. That's why the Sonata has a lot more meat in it for the electronics, so it's a harder thing to do, but it's not impossible, it's just something that you have to get used to. Adam lays it out very clearly, because to that point, I can say I've seen student compositions, or together types of works where they attempt to use Ableton or other kinds of, Max, and its very complicated. It's not very user friendly, which is the point of MAX, to be user friendly, so....
- BH: So do you think that having somebody, maybe not even Adam, but somebody that's an assistant would be a good thing in the performance of the Sonata, do you think that would be helpful?
- CD: I think in order to simply to simply produce the piece, I don't think it's necessary. I will say that I think we had a really, really good time producing something that hadn't ever been thought of really. Because a lot of things that were happening, was that I had all the bulk media, and Adam had a lot of excess sounds, like he had a lot of external sounds that he had recorded previously; nature sounds, cars, traffic, rain, whatever, all those different things, that would be more than likely impossible for you to do all of that structure as one person. So what I would say is that you can get a lot more depth out of this whole

experience if you had someone else, because you'd have someone to do more things. I think it's really interesting to Adam's point that his music, because a lot of it is improvised as well, it kind of gives a lot of freedom to the performer in general, but so do the electronics. The electronics are not limited to what is given to you. The electronics are limited to whatever you can imagine and create. Now, I think we would get into the same type of conversation with composer intent and all of that kind of stuff that we always get into and it gets a little convoluted at some point, but I would argue that keeping the basic structure of the piece, you can add a lot of sounds, you can add a lot of things to the work which add to the improvisatory style of the piece. It's kind of its essence. Its some kind of improvisatory scenario. So to that effect, can you do it by yourself? Absolutely. Could you get more out of the piece? I think so. If you did more, if you went that route, and I think we did a really special performance of it because of that.

BH: That's' cool. That's really good to know. It's kind of a freeing thing to be able to feel like you can change things a little bit and make it your own. Ok, on a total side note, I saw David Hickman give a master class where he was talking about that idea with classical music. I remember one of his teachers said, "Well, just change it if that doesn't work, why don't you just do it like this?" And we was like, "Wait, I can do that?" Like, yeah, it's your performance! He said it just totally was a paradigm shift You already kind of talked about this a little bit, but maybe you could go a little bit deeper with it. Were there any issues with your sound cutting out and Adam patched something in and jumped to the

next tile and you guys circumvented the issue. Was there anything else?

Anything else that came up while you were preparing this, technology-wise? It seems like you are pretty adept with the technology, so it's not- it doesn't sound like it's a big issue for you, but for somebody who is more of a novice with the technology, maybe you could talk a little bit more about the challenges that you faced with that.

BH: I'm more adept now, but then, truth be told, I really wasn't. I had just gotten a lot of this equipment, I had my microphone and things like that. But I had just gotten all of my sound equipment, my pads, all of these things...

You just held up an interface? Is that right?

CD: Yeah, this is a Scarlet 2i2, I wrote it down so I have it here. This is the 2x2.

This is a good point actually. I would recommend a 2x4. And I found this out later from Adam, more candid, Adam yelled at me [laughter] because I got the 2x2, and he was like, I told you the 2x4, and the reason is you can only have single instruments in the 2x2 and you can have multi-instruments in the 2x4.

This becomes extremely important when you do the Sonata because you can have a click track. You want a click track in the Sonata. I didn't have a click track in the Sonata, and to the audience, no one knew there were certain issues.

To Adam and I, we both knew that there were certain issues when I was performing it. Things go by really quickly. The percussion that is happening is very chaotic, especially in the first movement of the Sonata, so a click track would be extremely wanted. And so that would be the hardest technological

thing, and it's super easy to prevent, just buy the right equipment. If you buy the right equipment, you can add in an external click track, not even an external one; you can use the one in Ableton. The problem was that with this piece of equipment, you can't have both feeds going in or out, or else the click track would have been heard by the audience. So I couldn't just have it in my headphones, which was the problem. That was the hardest thing, and I think it was the only difficult thing for me at the time. When it comes to the hardware, there are always, I think, going to be problems. I remember talking to Adam about just the Launchpad itself, you know, the big 64 button Launchpad itself, all this stuff, I was like I don't really know how to use it, I don't know how to use all the lights, all of these types of things, he was like, first of all, you're not a DJ, so you're not creating a light show. I said, "ok." [laughter] And I got a little sad. And then the second thing, he was like, you just have to watch the tutorials on it, and honestly, it was the best advice, because he was like, I can walk you through all of these things, but really you're going to come up with a lot of questions as you go through it. There are tons of YouTube tutorials that will generally take you through the hardware itself and there are plenty of tutorials from the companies themselves. I highly recommend doing that in general. Like I said, the only actual hardware issue that I had was that I wasn't aware that it wasn't possible for me to have a click track with the one that I had. So that was the only actual hardware situation that I had a problem with.

BH: Ok. So what microphone did you use?

CD: I practiced on a Yeti Pro, a blue Yeti Pro. In the concert, we used an SM-57.

BH: Ok, just a standard deal. Because I now Adler has a really expensive clip-on mic that he uses, but I think it's good to know that the SM-57 is a viable option for people who can't afford a \$500 microphone.

CD: Yeah, totally an SM-57. Look, Adam premiered his on an SM-57, so it's fine. It's completely fine. It is an interesting point though, to Adler's microphone, I wish I would have had it, because if you have the right mic set up that's fine, but I, as a trumpet player, it was hard, because you're sitting there playing, and your computer is dead in front of you, your stand is here, you've got your stand light, and here you're playing through the mic. You can't move. You don't have flexibility. And there are times that you need to readjust, as a trumpet player, you know with your breath and all that, but there were points, because it was a live performance, where the trumpet sound sounds like it cuts off. It's not that it cuts off, it's that I wasn't pointing at the mic directly. So that's important, but that was more my user error, in times I looked back on it, and I watched it, and I was like, oh man, I wasn't pointing at the mic just then. But then it went back in when I took my breath and it was fine. So it's something to think about, if you can afford the mic, I would get the mic, because it's going to make your life easier, but it's not necessary.

BH: That's cool That's good to know. We talked about this, but I have the question, so I might as well ask it: have you done other pieces with trumpet and

- electronics? What's your experience with other composers and how does this stack up against that?
- CD: I haven't performed anyone else's except for my own. Adam's a better composer. [laughter] He just is. But I have been to many master classes and I have seen a lot of other trumpet players, and I can say that I haven't, like we sort of mentioned before, I haven't seen anything as comprehensive as Adam's, or anything that is that immersive. That's what I keep coming back to with Adam. You know, I've seen very good MAX pieces for trumpet, but they seem kind of one sided in a way. I don't feel like it's this big thing that you're a part of. Playing Adam's trumpet and Ableton works is like really playing with an orchestra in a lot of ways. I think you can equate it to that. Whereas most things that I hear with the electronics, I would equate more to playing with the piano. I think that's the best way I can sort of correlate those. So to answer your questions, I personally haven't come across anything as big as working with Adam's.
- BH: That's cool. Also like a follow-up to an earlier question, what kind of sound system did you use? What kind of speakers and that kind of thing? You don't have to be that specific, but an idea would be helpful.
- CD: Ok, so I performed on our main stage at Rutger's, so like a main auditorium.

  We had huge JBL stacks that we used. I don't know the numbers, but they were taller than me. They were massive, and it was loud [laughter].
- BH: That's awesome. That's good to know, for people that want to play this piece, it's a good idea to not just run it over a personal PA or something like that. It

might be a better idea to go with something more of like a house electronica kind of thing instead of a normal trumpet and tape kind of situation.

CD: Yeah, it was funny actually, when we were setting everything up, the house manager who was running all the soundboards up top, he was like, "So, how loud do we want this?" And Adam was like, "We want it to be like a house show!" [laughter]

BH: That's awesome. That's perfect.

CD: And it was! It really was. I have to say, my only problem was the way we recorded this thing wasn't the best way- to really understand this whole concept was to be there. The mechanisms we used to record were not great recordings, was on Ableton, and not so much of the trumpet sometimes. But that was more of the recording, that was more where the mic was placed, unfortunately. So I would say that when you do that, you have to make sure that your balance is good, because even though it's like a house show, even though you're playing with these big old speakers and that kind of stuff, you're still just one trumpet versus all that. And it's also important with Adam's music, too, that it is still electro music. It's not just the trumpet sound feeding through the electronics. Hearing the actual trumpet sound, I think is really, really important. It's the one advantage, if I may, to having the SM-57 over the other microphone, because you can hear a little bit more of that acoustic sound if you have a little bit more space between you and the microphone. I noticed that especially with Scarlet Rising Moon, actually. That piece, I did a clip-on, and you could tell the resonance of the hall with just actual flugel horn sound, you could tell the

resonance with the hall. I think that's a really important, albeit small nuance-y sort of thing, I think all these things really matter.

BH: No, I think that's an important point. You're connection is getting a little fuzzy.

This is Skpe. Can you hear me ok?

CD: I can hear you ok. Can you hear me?

BH: Yeah, I can hear you better now. It was getting a little fuzzy while you were talking. So you were saying something about flugel horn, that the flugel horn, you could hear the resonance of it in Scarlet Rising Moon in the hall? And that was an important thing?

CD: Important for me. I think it was a really cool thing to be able to distinguishably-that's not a word- to have distinct acoustic sound of the flugel horn and electronics as counterpoint.

BH: I think that that's a good point. Ok, so that 's about all the things I have written down. Do you have anything else that you'd like to add to the discussion? I'm guessing that as soon as I start interviewing more people I might have more questions, since it seems like you, aside from John Adler, probably have done the most work with Adam. So I might have more questions for you in the future if that's ok.

CD: Absolutely.

BH: But do you have anything else you'd like to add before we wrap things up this morning?

CD: I would just say with Adam's music, it's really important to remember the improvisation of everything. I think that for me is the takeaway with Adam's music, how important it is to be a unique performer in a unique performance of his pieces. None of the performances of his music should sound the same. And I think it's the one danger of recording the album, is that you project what the piece is. But I heard Adler's recording, and it's very different than what I did. And it's very different than what I will do in the future with Adam's music. And I think that's a really good thing. And I think there's an interesting point probably somewhere, that music like Adam's is something that can bring classical music to a very interesting point, because of it's improvisatory style. It's very unique. It's very interesting to listen to, it's very interesting to experience. And to that point, the improvisatory style of the performance itself. I mean, I used a light show behind me. I don't think a lot of people do that, or a lot of people do different things. I mean, Rikai has so many different possibilities, that the music is just a vehicle in a lot of ways. So I would say that is a really important thing for me, for Adam's music. So if that's somehow a part of our conversation, I think that's worth noting.

BH: I think that's a really, really good point. I feel the same way. I think that the improvisation and the fact that it can be so unique is really freeing. I also think that the fact that it sounds like it's really sophisticated, but it has those really attainable things for most audience members, that they can latch onto- that it isn't music that is just sound effects with the trumpet. Or a trumpet playing ambient noises with a tape. I think that it's an important marker, hopefully, for

the future of electro-acoustic music with trumpet. I hope that more composers move in that direction. It seems like some of them are. Really cool, man. Thanks, Chris. I really appreciate your time, and your candor and all of the specifics of your answers is really helpful, and I'm sure I will have follow-up questions, but other than that, that's about all I have for that aspect of it. I think we got a lot of good things in there for posterity's sake. Great.

CD: Alright. Cool man, well thank you so much for contacting me, and if you need anything else, let me know!

BH: I will, and if you are ever out in Oklahoma, let me know! It would be cool to bring you in for my students at NSU and do a master class if that would be something you would be interested in doing.

CD: That would be something I would be very interested in doing. I'm currently applying for a lot of adjunct and fulltime professorships around, so all things that are very helpful for me!

BH: Sure. If there's anything I can do to help, let me know, ok?

CD: I appreciate it, man.

BH: Ok, have a good rest of your day, and I'll talk to you soon.

CD: Alright, talk to you soon, man.

BH: Ok, thank you, bye-bye.

CD: Bye.

## Elizabeth Jurd Interview

BH: Hi Elizabeth?

EJ: Yes, hi.

BH: Did you get the consent letter? Are you ok with everything there?

EJ: Yeah, I'm fine with all of it.

BH: Can I contact you again if needed?

EJ: Sure.

BH: Will you tell me your name that you want to use, and maybe give yourself some background information, where are you in school? Where did you go to school, etc, that kind of thing.

EJ: Sure. Well, I'd like my name to be Elizabeth Jurd, or does it matter if it's legal, because I just got married. Sure Elizabeth Jurd. And currently I'm in Kentucky and I'm planning on going on to either the University of Kentucky or the University of Louisville for trumpet.

BH: That's awesome. I know Jason Dovel really well, actually.

EJ: Yeah?

BH: He had the job that I have right now before he got his job at Kentucky. And we played a lot together in Tulsa and all that sort of thing.

EJ: Oh, really?

BH: Yeah, I think the world of that guy.

EJ: Did you meet Dr. Walker at Northern Oklahoma University?

BH: No, I met him there at one of his Trumpet Days that he did back in 2011, 2012, or something like that.

EJ: Oh, wow. I was just curious about that.

BH: You know, this trumpet thing is a pretty small world.

EJ: Right?

BH: So you went to Tarleton?

EJ: Yes. I graduated in 2016.

BH: Congratulations. What was your degree in?

EJ: My degree was in was bachelor of arts, music, concentration trumpet.

BH: Cool. So what have you been doing for the last little bit after you graduated?

EJ: I was continuing teaching trumpet lessons to my sole student. I have unfortunately not been teaching her anymore now that I got moved over to Grand Prairie, I've been staying with my parents for a little while before I get moved to Kentucky.

BH: Ok. What brings you to Kentucky other than school?

EJ: My wife actually got a software development job over there, so I'm moving.

BH: Wow, that's great. I don't think you can go wrong with either of those schools.

Both of those trumpet professors are really well thought of.

EJ: Yeah, Dr. Walker was the one that told me about them, that's why I was interested.

BH: I don't know the trumpet professor at Louisville, or their classical professor.

I've heard their jazz professor play and he was unbelievable.

EJ: Oh, Yeah?

BH: Yeah. He was really, really good. So anyway, let's get into this Adam Cuthbért stuff. So what was your experience with Adam Cuthbért's pieces?

EJ: Well, first of all, the reason I wanted to play his piece Rikai, is I've always been into obscure and different music, and Dr. Walker actually used to get on to me for that, but I found Rikai on YouTube and I was like, this is really cool! I really wanted to play something with a backing track and so when I found that, I was like, this is perfect. So, I preformed Rikai at my senior recital with Ableton Live and a projector and I used Dr. Walker's microphone. It was a cool experience, because id never played anything electronic like that before and I've always had an appreciation for that kind of music.

BH: That's cool It's a cool piece. Especially with the projector. You did the video from YouTube with the film that was made for it?

EJ: Yeah, Adam Cuthbért, I signed one of those release forms that I was allowed to perform it by borrowing it, I forget what that's called. Basically, I'm sorry, what was the question again? I was walking into a different room.

Bh: You performed it with the actual film though?

EJ: Yeah. What I meant to say was that he sent me over all the stuff on dropbox temporarily.

BH: That's cool.

EJ: The actual movie file and whatnot.

BH: That's great. I've preformed that piece this last spring, but I didn't do it with the movie. I'm sure it added quite a bit to it. What did you think about that? Did you think that the movie made an impact?

EJ: I think it did, because having a visual instead of just you playing your trumpet, with or without a microphone right there, that's something for the audience to

see and there's petri dishes and stuff, and really weird- I definitely think that a visual improved the quality of it.

BH: Yeah. I think you're right. So you played Rikai on your senior recital at Tarleton, and what was the reaction from the audience?

EJ: Everyone thought it was really cool. Especially Dr. Walker, I mean he was part of the audience, he thought it was really cool that I was actually able to set up almost all of that myself with the lighting and everything, because I had to come in early for my senior recital rehearsal to figure that out with the sound lady, and basically everyone that I talked to was like, I've never seen anything like that before. So everyone really liked it.

BH: You know, I talked to Dr. Walker when I was trying to get a hold of you, that he was interested in performing it, too.

EJ: Yeah, he said that.

BH: These pieces are obscure, but I think people respond generally really positively to it.

EJ: Yeah.

BH: What was your reaction when you performed it? How do you think it went? Etc.

BH: Well, first of all, there was one part where I came in a measure early, but I fixed it. But besides that, you know, I thought my playing could have been a little cleaner with how pointillistic and weird the intervals are, all in a row, that was really hard to get that, but I think overall I performed it really well, and I think the audience really felt the emotion I was trying to portray, you know.

BH: Yeah. Cool. I think we can all, you know my wife gives me a hard time, because she'll say, how did it go? How did your recital go? And I'll go, well it could have been a little cleaner, but it was really great. She's like, you say that literally every time. I'm like I know! We're all our worst critics.

EJ: Yeah.

BH: You said you had no experience with audio-electrical equipment?

EJ: No. That's what my brother does. He went to school for music production, but I just used my wife's laptop, I downloaded Ableton with the components, and really, all I did was just listen to the recording with and without the trumpet a billion times. I played along with it. I had a lot of help from Dr. Walker with all of that. So yeah, basically no experience.

BH: Well, that's interesting that you were able to put that together though, with

Ableton and learn the software and learn how to run the programs pretty easily?

EJ: Yeah. Actually Adam Cuthbért set it up really easily just to use it, and all you have to really do is press play. You don't have to use a pedal or anything, you just press play. You don't have to change anything. You just basically- it's a backing track and it does the effect with whatever you play into the microphone. So it wasn't that hard. It was scary looking, I will tell you that. But once I listened to it and messed around with Ableton, it got a lot easier.

BH: That's good to know. Let me think about this. You said you came in a measure early?

EJ: Yes.

BH: Were there any other issues that were really specific to that work that you found difficult, or challenges that you had to overcome?

EJ: Yeah. First of all, the cues, sometimes I couldn't hear them because I was playing too loud, or the volume wasn't loud enough, or the backing track, but like I said, I listened to it a LOT. I listened to it backwards and forwards.

Basically, the ending is so hard. That was the only part where there's a time structure and you can actually count it. I had to train myself to do that, because Id never played in that time signature before. It was something like 4/16 or something?

BH: Yeah.

EJ: But keeping and playing at the same tempo as the music when it's that difficult of a passage, it's pretty difficult, because you don't want to rush or be behind, because everybody hears the backing track, too.

BH: Right. Lining it up is really a challenge. And keeping it in time is really a challenge. I think you're right.

EJ: Yeah, and then also keeping the same tone; you don't want to sound too drastically different from the backing track. You want to kind of blend in.

BH: Yeah, I see that. I think that ending is really quite challenging. I think you're right. I always had a hard time getting into it, making sure that I started at the right time.

EJ: Yeah, for me, I really had to subdivide like crazy and hear it in my head.

BH: That was my big issue. Sounds like it was similar for you, too.

EJ: And those intervals!

BH: The intervals, right! So it had a lot of wide leaps, but I don't remember there being a whole lot of range problems, but the leaps, especially in that melodic stuff- the more rhythmically driven things.

BH: Yeah. I agree with you on that. There's a lot of stuff that kind of felt unnatural that you kind of had to play over and over again to make it feel more natural.

But that's how a lot of different written music is.

BH: That's true. Ok, let me think about this. What did you do to prepare, how did you address those issues? You said you just listened over and over again?

EJ: Yes. I listened over and over again, and I played with it, and I listened to it with and without the trumpet-backing track with trumpet and without trumpet over and over again. And of course I played it in front of my trumpet instructor, and obviously he gave me pointers and said, listen for this sound, and I'm like, Oh! That's the cue! Because some of the cues felt like they were a little buried sometimes, because there's so much going on, you really have to listen to it a lot of times to know where that cue is. But that's not a bad thing. It's just kind of-you've got to get married to the music.

BH: Sure. So what equipment did you use, you said you borrowed a microphone from Dr. Walker? Do you remember what kind it was?

EJ: I'm pretty sure it was a Shure, but I'm not 100% on that.

BH: Was it an SM57? The Shure, the one that looks like an ice cream cone?

EJ: No, it wasn't pointy on top, it was like an oval, like an egg kind of shape. Sorry, I don't remember.

BH: But you used a microphone that was on a microphone stand?

EJ: Yes. It was a legitimate microphone, I just can't remember what make it was, because it wasn't mine.

BH: No, it's ok, I'm trying to ask, because some people use clip-on microphones for things like this.

EJ: Oh, no, it wasn't a clip-on.

BH: Was that an issue? Doing it with the mic stand?

EJ: No, I actually had just a little table in front of me with the laptop and the microphone stand. I just had to point my trumpet a little lower than I am used to, but it wasn't a problem.

BH: Cool. And you used you used your laptop and then you said you collaborated with the folks that were working at the recital hall?

EJ: Yeah. With the projection- obviously you do a sound test. Well, that was my first time doing a sound test. That was a little scary, because I was worried that the backing track was going to be too loud or too soft. I think I could have been a little bit louder, but I think it turned out fine. It was just the whole experience of doing a sound test and blending all these sounds and really thinking, oh wow, this is really happening.

BH: Yeah. So did you use an interface? An audio interface with your laptop and the microphone? Or did you use the equipment that was at the recital hall?

EJ: I actually used one of Dr. Walker's amps. It was a little amp and there was a monitor, too.

BH: Cool. That makes sense.

EJ: Me being a little student, I had to borrow stuff.

BH: So do you think that working with this equipment- how do you think that helped you? What did it do for you as a student?

EJ: Well, it introduced me to a whole other side of music that I've never interacted with. So that was really cool, and I definitely want to look into more of playing with backing tracks and possibly experimenting with my own electronic music. I really want to get a synthesizer one of these days. I realize it's not the same as Ableton, but I've definitely been interested in electronic music for a long time and that kind of just put me more on that path.

BH: That's cool. That's exactly what I was hoping for you to say!

EJ: Well that's good! I'm glad you got the answer you wanted! [laughter]

BH: Trying to lead you like a lawyer. No, I think that's one of the coolest things about working with this stuff, is that I didn't know anything about, and I still kind of think of myself as a novice when it comes to electronics, there's so much to learn, but I was like, I want to do this. I think I can do it. And so I kind of just- when I started working on that if was the same kind of thing. I tried it and tried to figure some stuff out and it really opens up this whole world. It's pretty neat.

EJ: Yeah, it sure does.

BH: And you know, also, not for the record here, Jason Dovel is a really outstanding person for trumpet and electronics. He's done quite a bit with it. I think he's written a couple of articles in the ITG journal about trumpet and electronics.

One of his DMA students just wrote a dissertation that I'm using in my

dissertation about trumpet and electronics, so he would be a really good person for you in particular to get a hold of.

EJ: And his name was Jason Dovall?

BH: It's Dovel. D-o-v-e-l.

EJ: Ok. Cool. You know I think I've actually heard of that name.

BH: Yeah, he teaches at Kentucky and he's- if you go on YouTube and look him up, you can find him playing several trumpet and electronics pieces. He's' a great guy. He just has such a wide amount of interest in the trumpet world.

Especially for a master's degree, I think you would do really well studying with Jason.

EJ: Well, thank you! Dually noted. I just wrote that down.

BH: Let me finish up this- you said you're interested in electronics and trumpet.

How do these pieces compare to other trumpet and electronic pieces? What drew you to this piece versus something else that's a little bit more conventional?

EJ: Well, I think that honestly, because I really like Radiohead, liking that kind of music has drawn me to this type. I've looked at other backing track pieces that were mostly atmospheric at best, just waves, but I really, really liked the Adam Cuthbeét piece, Rikai, because it wasn't just atmospheric all the time or beats the whole time. It was a fully-fledged piece. And I just really enjoyed it.

BH: Yeah. I get that. I like that Radiohead analogy. That's a good one. I think there's a family resemblance there.

EJ: You know, there's a bunch of Radiohead music written for jazz band, for 18piece bands. We played that for my college and it was really cool to get to play
those pieces.

BH: Awesome. Yeah, I love Radiohead. I'm in the same boat. I love that stuff. I got to see them live once. It was like the best thing I've ever seen.

EJ: Oh, that's something I would love to do!

BH: Do you have anything else that you'd like to add? Anything that comes to mind when you think about that experience that we haven't talked about yet?

EJ: I think that it's really important to try something new, you know? Going to school and learning to play trumpet isn't just about playing the standards. It isn't just about playing the Artunian. You should really try playing things that people haven't heard before or people don't know, because I think that it's important to have diverse music. As we move into the future and things are growing and changing, we should be introducing new things into the world and be creative.

BH: I agree. I think we have such a niche thing that we're doing that if we don't figure out ways to be interesting to wider populations and keep music alive and not just be regurgitating stuff that was written by dead white guys 150 years ago, we are going to be in trouble.

EJ: Music is growing and evolving and we should be, too.

BH: Sure. And I think that this kind of stuff with Ableton- this is me editorializingthis kind of stuff with Ableton seems to me, that was what drew me to it. It seems like the most relevant music I had heard for trumpet in a really long time. EJ: Yeah.

BH: Relevant to people that were not trumpet players.

EJ: I completely agree. I saw on his website, on Cuthbert's website that we consistently does like master classes and stuff like that- hey, electronics can be a part of this music. Like we can use regular instruments with this. We can evolve music, basically. I think that's really cool.

BH: He's a pretty special composer. So my dissertation is called A Performer's

Guide to Adam Cuthbert's Works for Solo Trumpet and Ableton, so I'm not just
doing Rikai but since you performed one of his pieces, that was why I got a hold
of you. I'm basically going through and you're going to be in one of the
chapters where I do interviews with you and a couple other people that were
willing to participate, too. Its interesting, because they are all very different
experience levels and I think that's going to make a really interesting chapter.

EJ: Yeah! That's really awesome.

BH: So it's you, and a guy that just finished his DMA from Rutgers, and I guy named Sam Wells who is also an electronic music composer for trumpet, and freelances and plays in New York and he and Adam kind of run in the same circles. So it's interesting hearing all these different perspectives on the same thing. It's going to lead to some interesting conclusions. I'm not even sure what it will lead to yet.

EJ: Yeah, because everybody perceives music differently, I mean, we are all different people.

BH: Yeah, an having different levels of knowledge and experience with electronics, like Sam Wells, that guy is a professional composer and so he has a very different perspective than I do. Because that's not the way I think of music, you know. So anyway, it was great to talk to you!

EJ: It was great to talk to you, too? And I don't know if it will help you, but I have a video of my performance on YouTube if you just search Adam Cuthbert,

Rikai, and then is just says senior recital on there. I don't know if that will help you or not.

BH: Yeah, that will be great! Thank you.

EJ: Thank you so much. I'm really glad to have taken part in this.

BH: Alright. Thank you so much Elizabeth.

EJ: Have a good day!

## Samuel Wells

BH: Hi Sam, this is Ben Hay. Thank you so much for doing this.

SW: Oh yeah man, happy to chat.

BH: Um let me real quickly, my computer is being really slow and I'm tying to pull up all these questions.

SW: Yeah man, take your time.

BH: So I need your permission...

SW: I just emailed the consent form like 15 minutes ago or something.

BH: Ok.

SW: Happy to resend it if it didn't go through.

BH: No, that's good. And you were fine with all of that information?

SW: Yeah that's fine.

BH: And I can contact you again if I need to?

SW: Yep, absolutely.

BH: I don't know why my computer has just decided its on lockdown. Its' running really slow. So, I guess we have some mutual friends, that's kind of a small world.

SW: Totally, yeah

BH: Especially since you're from Kansas City, right?

SW: I'm from Iowa, but I did my undergrad at UMKC. So yeah, in the neighborhood

BH: So you know like John, Jenkins...

SW: Yeah, John and I were in UMKC together, yeah.

BH: That's awesome.

SW: He's a great guy yeah.

BH: He is a great guy. We've played quite a bit in Tulsa together. Yean, And he does the band at ORU.. I teach at NSU which is about an hour SE of Tulsa but I live here.

SW: Ok cool

BH: So we basically run in very small circles of college professors in this region. So, yeah that's great.

SW: Yeah.

BH: So which pieces did you perform of, well, I guess we are supposed to start with your background here, of electronic music and where you are professionally

BH: Yeah, so I'm freelancing in New York City, I was a trumpet player, composer, music technologist. Anything I can do, basically, I'll do it. And let me see, I actually have your questions pulled up here. I did my bachelor's in composition and in trumpet and UMKC and then I did a masters at Indiana University and I did a trumpet performance and computer music composition degree. So I obviously still write music and perform a lot of new music and specifically in the last five years I do a lot of ton of trumpet with electronics stuff. Either solo or chamber music stuff video interactive stuff. I'm pretty fluent with MAX and other audio production type stuff. That more or less answer that question?

BH: Yeah, and you're a composer as well. You know I played your piece...

SW: Oh, yeah, I remember emailing about it a while ago

BH: And it was kind of one of those things that I hadn't been as fluent with that software as I probably should have been but the weirdest thing was that I got it up and had it ready to go and I played it as a guest recital at Oklahoma state and it was really well received,

SW: Oh great

BH: But the next time my computer wouldn't talk to the software, which is neither here not there, but I spent a lot of time trying to figure it out, and I think if was because I was on a MAC. It seemed like the mac was basically saying this software doesn't work.

SW: Interesting. Did you originally perform in on a PC?

BH: No, I played it on a mac and then if figured out that the software was something else.

SW: Hmmm it should, I've never tested it on a pc, but it always seems to get weird when your transferring mac stuff from computer to computer.

BH: From that q press site

SW: Ok the Dysfunctions piece. Yeah, that actually, that doesn't need to be run in a max patch. I mean, it can and its fine, but I've been meaning to contact them. I think there's a simpler way to do it.

BH: Ok

SW: Yeah I can also just send you the file and you just need a click track and you can play it on logic or whatever and it will be fine, but yeah that you so much for playing that!

BH: It was a really cool piece and I really enjoyed it. Everybody just raved about it.

SW: Oh, great thanks.

BH: It was really hip. One of the reasons I like that piece was a lot of the same reasons I like the Adam Cuthbért stuff. Its not what you think of when you think of trumpet and electronics. That you were addressing the instrument and it wasn't just ambient noise with the trumpet just playing long tones. You know, bleeps and bloops. SO anyway ok. You have, I finally got my questions up so here we go...

SW: Ok great

BH: So what's your experience with Adam stuff now that we've kind of...

SW: Yeah, I know Adam personally, we kind of run in the same circles in NY, but I've only, I'm familiar with all of his music, but I've only performed Rekay or Reike, I'm not sure how to pronounce it, but one, but I actually did it in KC a while ago. SO I performed that once and it was on a um an organization called KCEMAA, it's the Kansas City Electronic Music and Arts Alliance. They put on a concert and asked me to perform his work. So it was selected, someone else programmed the concert and then I was just asked to play. And I didn't now his music before that, so I was introduced by someone just asked me to play it, and I was pleasantly surprised. But other than that I am familiar with what he is up to. Who just recorded an album of all of his stuff? John Adler?

BH: Yeah

SW: Yeah, cool. Adam showed me his trumpet sonata on that. It looks really cool.

I'm hoping to play that in the next year or two. I just have to figure out where

I'm going to program that. So I don't have a ton of experience performing it,

but I have been preparing and going back to the score and looking at the electronics for it.

BH: Well thats great. That seems to be his most popularly performed piece, because it's a little bit more of a plug and play piece

SW: Yeah

BH: So, what was your reaction to the piece when you were working on it you said somebody else picked it for you, how did you feel when you first started working on it?

SW: Um, well I was excited to work on it because I think one thing like about

Adam's music is when I hear it, I know it's Adam's music. I always love when
a composer has a distinct voice, and that, doesn't mean, I mean, even if I dislike
a work, I still like it when I'm like, oh, that's so and so's piece. I can just tell
that they are really doing their thing. I think I was trying to remember back to
how I felt at the time at 2011 when I performed it. I actually hadn't done that
much with electronics yet. I played it on a concert that I gave the premier of
Dysfuncitons on

BH: OK

SW: And so I was excited about the piece because I felt that it was really engaging and I think it presented the trumpet in a very natural way without kind of turning into a bell tone piece. I don't know if that makes any sense. Specifically I think it presented, it seemed to draw more on the trumpet's popular music tradition, a little bit different than the orchestral tradition and I thought that was, but still presented in a very through composed way.

BH: Yeah. So when you say popular tradition, expand on that idea a little bit.

SW: Sure. I think, so I think personally one of the interesting things about playing the trumpet is that it is present in pretty much every genre of music. So it can be a really flexible instrument in terms of what we are able to do with it.

BH: Yeah...

SW: At least with how it is perceived. So if felt that the rhythmic driving nature of the piece drew a lot from, because the trumpet evolved from like a jazz/funk tradition, it is almost like electronic edm with electronics and I thought that paired really well together. And it has lept out of the kind of the orchestral tradition where it's about the sound of the trumpet, like unless, even thought eh piece is somewhat, you could say it is fanfare-ish, but I've never really thought about it that way, I think it is a much more agile piece than just an orchestral fanfare.

BH: Yeah absolutely yeah. The primary driving force isn't the trumpet's kind of traditional role of the fanfare and the sounds. It does have a rhythmic drive, but it's more like electronic dance music, funk influence, and pop music influence, even a little bit.

SW: Yeah. Absolutely.

BH: I kind of, I agree with all of that, because it sounds to me that he didn't think of a fanfare at all.

SW: No, and I don't think he did at all. But that was the appeal to me. That is what drew on one of, I'm a classically trained player, and that's what I focus on, and I enjoy that it drew on another one of the traditions of trumpet playing.

BH: Yeah that's cool. There's a lot of fusion between genres with this stuff. That's great. What was the audience reception? What do you think...

SW: I think it was good. It was like 7 years ago, but yeah, I remember it going well.

I don't, I cant say with any specific certainty besides that it was warm and good.

BH: People enjoyed it.

SW: Yeah, I think people did enjoy it.

BH: And you said you had at that time you were obviously composing, you said you premiered Dysfunctions on the same festival, what, have you really done anything with ableton? When I did it is was a Max thing...

SW: I had actually never used ableton before this piece, and I do remember that specifically. And that was a little bit tricky. I use ableton quite a bit now. But so I was using daw didgital performer which isn't actually meant to perform with like ableton is or MAX and MAX and my max piece is just like a fixed tape piece with a click track, there's really no need for a max patch. But that's also me looking back on my piece 7 years later. I remember that being a bit tricky specifically with this piece, and I went back to look at it so see, because I have a memory that it took me a while to figure it all out and I didn't figure it all out, then I went back and looked at it again to see if I could see the same problems with it after I became much more experienced with it, and I think everything is clear in what he says. I don't think- let me pull up the score. I don't' necessarily agree with the approach to synchronization points, the way he approaches it....sorry I lost this one, I'm trying to pull it back up. So, I think what's tricky about this piece is that you hit play and you're at a specific

timeline, but you're also playing very freely at the beginning, which is fine, but it takes quiet a bit of rehearsal just to, for example, on the 4<sup>th</sup> system, there's like a rising at a certain time stamp, or a rise here, and to really fit that in exactly right takes a lot of synchronization, and I think there are more effective and efficient ways to do that. That especially if you are already using ableton, you could have multiple sound files, not just a single sound file for one piece, but trigger a new sound file when you reach that point, or turn on an effect. The other side of that coin is though, that requires a little bit more involvement with the software for the performer.

BH: And I think what's interesting about what you are saying, is that I think he eventually does that with his sonata.

SW: I'm sure he does, yeah.

BH: But I think he, that was just such an earlier piece, that was the first kind of piece he wrote with that kind of setup, so yeah,

SW: Yeah, actually, I, that's basically how I feel when I look at it, and I know all the stuff that he does now, and he's like a wizard in ableton, but as I look at it, there's some things that I don't' think, and I'm sure he does this now, but actually, in the summer I teach at a thing in Michigan, where I teach electronic performers and I also work with composers, but I think a lot about how to effectively communicate instructions, how to make things approachable to performers with little to no experience with electronics and so that's my only thing with this piece. I feel like even though his instructions are clear and correct, there could have been a clearer more efficient way to approach it.

BH: I personally, when I perform this piece, I kind of had the same problems, making sure that I arrived where it said to arrive. It's a challenge.

SW: Yeah.

BH: So, that's really really good information, and I think your perspective is super valuable there.

SW: Thank you.

BH: I mean, it's a unique perspective that, you articulated something that I had thought about, but hadn't quite put my finger on, and I think, I appreciate that, and I agree with that, especially on that piece. But it's interesting to watch the progression of his pieces and see that happen in the, because the sonata is with the launchpad, you know?

SW: Yeah. Alright. I have the sonata. I don't I got a new computer recently, and I don't thing all my files got transferred over, but so the other thing is he, that I think would have been useful is, I'm looking at the score right now, is he does give some text cues about what is going on in the electronics, but I remember specifically it took me a while to figure out, the piece kind of ends in this long 15 16 unison groove with the synth and the trumpet, and figuring out where that actually started, and I think just notating the electronics on the paper at another staff is like, it wouldn't have to be continuous, but you could just be like, oh, that's where that comes in. Just follow the music. I think there would have been a few intuitive musical approaches that would have, just to notate out the electronics a little bit more. And I assume he actually wrote it for himself at first.

BH: Right

SW: Which is what I did with Dysfuntions, so, the score when I played it at first, there was much less on the score. There's not even a ton on the score, but it's very different when you write for yourself and you're like, oh I know what goes on here. I've had a lot of pieces like that, that after the fact I need to make them, the scores work for other people.

BH: Right. I think that's all. What you were talking about there was a problem that I had, too. Being able to time it correctly at the end, because that groove is...you have to have it right, or it doesn't work. It just doesn't work if you don't come in in the right place. So, that's cool. So as far as technological choices, when you were performing this piece, what did you use that you can remember, or what might you recommend?

SW: I don't remember what I used when I performed this, but I can talk a lot about what I do now, or what I would do now with this piece. So, for like a microphone, I use a clip-on dpa microphone, I mean how specific to you want to get?

BH: As specific as you can be is good.

SW: Ok, it is actually right in front of me. It's a DPA 4099T, so dpa microphones is a really brand of microphones, and they make clip-on microphones for like every instrument and the microphone is pretty much the same on every instrument, but they do make a brass model that can handle a little louder volume. So the T is for trumpet, so that's the one I have. Its great. I like a clip-on mic because I don't like worrying too much about, well for a variety of

reasons, one really close micing, and has a fairly narrow pickup pattern, or polar pattern on the mic, so I'm much less likely to run into feedback issues with live processing. So its really dependent on that way, I like having a clipon mic because I don't have to worry about my relationship to a mic on a mic stand and I move around a little bit when I play, so I enjoy that. Otherwise I'll use an SM57 cheaper microphone just on a stand, but I think they sound really good on trumpet. I actually recorded with the SM57 quite a bit. And that's a Shure SM57. And then I use a MacBook and I have a variety of audio interfaces. I always perform with an audio interface. When I'm traveling I use the Microbook, I'm not crazy about it, but I've had it for a while and it does OK. Its, I'm thinking about buying an RME Babyface interface, they souNd really great, I've used them a few times, they're great for traveling. Let's see, any other technical stuff? I have other things that I use, but they don't' relate so much to this piece.

- BH: I think the mic thing is really important, and the interface, you know, that's

  Adam has some recommendations, but it's kind of like, I think he recommends
  the 2i4, the made by Scarlet?
- BH: Oh, that's right, those are good, those are good, they're really affordable and dependable. That's what id recommend for most people to actually buy.
- BH: That's about, how...the last question really, the last real question is how you, how does the Rakai and what you know if his other stuff compare to other trumpet and electronic pieces that you have performed or composed?

SW: Yeah, OK. I've been thinking about how to answer this one. I think Rakai as music, is pretty unique and different from most of the stuff that I write and play. I think he I like Adam's pieces because he uses the trumpet in really idiomatic ways without being cliché. It sound like to me like cool trumpet lines that you would here somewhere, like not with other electronics, you could maybe hear them in almost any piece, or whatever, but then he frames them in this different context, which gives them new meaning. It differs a lot. I do a lot of what most people call extended techniques, but I don't like that term, multiphonic stuff on trumpet, so it's a little bit different, I've been working a lot in the last couple years, pushing and expanding the timbre of the instrument, and I've been having a really rewarding experience doing that. My experience with Adam's music is that is't generally looking for a kind of pure, typical is not the right word, but a more standard trumpet sound, which obviously I still do that too, so, I think I like his music, I'm interested in it because it sounds like a trumpet in kind of a stereotypical kind of way without being, while still being interesting and engaging. And I think he also, at least with Rakai, he pairs the trumpet well with non-trumpet sounds, which I think is interesting, and a lot of what I've been interested in is using live processing to extend and expand the timbre of the instrument. I like everything to be somehow derived from the trumpet. I like the idea that, I kind of use the electronics to extend the instrument, like we are playing this extended or expanded instrument and I don't quiet know his sonata, I can only speak to Rakai. He does have some live processing, mainly it is the trumpet paired with the synth sounds, it's a really nice balance of timbres.

BH: That's a good perspective. Its really interesting to have another performer speak to that. Because that's so far out of my realm, you know, I've never written anything for electronics and my compositional chops are limited so its really great to hear you talking in really musical ways about it. I really enjoy that. So thanks for that.

SW: Oh, yeah.

BH: Is there anything else that you'd like to add? Do you have anything else that you'd like to add? Is there anything else in the questions that jumped out to you?

SW: Maybe not, but I guess I'm interested in, you're writing a performers guide to

Adam's music, and so how much are you focused on kind of presenting a guide,
is it for someone who has never performed with electronics, so there's a whole
technical side plus the music side, or is it mainly just musically how to approach
these works?

BH: Well there's a, there's two chapters, so like one, there are two chapters that address what you are talking about. One is how to technically set up for the pieces and how the interface works, that kind of thing, and then there is another chapter that basically is an analysis of the pieces so that you can kind of talk about how to musically approach the pieces. And kind of getting an overview of the pieces and how they are put together and that kind of thing. Just musically put together.

SW: Absolutely.

BH: So, and then there's interviews with you and a guy named Chris Delgado, who just finished his DMA at Rutger's and he did a full, he's the only other person that's

SW: I just met him in April, actually.

BH: So Chris did a whole recital of Adam's stuff and then interviews with John

Adler and Adam. I would like to get another one or two folks

You there? Hello

That I've tried to email are students, but the only emails that I have for them are college emails, so I don't think they are students anymore, so I'm kind of at a loss there, but

SW: Who is it?

BH: There are like three or four people that Adam recommended that were students that had performed his pieces for recitals at various universities. I don't know, do you have any recommendations of people that I just haven't thought of?

SW: I don't, I think its really just John Adler and Chris are the only two people that have been playing his works, that come to mind. But I don't think there's really anything else that I have to add. It sounds like a great, it's a cool project. I'm into it.

BH: Well, I'm going to do my best. It's actually been really a cool project for me, because I'm interested in it, but I'm not a- I haven't done an enormous amount of electronics things, so there's a lot of learning for me also. And one of the chapters, the first chapter, I'm sorry, the second chapter is actually a history of

electronics and trumpet, so to put kind of these pieces in some kind of context, so I'm going to site your piece Dysfunctions in it.

SW: Awesome!

BH: Just as something that's happening now, and then the fact that you used the max patch as a download, using that to share the trends that a lot of people use max.

Basically the premise is that ableton, pieces for ableton and trumpet are almost nonexistent, so he seems to be the only one that is writing that kind of stuff that I have found. I might, I won't make that statement of course, because I don't want anybody to go, hey, I know this guy, you know.

SW: Oh, there's always someone out there doing something!

BH: Right, you don't want to make any absolute statements, but he seems certainly like the most prominent one, especially since they just recorded a CD, and you know I hope that more people perform this stuff. I think that it would be really fun for undergrads to use on their recitals. I mean, it's playable, you know?

And it's really appealing to audiences, so I think it would be good to get out there more, and that's kind of the reason I've done this project.

SW: I'm into it. Yeah, use as little or as much as you want.

BH: It's been really helpful and if I have any more questions or want to expand on points after I look at this again, and say wait a minute, I had this thought and I didn't follow up the way I should have, they I'll give you a call again.

SW: Sounds good.

BH: Thank you so much, Sam, I really appreciate it.

SW: You bet! Good luck with the rest of your project.

BH: Well, I appreciate it, and I need it! We'll talk to you later.

SW: Ok bye-bye.

SW: Ok, bye.

## **Appendix B: Interviews with Adam Cuthbért**

## Interview No. 1

BH: Audio confirmation of you saying that you are cool with everything?

AC: Oh, yeah, do I need to read anything like give you a specific script?

BH: No, just need to ask you these questions and make sure that you're ok with it.

AC: Yeah, I consent to anything audio recording-wise.

BH: Ok, and its ok if I contact you again in the future?

AC: Oh yeah.

BH: And I can use your data, or I can use your identity to, I can identify you in the paper?

AC: Yes. You can use this interview about my music. You just can't sell my data to corporations.

BH: Ok! I'll try to avoid that. So, that's good.

AC: Where do you want to start?

BH: Let me see if I can get that google doc that you sent me pulled up.

AC: That's a total riff, so I figured we would scan it all in person.

BH: You know, I have a, on of the things that I'd really like to talk to you about is John Adler, so if I don't ask you about that, or if you have more to add, please do. That's the big thing. I have like two chapters in the dissertation that are one of them is your relationship with John Adler and it doesn't have to be like 30 pages long or anything, but it does have, it is a big enough thing that we could maybe devote time to that, you know. And then the other big thing was just about the music and your bio and influences and all that sort of thing, so we can

kind of use the questions as a launching point. I can't seem to pull up your google doc, but

AC: Do you want me to, actually I can't make you full screen. I can text you the google doc.

BH: OK.

AC: But its really it's just like, ok, Actual facebook chat, open that in a new tab. Ok.

There is the doc.

BH: Got it. Ok.

AC: And it's like, ok, we don't have to, it was kind of more like for my sake to just try to put these thoughts out, because I haven't had to answer these questions, some of them, ever.

BH: Right.

AC: So, lets make sure I know my own story here.

BH: Ok, so tell me a little bit about your background, your education, when did you start taking music lessons, and all that kind of stuff. As much detail as you're willing to share about your musical bio.

AC: Well since it's a trumpet paper, I may as well start at the beginning. I picked trumpet in 5<sup>th</sup> grade. I picked it, because of that Chumbawumba song, do you remember that?

BH: Yeah, I do!

AC: The trumpet comes in at the bridge at the end of the song, and in the music video it was like a close up of the hands playing the trumpet and it had this red curtain in the background and it was just playing Trumpet Voluntary or something like

that, but it was just a part of this little canon at the end, but I was like, that's just the coolest song, and I just like imagined myself playing it and putting the valves down, and as a 5<sup>th</sup> grader I thought it was only like four notes.

BH: Right

AC: One, two, three, four, so needless to say, when I learned the second note was one and three, I was like f#@\$, everything is out the window.

BH: That's funny!

AC: So, I learned in public school in the suburbs of Detroit, just like a traditional middle class public school curriculum. And I was ok at trumpet. I made first chair in the band, first or second chair in the band, so growing up....super nervous about that. It was sort of like a block, like a thing that I, music class, band class was a thing that I could count on, that I could be ok at, and I could, I was pretty average at every other class, or I was like a really, really awkward anxious middle school kid, so band class was a thing that I would go to, and I would be like, ok, I can go there, I can play the trumpet for like on hour, and for me it's the best. So I practiced really hard at it, because it was fun. And so all the way through high school I picked all the band classes that I could, that they offered symphony orchestra my second year, there's a jazz band, there's a musical pit orchestra, and I even got to do a high school brass quintet my last couple years as well. Do you guys have like solo and ensemble?

BH: Yeah, sure.

AC: Yeah, band. Where are you from again? Are you from Arkansas?

BH: I'm from Oklahoma originally.

Oklahoma, Ok. Got it. Probably very similar in the public school programs. But one special thing was in my high school there was free hour on Tuesdays and Thursdays where you could just like go to any class to get either remedial help, or there's a chess club at that hour. So every teacher kind of had the opportunity to kind of do some open curriculum fun thing and my band director had a mini keyboard lab and all of his computers had fruity loops and Finale and like a decent Roland midi keyboards plugged into these stations, so as soon as I figured out that was there, I was like, I'm going to go and put notes on a staff and try to fumble through this software and figure out, I'm composing music right now, that's awesome! I would get my Tuesday and Thursday stamp credit that I had for most years, like every week I would go and at first I was like playing with the midi, with the live recording where you press a button and in Finale and you plunk through with a metronome, you can just press a button on the keyboard and it will approximate what usually looks like atrocious but messy music, but it was fun to play, that first experience with that sort of technology. So I started composing songs in this software and that eventually became, oh, what's this cool video game soundtrack jingle that I'm really into right now, I'd plunk it into the piano and figure out what it looks like on the staff. And so I would like recreate Legend of Zelda songs inside there, and that was sort of my first intro into using Finale software. The further I got in music and trumpet lessons and whatever, the more sheet music I saw, the more I was able to contextualize that somebody had to write this. Like music that we looks at are actually just like roadmaps and schematics that somebody designed for

AC:

musicians to run through. I thought that was the coolest sh#% ever, so I kept like, I would just compose little melodies, it was really basic, my understanding was basic, just like melodies and harmonies, melody and accompaniment or whatever, and just trumpet, when you play an instrument that is almost always the melody, or pretty close to the top of the frequency hierarchy, so we sort of learn that our role is to play a melody and somebody else is going to contextualize it with harmony or whatever, like an accompanist or the band when you're playing a concerto, is contextualizing your melodic homophonic contour. So that was a lot of the music that I was clunking through in Finale when I was figuring out how to "compose." It was just melodies with harmony and stuff. I was taken in by game music a lot because that's actually very orchestral in it's composition, are you a game person?

BH: Not probably as much as some people that are my age, but I mean, I played a lot of stuff when I was in middle school. And Sega Genesis, I played all that you know, like Golden Eye on 64 and all of those kinds of things, yeah.

AC: We're probably a similar age, how old are you?

BH: I'm 34.

AC: Ok, I'm 30, so we're not that far off. We probably had the same game consoles growing up.

BH: Yeah.

AC: So you probably know some of the sounds that I'm alluding to right now. And that was really the first, the first I started thinking about the function on what a composer could do in the world. And then the internet came along and game

culture and electronic music culture was actually, you could share a lot of enthusiasm between the two. Maybe I came into electronic music first through like, remixes of game tunes that were all like Napster and your mp3's of your videogame mixes, but through that I eventually found myself, I found the way to like real electronic music and Detroit was just down the street, it was literally where techno was invented, so when I figured that out, there were all kinds of more authentic EDM music to be had, to be learned. So this was all just like a side thing that I didn't actually even consider part of band class at all. In band class I played the trumpet and did what was on the page, but then you know, when I'm hanging out with friends and playing video games and we're talking about like, do you hear the soundtrack to this game? This is my favorite songthis level has like awesome background music or whatever, and we were geeking at all this stuff and it didn't even occur to me that is was the same world as band music but I, towards the end of high school, I was like, ok, I've got to do this for a living. This is what I'm going to choose as my major when I go to undergrad. And so I thought, ok, I'll like steer the course, I'll learn like all the "band composers" I'll like find out ore about marching band and drum corps and how to operate a marching band group as a music educator, I better get up on my orchestral excerpts, I need to just like know the symphony orchestra world, like all the good trumpet players know these certain super hard licks, and all these famous symphonies, I gotta get on that, I gotta make sure I know like which Mahler it is that I'm hearing right now, we'll talk about that. So I got this like laundry list of things that I thought I had to do in order to succeed in

classical music school. And it wasn't even that I liked, that I was inspired to go into classical music school because I was so into classical music, I mean I thought it was cool. I still think it's cool, but it was never the driving force that led me there. It was really like, I want to figure out this composition today. But I went in for trumpet performance, because I didn't want to be a teacher, and my band director, who was great, like he taught me theory, he had two semesters of high school music theory, he had this midi lab available. He definitely gave me the resources, but he was also like, you don't really know how to be a composer, so maybe just take some lessons on the side and claim trumpet as your like, center, as your focus. So I went in and I auditioned and I did the studio, but I also enrolled in composition lessons. I just was like, the school had a pretty rudimentary list of application requirements for (inaudible) things that shared various contrasting styles or whatever.

BH: I lost you for just a second there. The last thing that I heard was that the studio had a rudimentary list of things that they needed?

AC: Oh, yeah, application guidelines for submitting a portfolio of compositions to be considered as a composition major. And it was like, have a large ensemble score, have some short works of varying styles, like typical stuff, so I banged out a bunch of scores, just like page or two long scores that were basically just like melody and accompaniment and alluding to certain formal systems like sonata AA', blah blah blah and then I had a band piece that was basically only ever of the vehicle for exploring Finale. It was never gonna get played. But it was like me trying to figure out this software and figure out how to orchestrate.

But really, I'm like orchestrating by mixing these midi sounds, so little did I know I like, that that was it actually. Playing digital sounds and the score was kind of an afterthought after that. Because I was mostly just interested in the sounds. And then so they let me into lessons my freshman year, which apparently is a rarity, so I'm super thankful for that . Anyway, so my undergrad was like, I'm doing two things at once. I'm going hard in the trumpet studio trying to be like the best, it's like it was a super-competitive and needlessly toxic environment where the upperclassmen hazed the freshmen. They stole our valves out of our trumpets and hid them while we were in the bathroom. Or like locked our practice rooms. It was a super toxic situation. But I thought I had to play along with the game because I had to be super good at trumpet and the teacher was very good at giving all of us naive freshman to think, you need to be super good at the trumpet and then everything will be fine. All you have to think about is practicing. And we're like, oh, ok I'm going to do that. So there was like this side to my undergrad and then the other side was my composition teacher, Bill Ryan was like, alright, the new music world, or like the world of being a living composer is like super complicated. You're going to have to learn a lot of sides of the world. You need to learn how to record yourself and record samples of your friends, and you need to learn certain software's and you need to like know how to be a good community member and help your friends make music and just like the stuff that actually is real about the world.

BH: Right.

AC: I learned from him. And I was like, oh, well I want to do all this stuff, but don't you think I need to be practicing 10 times a day? So there was always like, do I spend my day doing this or that, or do I compromise and do both? And that like cracked my brain a lot. I didn't want to choose. I didn't want to hyper (inaudible).

BH: I lost you for just a second. It's still kind of frozen.

AC: Which Bill Ryan directs, was um 12 or 18 musicians, and you know the.....

BH: Hold on one second, Adam. It's kind of freezing on my side. I think it's my
WIFI. Would you go back just a little bit? You were saying there was like a
conflict between the two trumpet composition and your teacher, and that's about
where I lost you.

AC: ...Kind of compromise. I kind of worried, should I pick just being a trumpet player, or just being a composer? And I didn't really want to pick. I didn't think I was informed enough to commit to one or the other yet. And I was still kind of having fun in both. So I didn't pick. I just was tired most of the time.

BH: Right!

AC: Doing two studios worth of activities, so that was just splitting my day in a weird way because I didn't want to pick, anyway the first year, in Bill Ryan's studio, he was directing the New Music Ensemble at GVSU and their big project was they were doing a recording of Steve Reich's Music for 18, which is f@#\$ing hard music to get undergrads to do. He just made it like a full year project, like teaching cell structure to a lot of musicians who have never seen minimalist structures in music before, or needed to use the amount of cross

ensemble, non-verbal communication in order to advance a piece like that from section to section. There's just tons of challenges in it. I didn't know because I was just a freshman. I just thought it was insane. But it was like nothing that I've ever seen. And that got me thinking, like what else are like people doing that people who are writing music now, using the tools we have today? It was my first taste of contemporary music done in a really, like influential contemporary music that still plays a role in the zeitgeist of living composers today. Frankly, the way that Mahler just doesn't.

BH: Sure.

AC: And I don't mean to like talk down on Mahler, I'm sure...

BH: No man, I get you're saying.

AC: He's sort of my straw man for digging on classical music.

BH: Yeah, he's kind of the pinnacle of all of that. The biggest orchestras and the most verbose music. All of that.

AC: Yeah, just sort of that era of late-romantic.

BH: Self indulgent, yeah.

AC: Super self indulgent, yeah. Anyway, just like starting with Music for 18, and then every semester there would be guest artists and guest composers coming in to do concerts and master classes and talking to us in the composer studio, and I started getting super stoked about music that 's getting created now. And what sort of things are making composers today tick. And then the classical side got, it felt more and more irrelevant. Or it felt like, this has it's space, but it's sort of like a museum. This art is amazing, it's been passed down, it needs to be

preserved, but I don't think I want to be the one to be the one to do those period preservation performances. And that was sort of, it was maybe always a tough spot between my trumpet teacher and my trumpet peers who were like, what do you mean, you don't want to practice your excerpts? What are you going to do for a living if you don't? And I never really had an answer, I was just like, I don't know guys, I just really don't want to play these excerpts. I want to go home and twist knobs and see what this distortion filter does on my trumpet and these other sounds. I want to make beats. I want to make scores for games, or make cinematic things. And I want to play with software while I'm doing that. I want to be stuck in the machine while I'm doing all of these things. Some sort of like romantic feeling for the cyberpunk dystopia. Just super fascinated to be like trapped in a computer, existing as software, so I think that probably forms the kind of music I do. So where was that? I forgot the question already.

BH: It's good. I like it. It's really helpful actually. We were just talking about musical influences, background, like your biography, so you're in Grand Valley, and you're sort of forming this, a path forward for yourself that's a unique, seemingly unique path amongst your peers. So is there anything else about Grand Valley that stuck out? You'e done some recording with them lately, right? I've seen some things on social media.

AC: Yeah, we just did a record last year. Where Bill called me and two of my fellow alums from the program with the intention of saying, I have always wanted to do a project where all the composers were through my studio, the ensemble all my ensemble, it's just totally like, a legacy project for him. For saying, this is

what's happening, sort of a snapshot of his life's work, essentially. As a new music ensemble director at a school and as a composition teacher, sort of the dream would be to produce a record of music by his former students, played by his current students. So that's what Return was. That was a super fun project actually. But I think the turning point for me when I was at my last couple semesters there. I was starting to get really disillusioned with classical music, and...... Daniel Brody, and he and I were both like, he had a bunch of pieces we had composed for lessons and for class that just haven't gotten played, we've got all these weird ideas of using techno and weird noise and weird sounds, and mental music making with all these classical instruments, and it's in the context of composition, notated composition..... We did one show and we were like...

BH: Hold on one second, this internet, the connection was bad. I'm sorry man, I don't know why my internet's running...but you were talking about Daniel Rhody, you were talking about him and how you had some ideas of what you wanted to do?

AC: Yeah, he was sort of a kindred spirit of mine. He came in as a trumpet player, also, and they actually kicked him out of the trumpet studio and forced him to play euphonium.

BH: That's frustrating!

AC: And he was like, alright, I'll just play the euphonium or whatever. He was getting a music ed degree, and he was in the comp studio as well and he was kind of like a kindred spirit of me where we were both kind of feeling restless with the culture around us that nobody around us seems to be questioning. Like

this is just how music gets made here, but there's so many other cool ways to make music, so let's figure out those ways and lets to that with everyone. So we went in together on a graduate recital for our composition capstone and we were like alright lets make the craziest recital that this school has ever seen. And so we called the dance department, we got a bunch of choreographers in on it and we wheeled subwoofers into the dance studio and I had a friend of mine, Tyler Smith, compose, I commissioned him to write me a piece for trumpet and ableton. So he wrote this insane, out piece, super slow, drone-y thing. Dan and I composed a bunch of stuff together. I premiered Rikai in this show. That was sort of like my lynch pin, like this is going to be a piece where I'm going to learn this software, I've got to figure this out, because it's super fun. This is definitely way closer to what I want to do then orchestral excerpts, so let's make this piece the statement piece. And that piece was sort of like, alright I'm going to play this trumpet piece, and im also going to drop beats halfway through it. Nobody's expecting that, and it's going to be loud as f@#\$, because it's in this boomy dance space and we have wheeled two subwoofers in. I'm just going to play this metal, kind of vaguely punk rock ethos trumpet composition for myself, and you're going to see me play that, so you have to sit there and listen to this piece. SO we put this recital together and we plugged it really hard so we got a lot of people there, and it was like super successful. We had a coupel friends in, these guest composers, like dance choreographers. It was just a big fandango. We went realy hard to produce it and make it something large, and it worked out. People liked it, so we were like, let's do it again next semesters!

And we were like, why?! There's no reason to do this like, there's no- we've fulfilled our recital requirements. And I was like, actually, no. You know, let's do it anyway! And my capstone project is now a concert series instead of a recital. And we did it and we hired a couple friends to come in and we made a rock band arrangement of this God Speed ye Black Emperor tune as the concert closer. We made- I played trumet on this piece- oh you know this piece. It's called Emotional Bounce. You saw the violin version.

BH: Yeah. That's a cool, cool piece.

AC: Thanks. We co-composed that and it was about a messy breakup that Dan had. So he played the laptop like you saw in that video, and his wife was the violinist, his now wife was the violinist in that video. That was originally a trumpet part and we made this piece to open the program, and it was meant to be, this is Adam and Dan, like collaborating. Who cares what it sounds like, you're here in this space and we're going tot share it with you. It's not classical music and we are going to be ok with that. It's just what it is. So we did another and then we did another and another, and we did like a whole bunch of these shows, for no reason, just because people would hang out. And then they'll seem to be liking and talking about them. I think we did six when it was all said and done, and eventually we, one of the concerts, we just did a rave in the school. And we got the dean to sign off by saying, "we are doing an elecro-acoustic recital of compositions in the building until 3:00 a.m." And the electro-acoustic compositions were just like techno, and we did live video improv and we mixed through tracks and we brought everybody in, and they may or may not have

brought in a bunch of booze, but we just danced and had a great time in the recital hall.

BH: That's awesome. That's like an undergrad dream right there!

AC: Yeah. We just made it something really fun that we had reason to enjoy. After being so stifled, or feeling creatively snuffed out in the rigor of the orchestral music track. So we just made it fun. We combined games- we did a rock band game ensemble on one of these shows. There's a couple of like Bang On a Can compositions in one of those rock band games that you can play on the guitars, so we set up a mini ensemble to play some of that. We were like, we like contemporary minimalism, we like games, we like techno beats we like all these things that aren't getting the time of day at music school, so let's just do that. It was all sort of, for me at least, it was all rooted in, I just love using technology in ways to make music. I'm kind of obsessed with being uploaded into the cloud and existing in the ether. That's how I feel when I'm like sculpting noise on a computer, frequency band by frequency band. This is just really exciting. So, that was basically my undergrad. Then I graduated and still had no idea what I was going to do. At least I had fun doing it.

BH: Yeah.

AC: So that was around also the time I met John Adler. He came into- he had a record called Confronting Intertia- did you listen to that?

BH: Yeah.

AC: He was touring that record with Trey Tecatta and his pianist and he came to GVSU and he's like I'll do a master class......

BH: Are you there? Can you hear me? Sorry man, hold on- it cut out right after you said that John Adler was touring that album for the masterclass.

AC: Ok. Are you recording it too?

BH: Yeah.

AC: Ok, I got ya. So, he was touring the Confronting Inertia record and came in to do a master class and recital. And my trumpet teacher invited me to play at the master class and was like, play whatever you're working on. And I'm like, are you sure? Anythigh that I'm working on? Because I don't think you know what I'm working on. And he's like, yeah whatever! Alright, there I don't know if this is like a work in progress Rakai, and he's like, how do I teach what you just played for me? I think he was expecting something that he knew, or something at least coachable. I really just wanted to show off this cool piece that I was working on. And he was just like, yea, this piece is dope, actually. I didn't know he was into playing with effects and stuff, either, and he turned out to be the perfect guy to play that piece for. And he was like, Let's chat after the master class about how this works and send me the piece when its done. So like, the next year or whenever I hacked it into a zip file and it made sense to somebody other than myself, I sent the score to him, and I'm like, hey here's that piece. I don't know if you remember me, but if you want to play it, that would be awesome. I would like to know if it can even be played by somebody else or what that means, because there is so much extra stuff to it. It's not just a score. I gotta sort of write instructions about how to rig the thing up, especially if you're coming to the software for the first time. How do I explain this, how

do I set this up so you're good. And I don't even know what the good gear is yet. So, get a microphone I guess, to play trumpet into- I don't know what it is, but let's figure it out together. So he's had most of the stuff required for the piece already and he kind of ran me through what his rig is and what works for him. And he played it a couple times in his school. He was teaching somewhere in Virginia before UNC. I cant'remember where. I think a school in Virginia. So he played it over there, he played it around, because he tours a lot. He just has a lot of friends in the trumpet community, I guess. Wherever he's got something new, its [pretty easy for him to set up a few stops on tour. And what better audience to sell trumpet CDs to than trumpet undergrads?

BH: Right.

AC: Who else likes trumpet CDs?

BH: That's right!

AC: Which is what brought him to GVSU in the first place, so he played it around and I guess he was pretty stoked on it after a while. And he was like, can you write me another one of these? I like this system that you're working in, let me commission a new one to go along with it, or make that it's own thing. So this was really exciting for me, it was sort of my first pro commission of hey, I want a score from you. Here's money, and I'm paying you to make me a composition. And I really wasn't excepting it, because its' not like I make scores that are just, I mean, it comes with all this tech baggage and everything. That was around 2013 that he invited me to do the sonata. I had been figuring out how to live life in New York, and starting to connect with the community

that would eventually employ me and be my peers. The things that I was doing were electronic scores for contemporary dance. Me performing stuff myself and working with a small ensemble, like a free jazz band or something. And doing scores for experimental theater where the budget was nil, so I had enough budget for a couple singers to sing the libretto and I kind of had to make the sounds myself. So it was a very DIY poor man composer way to figure that out, and through that, I didn't really do very many straight up notated scores, like acoustic compositions. So the prospect of writing something fro John that was just going to be a score, I'm like, man, I'm glad you like the electronic part, because I don't know if I could do a straight up acoustic piece right now. So fortunately he sort of asked me for exactly what I was able to offer, like the only thing I was able to offer was like a hybrid trumpet composition with weird sounds and samples. So I got to work on what eventually became the sonata. There are a lot of drafts in the garbage. While I figured out how I wanted to do this modular thing, because john is such a good improviser, and it was around this time, he made a jazz record with a trio called Things I Like, have you heard that record?

BH: I have, yeah.

AC: It's like incredible. It's like so good. And so I heard that, I'm like he knows how to play with electronics, he knows how to tastefully add layers of delay patterns and not sound like he's a jammy dad band. That's just like guitar solos for days. That's sort of what I was worried about that i was making my trumpet become. I didn't want to sound like a wale-y guitar man just playing trumpet

instead. So hearing John do his thing, I'm like, ok, there's another that I didn't know about out there. I don't have to worry about like being a whale-y guitar man on the trumpet. So I made an effect box just for him, which was derived from the kuuma project which is like my avatar for improv music. It's sort of its own ableton live set that is designed for me to take trumpet, so you know if you play a monophonic melodic instrument, sometimes if we're the only one that shows up to the gig because we don't like, we don't have enough money to hire a pianist or drummer and we need to fill out the frequency spectrum, and make potentially like an hour of improvisation on the trumpet feel like there are enough contours of density and frequency that it makes sense as a long-form sonic movement. Because if you just play acoustic trumpet for an hour, you get sick of the 10,000 KHz frequencies and nothing else, and only ever one note going on at a time, so there were these, I don't know if I want to say shortcomings, but that's the word that I'm thinking of, shortcomings of the trumpet that kept it from being an entire orchestra by itself, so those were some of the things I needed to figure out how to play low notes, and I needed to figure out how to play, like have notes continue to sustain even after I have to take a breath or take a rest, like the notes need to keep going, or some kind of music needs to keep going. So those were the problems that the kuuma rig aimed to solve. So that was my trumpet project at the moment when John invited me to write the sonata and so I wanted to bring some elements of that system into this composition. And I know I wanted to give him space to improvise with it, because he's really good at it, it would be a shame not to let him do his thing

freely while playing, so I gave him some things that I like to improvise with, which are a looper and ableton with a few specific, certain customizable parameters and several effects filters like guitar distortion that I found to enjoy playing through when I'm improvising. So I wanted to give him those tools and I also know he can play whatever notated-wise- I sort of, the challenge was to come up with a way for me as the composer let him play what he does best, let improvisation and what I guess I do best, as putting music on the page. And that led me to this very modular system where he'll press a button and the accompaniment will happen, like it will play the accompaniment for like a section and then it will empty ......(inaudible) that you hear as long as you want to be, and when you are done improvising, you can dictate when that moves on, so the soloist sort of as a band leader, where the band is these tracks of digital sounds, just waiting for your cue to move on. Am I straying from the prompt?

BH: No, man. This is all really, really good, because it goes into what your thought process was in how you are writing. It makes total sense, listening to the piece now, that makes more sense to me, what is going on, that there are these long sustained, and the whole idea of Reich and Terry Riley and those kinds of people, being present in your mental space. That all really is clarifying and informing of what any performer kind of wants to go for. The Bang on a Can kind of stuff. What else did I want to ask you about?

AC: Yeah, I'm talking too much.

BH: No, I think it's great.

AC: I would much rather have you talk way too- I'm not saying you're talking too much- I would much rather you have material, than to not have material. And we can do more than one of these. Sorry, my wife just got home.

BH: That's alright.

AC: You want to say hello to Ben Hay?

BECKY: Hello! Hi Benjamin Hay in Oklahoma!

BH: It's just Ben, haha.

AC: So this is my wife, Becky.

BH: It's nice to meet you.

BC: Great to meet you, too.

AC: We're talking about trumpet rep.

BC: Trumpet rep, oh, I'll leave you, haha!

AC: I'm going to be doing this for a little bit.

BC: No, it's good.

AC: Welcome home.

BH: And we can do more of these interviews, in fact I think it would be good to do more, because I'm sure that I'm going to think of some things...

AC: I'm taking a really long time.

BH: No, it's good- like I said, id much rather hear the whole story, and I've got questions. And something I like to ask you while we are kind of stopped briefly, is about the Sonata, and about me just being able to play that for my faculty recital this fall. Because Id really like to make an attempt of doing it, because

one of the chapters of the paper is how to set this up, how to set up for this music.

AC: You don't have to pay me any money or whatever, just play the piece, man.

BH: That's super generous of you, man.

AC: No, you're spending a lot of time on my story, and I'm super grateful. Not to get like super gushy or whatever, but the least I can do is give you my shit

BH: I'm really excited.

BH:

AC: I'm just really stoked that you're interested.

I think, for me personally, as a musician, what John, when I saw him do his thing at ITG, I was, I just had never heard anything like that for the trumpet, that seemed relevant in a way that's larger than the trumpet world, does that make sense? To contemporary music,, and that was really refreshing, and that's what made me really want to look into it. You know, my younger brother is a contemporary artist, and he talks about, he's a painter and sculptor, and he does installation work and stuff like that, and he runs a gallery in Colorado, so anyway, he's always talking about all these different contemporary artists, and I feel like our, especially the orchestral instrument world, we're just, I don't know if behind, or snobby, there's like an exclusion there I think, of contemporary music and I would like to be able to do whatever I can to help promote music that speaks to people where they are. And I think that your music really does. I think I could play your music for a crowd of people that don't play the trumpet and I think they would probably actually enjoy it. I can't say that about most trumpet rep.

AC: Thank you very much for saying that. I never wanted my audience to just be other trumpet players. That's pretty refreshing.

BH: I could go off on that for a long time. It's like one of my soapbox things. You go to ITG...

AC: You mean, the laymen don't want to hear the Persechetti and the Parables?

Who wrote The Parables?

BH: It was Persechetti.. Or like you hear the same kind of cinematic composers that write new music, that all sounds like John Williams, that's my thing that its like-I went to the ITG and I heard one trumpet ensemble do a prelude that did, that paid homage to Lutowslovski, and I was like, wow that was cool. That was a cool piece. I asked one of my friends what they thought of it, and they were like, oh that was terrible. Man, are you kidding? That was the best thing in this whole conference! That was the best that any of those groups played!

Anyway...

AC: I felt that way one time when I saw Steve Burns do a Stockhausen piece for trumpet and sound system.

BH: Yeah, I think I know- Aries, maybe? That seems to be like the big one, the Stockhausen.

AC: I like Stockhausen a lot. Whatever that trumpet piece is. My friends were like, whatever, and I was like, you guys, that was amazing!

BH: That's contemporary music, you know? But also, on your, to continue talking about your stuff, one of the, can you hear me? It kind of froze for a second.

AC: Yeah, can you go back like two sentences?

BH: Sure, what was I going to say? Now I'm lost a little bit. You've talked a lot about this stuff, ok, here's a questions, and maybe you can answer this, and maybe I'm reading too much into it, but your choice of ableton versus, I've played a few pieces, t seems to me that the programming language of most contemporary classical composers that write electro-acoustic music is MAX. And very few of them write for ableton, and I was just wondering if that's- the reasoning behind that, or why you chose that system. 56:19

AC: I can talk a lot about this topic. But the thing I think is the bottom like- I've been thinking about this since you sent me the questions. I don't have anything bad to say about MAX, it's a wonderful piece of software, and actually Ableton bought MAX, so it's all under one roof now, and its two different points on the programming scale. In MAX if you want to make a reverb patch, you go in and you say, it's like you're coding language almost, like you say, frequency range from here to here if sound is imput, then the tail will go through and these are the characteristics of the reverb trail one at a time, and you're putting all these components together and attaching them with wires, as if they were circuitry. You're sort of digitally designing the circuitry of sound making or sound processing components. And if you want to build something from literal scratch, then MAX is a great place to start, because you can't build a reverb from scratch in Ableton the same way. In Ableton, you drop a patch of reverb, and then it's essentially like a pedal for a rack, for a audio rack, where you can tweak all of these things in a reverb just by turning these knobs, and sliding frequency bands, its much more visual. And the thing that I love in ableton that I don't' think is really achievable in the same was MAX, is I can drop a sound and loop that sound and then start sculpting that reverb while I hear that sound. And I hear how the effects I' changing are effecting the sound in real time.

BH: I see.

AC: So, if I'm spending an hour adjusting the parameters of a reverb patch so it perfectly fits a sound that I know is going to be going through it, I'm hearing the sound the entire time. It's not like theoretical or hypothetical, where it's actually- it's active listening in a way that it's real. It's super real. Whereas MAX is hypothetical in that way. And then ableton, the environment, the mixer environment its sort of at once reminiscent of Sibelius and Finale, and also ProTools and Logic, and also Reason. Do you know Reason?

BH: No, I know the others that you mentioned. I've played with the other ones you've mentioned, but not that.

AC: Ok, Reason is another- just look it up and see what it looks like. It's sort of like a virtual audio rack where you put your effects in racks or EQ racks or whatever, just in order and it sequences. But ableton is just like this amazing fluid fusion of all these components that are usually their own software, so you have the mixer right there, where if I want to drop a drum track and play with the drums and then go back to the trumpet, a MAX patch, it's not really a digital-audio workstation in the way Ableton and Logic and Protools are. Max isn't a thing where you can record audio and process audio and spit it back out and then put it in a track and then that's a piece of your accompaniment in the Sonata, for example. Programming the Sonata would not have been possible in MAX.

RIkai would have been possible- I could have made a MAX patch for Rikai, now that the track is finished, but I never would have been able to create the sounds in the composition in MAX. Its' just a different set of tools.

BH: Ok.

AC: I would say it's like apples and oranges, but its also sort of inevitable that we have to talk about the comparisons and the contrasts between these audio software's, because it almost seems like a little bit tribalistic, like, Oh, you play the trombone? Why don't you play the French horn, because the French horn does all this cool stuff better than the trombone.

BH: I get you.

AC: But it's, whatever. And then this is nothing to say about MAX- it's not my, it's not the way my brain works, and I would prefer it to work in an environment that's a little bit more sonically immediate, where I can have instant response on the sounds with a super visceral way, and it's not hypothetical. Exactly what I'm hearing on the speakers is what I'm working in. It's like a sculptor thing. Whereas, where MAX is very much, how do I build a piece of software that will do it's thing? And I've got friends that have used MAX to create incredible tools. My friend Stuart Razinskyis a MAX whiz. He plays oboe in a wind quintet and he makes these specialized max patches for every piece that his ensemble is working on. Like a sequence, dealing with an interactive metronome. I don't know, I don't even remember all the tools inside it, but it's like a super personal max patch that is like a standalone performance practice assistant tool. Specific for the rep that they are working on. It's unbelievable.

And the circuitry in his under the hood of MAX is really elegantly assembled and it looks in itself like a work of visual art. So that's cool, the same way a really cool graphic score is sort of a work of visual art, but it does something very specific. Or it's aiming for something specific. Where as LIVE is aiming for something different and I can do some composing in the midi sequencer and then immediately switch to the melody or whatever I just composed, but I need to work on the sounds, like I need to sculpt the parameters of the synthesizer that's making these sounds, or I need to EQ this field recording until the right frequencies are coming out and I can do that for five minutes and then go back to arranging the material, and then go to mixing it and busing frequency tracks together, like making sure the basses don't create like beats or something and make it muddy. I can go through all these different steps on the spectrum of the production and composition and it has all of those tools available. And then you can perform with it. And you can just save a set, and then bounce it in an email to a high school kid and they can open it up and never have learned how to use the software before but they just plug in a USB controller and their buttons just work, because you set it that way. They don't need to open mac versions of USB device reading, you just plug it into ableton and it goes.

BH: Can I ask you just in that- one of the thoughts that I had, and maybe this is because I have a little bit of a political thought about it, you know, what you kind of alluded to is that there is just accessibility by the general public.

AC: Oh Ok.

BH: Yeah, accessibility, like small d democratic, you know? That it's a platform that more people can access, whereas MAX is kind of a high brow, you have to go to Columbia, haha, you know Princeton to really get it?

AC: Ok, I love that you mentioned Columbia and Princeton. I have nothing bad to say about either of those places, I have many friends in both programs, but I now what you mean. You do need to learn code to understand how MAX works. Ableton is totally for the people. I think that's, I maybe would not have said that right out, but now that I have been thinking about it, yeah, it's for the people. And it's for a better producer that's producing their first track. And it has a stigma also in the highbrow world, because so much sh#\$% music is made on Ableton also, and you know, you can go through Sound Cloud and YouTube and they just have ableton house beats from Joe Junk composer basement man, and you can hear they just slap the reverb on, they didn't turn any of the knobs and that's the stock setting of the reverb, and I'm like, bro. That's way too gendered about it, I keep saying bro. Girl.

BH: Haha, no I think that that's an interesting thing, a thought that I had that maybe wasn't a conscious thought on your part, or maybe its just the fact that it was, you are more software, or something like that?

AC: That's probably a big part of that. Because I was self taught for a long time. I had some mentors pointing me in the right direction, but for the most part, it was figuring the software out through trial by fire and resources online and the occasional hang with somebody that's got really complex Ableton chops. So I learned it a long time ago and I kept learning it, and you could say that I'm a one

trick pony in that way, because I don't really know MAX enough to program a patch, I just watched so many patches created from scratch, asked a lot of questions, and then at the end of the day, that was time I would rather spend making music then learning that particular skill set. The returns just didn't seem right for me to go all in on MAX the way I did on Ableton.

BH: I get that.

AC: But again, I don't have anything bad to say about MAX. It's an amazing piece of software. Just like Ableton, like every piece of wonderful software, it can be used to create really basic and kind of annoying things.

BH: Right. It's just a tool.

AC: It's just a different tool. They cross over in some ways, but in most cases I don't think they're really the same beast.

BH: Ok. That's great.

AC: And I think Ableton agrees, when they bought MAX, and continued it as a stand-alone thing. They have a bridge program called MAX for LIVE where you can use the best parts of MAX to integrate into the best parts of Ableton.

BH: I want ask you more about John, because I feel like we kind of started talking about that and it didn't, we didn't quite finish talking about that. But like I said, we don't need to get to everything in this interview. We can talk more another time, maybe even later this week.

AC: Yeah. I have time.

BH: This is good for me too. This is kind of my break from classes and all of that.

So, with John you said that there were, at one point we talked, and you mentions

that he was almost like a second composer of the piece. What do you, is that something- how do you mean that, I guess I should say.

AC: I think I mean that as like, so much of the piece was- I have kind of a, one of the things that I'm interested in composition is, this isn't my only interest, but it's kind of a long standing thing, is how can I give more freedom to the player? It sort of doesn't sit right with me how authoritarian a composition can be in terms of like, how much detail- it's like you're already telling someone what note to play and when to play it, and how loud to play them, how soft to play them, and then also you have to tell them how to shape the articulations and how to do all these things and when to do them. It's a very king and peasant kind of relationship- notated music is. And I don't feel really, I guess comfortable giving somebody that many orders- that specific of marching orders. So as a composer you gotta put notes down, its sort of your job, but also with somebody like John, who's so versed in so many styles of music, and has so much skill in improv and knows their way around tastefully applying process effects to his sound, he has so many skills that would if I were to just write a note-for-note page of the music, it just doesn't take advantage of his skills. And basically, when I say improv, I don't necessarily mean jazz. And that's another thing, like sometimes it's like you say "improv" you must mean jazz. I don't play jazz, I don't really know how to play jazz, but John does know how to play jazz and he knows how to play free jazz, he knows how to play the standards, he knows how to play all these different subgenres and stylistic variants within the spectrum of jazz that I don't even know about, so I wanted to find a way to make sure that he got to share that in his music in whatever we do together. So we were back and forth about where to improvise, how much to improvise, the last movement is not even scored. There's not even bar lines. The earlier movements are just a vamp where he can play forever or whatever, and I think after we recorded, especially the first and second, no actually all three, the whole sonata, after we recorded that, it turns out probably half the time was notated music, like I was hearing notated music in the recording, and half the time was him improving within these frames. So like the number of melodies to the number of notes of those were not me. Half of those were him doing what he does best. Being John Adler in this Adam Cuthbért frame. So I think that's probably what I meant.

BH: Ok. I think that that's fair. I think that's interesting. Is it working? I think that's interesting for all of us, because maybe the next question is how many times has the sonata been performed by people that weren't John?

AC: Just one.

BH: Ok. And how did that change? That was Chris Delgado?

AC: Yeah.

BH: How did that effect the piece and what you thought of the piece?

AC: Two things were different. One is I was on stage doing all of the effects and advancing all of the scenes. John played it solo. The piece was also a little bit updated when Chris played it. And also, Chris just had a completely different stylistic sensibility when I comes to improv. So in the passages where John maybe took a more jazz-inspired route, Chris is super into pop music. So he

played much more melodically. He wrote out I think, a few sections. His improv was pre-meditated. Like a cadenza or something. So there's space to make it your own. He made it his own. But the recording that we hae that I'm sure you're referencing is- that's the John Adler version. And I would expect if you want to play it, your improv sections are going to draw from other influences that you have that John and Chris and I don't have, maye. So that will be super exciting for me, because everybody improvises differently. Classical musicians are super afraid of improv, so I'm always very excited.

BH:

I think that's really cool. I like improvising and I'm not as good at the jazz as John Adler, but I do like doing it, and it's fun. Its something I'm going to try, on a total side note, try and start working into my trumpet studio at my university gig. We do warm up sessions in the morning, and Wif Rudd from Baylor, does these group improvistaions where he goes around the room and he kind of sets the parameters non -verbally by just starging a thing. Anyway, I'm going to try to- ts' really cool and I think a lot of my students will hopefully not have that kind of frustration that you were having in college with studying the trumpet, how it feels very boxed in. Because I would really love for all of the peope I interact with, the young people I interact with, to be encouraged to find a voice. That's a total side note, but I think its really nice that I can hopefully perform and show them that there are different routes that you can take in the world of music that you've taken and I've taken. You know, that we've all got to find our way, and honestly, you have to really, uncless you win one of those really big orchestra jobs, even if you win a smaller orchestral job, you've go to

figure out how in the world you're going to pay the rent, because you play in the Tulsa Symphony, and it's like an \$8,000 a year job. A \$10,000 a year job, really. So most people have other lines of work.

AC: I have a day job. I'm not ashamed of it anymore.

BH: Yeah, I don't think there's anything wrong with, shoot, Ives was an insurance salesman his whole career.

AC: Yeah, haha. Philip Glass was a cab driver until his mid-forties.

BH: Yeah, there was a story of a critic who needed his something repaired at his apartment and he called the repair man and Philip Glass showed up. Wait a minute! You gotta pay the bills somehow! So anyway, that's neither here nor there, but..

AC: But I'm excited to talk more about improv and what improv can be, besides the jazz idiom. I have this story, this kind of aside, where I was on my way one year to the ITG conference. It was in Harrisburg that year. So a friend of mine from the trumpet ensemble, we drove and we were going down there to perform and we stopped at my folks place in Detroit for a night before we drove into Pennsylvania. And my parents had some friends over, and of course my parents are like, "oh, my son is home from classical music school and he brought his friend and they both have their trumpets," and they're like, oh let's hear you play some sounds! And I pulled the horn out and I looked at my buddy and I'm just like, alright, you want to just, lets just play a couple Arban duets and that will shut them up. SO we played a couple duets out of the Arban book and they're gave us the Midwestern mom golf clap, oh you are so talented thing, and they're

like, what else do you have? And I'm like, well, weve got solo rep that we can blow down acapella, so I blew down some concerto or whatever, I don't even remember, and I looked at my buddy, and I'm like, do you want to play something? And he's' standing there awkwardly, and he's like I actually don't have anything prepared. And I'm like, do you want to just sight read a Carnival of Venice or whatever out of the Arbans? Or just play some etudes or whatever for them because whatever you play, they are going to be stoked, it's not a classical thing at all, you can just sight read something. And he was just straight up, like you know, no, I don't have anything prepared, I'm not playing anything. And that was a moment where like, man, I don't ever want to be ready to play and have all the tools available for me to play, but then just refuse, because I don't feel like it's properly worked up. And that was a thing that I experienced a lot in classical music school, where people wouldn't perform, they wouldn't play a note in front of you unless they felt 100% prepared and they knew the premeditated entire performance. Regular people, sometimes they're cool to just hear you riff on some notes and just find beauty in the moment. And that's perfectly enough to bring them joy.

BH: Yeah

AC: The other thing I was going to say about improv, is one cool thing that really started to break me out was to put on tuning drones and pretend it was a bass in a Gregorian chant and just play melodies up and down this tuning drone. And that can eventually become improvising melodies, which is what the trumpet does. And it's really easy, there's no chord changes in a tuning drone, which

12-bar blues always terrified me, because I'm like, you've got eight more beats of C, four more beats of C, don't pick the wrong note! Two more beats of C, ok, now we're in F major, we have a different palette of notes, you can't pick the old notes, those are just going to sound wrong, you have to pick your new notes. You have no time to think- you're onto the next chord. And I just always felt like I was being dragged through these chord progressions without- like I was hitting all the hurdles as I was jumping over them, so a tuning drone was just like, here's a D. Play all the notes inside this D and feel what those notes sound like.

BH: I love that, actually. Pat Harbison, do you know who Pat Harbison is? He's a jazz trumpet player and teacher at Indiana. He's like one of the guys that Jamie Aebersold brings in for his camp every year.

AC: Yeah, his book was terrifying.

BH: Haha, yeah. Anyway, Pat, he's an awesome dude, and that's one of the things that he talked about in his master class that I saw him do, he did a drone thing and he loved that. He was like, it just frees you up. He talked about that a lot. Exactly what you're talking about, because he was like, I really don't want to have to think about, like you're saying, all of the sound of E-flat minor 7, or he doesn't want to think about what that means on the horn. He wants to be immersed in the sound of it. And be able to freely play over that chord when it comes up, so he spends a lot of time getting comfortable with it over a drone so it's not like, so it's not a technical exercise, but he can just let it come out. Whatever's in his brain.

AC: Just switch into a mode.

BH: Right, like I like this sound and this is the sound I want and it happens to be an E-flat dorian scale. But anyway, there's a couple more things Id like to talk about, but I feel like we're kind of losing steam a little bit. We've been going for a while. You know, the other things I think are going to take some more...I think it would be better to start a conversation with them than to end it. So let's, and plus I need to get my kids to bed here pretty soon.

AC: Yeah, take care of your kiddos. I gotta pack for a drive tomorrow.

BH: Ok, well let me know, you just email me what you're available to do this week.

I'm pretty open. I've got a few lessons to teach, but my evenings are fairly free,
and a lot of my mornings are free, too. So mostly just working in the afternoon
for me.

AC: Mornings would be pretty good for me this week.

BH: Ok cool. Just let me know what you prefer and we can work around it. This is great, Adam. Its great to actually talk to you and meet you in person.

AC: Thanks for all the time you're taking to dissects this music, too. It's really exciting for me. However it shakes up.

BH: I hope you enjoy the finished product of this dissertation.

## Interview No. 2

AC: Hey, Ben? BH: Yes. AC: Hey. BH: Hey. How it going? AC: [crosstalk 00:00:26] hanging out. BH: That's good. AC: Yeah. Sorry about earlier this month. It turned chaos real fast. BH: Yeah, that's okay. It's like, that time around the holidays and traveling, I'm not worried about it at all. AC: Yeah. You got time still? BH: Yeah, I've got some time. I'm trying to get all of this done by like ... what I really want to do is have the whole project kind of wrapped up by mid-August, and then edit for a couple of weeks before submitting it. AC: Yeah. So where do you want to start? You got all the files, right? The music boots up?

BH:

Yes. Yeah.

AC: And then...

BH: So I ... yeah, I got everything. Everything works. The one thing ... I started trying to set them up with my launchpad, and it was ... I'll send you a screenshot, but it was telling me that some things were unavailable.

AC: Oh yeah, definitely send me a screenshot. I can help.

BH: But yeah, I think it was just like, the newest version of Ableton having issues for some reason.

AC: Yeah, there might be a couple custom components that I can either send to you or send like, a replacement.

BH: Okay.

AC: Using the stock components.

BH: Okay. Yeah, I'll send screenshots of that, and ... and I can work on that. That was my big thing. Everything seems fine other than that. Okay. So I have some questions, I just wanted to jump into ... okay, so I was looking at your, the sonata. You know, and I'm like, starting to do some analysis for one of the chapters I'm ... and the last movement that Adler recorded is totally different than ... at least, what he's playing is so different from what's on the page. Like, it doesn't really match up. And maybe I'm just missing it, but could you talk a little bit about that?

AC: That one, so yeah, the third movement is like, it's not composed in the same process as the first two. It was actually derived from a straight-up improvisation, which I had then like, edited and cut up to be its own track. And that track Synthetic Flora was somewhere else. I think I sent that over. Inside the Kuuma Project, with the ... so basically the score was created here, is that I worked with a copyist to sort of transcribe gestures that appeared in the final cut of this recording of this improv, and sort of construct the part retroactively. The form of the original was like, it sort of felt like there's like, a landscape that sits for a little while, and then melodies come in, and what's on the pages is vaguely the melodies in this improv, and they ebb and flow, going back and forth between like, kind of calm, long sections, and space for trumpet.

AC: And John came in, and I'm pretty sure he plays all the licks on the page, but I told him just like, let this be almost a cadenza. Let it be like, a space for you to live in and exist in and like, really shine through as the great improviser that you are. And then in the recording, like, every time he played it, it would get a little bit more loose. And when I went out to Colorado and we recorded it, I was just like, "Straight up, man, like, have fun with this. Don't even worry so much about what's on the page. Like, this is your roadmap. Like, it maybe represents now just a point that the recording evolved from." But I think compositions kind of have life spins, and they like, grow over time. And maybe the score of the third movement sort of represents like, a point on the path that the recording is now beyond. Does that make sense?

BH: Oh yeah, definitely does. I mean, I figured that that was probably the case, you know? But I just, as somebody coming to it fresh and, you know, not seeing those connections between the recording and the point of departure you know? So if he were talking to somebody who was going to perform this piece, and that last movement came around, what would your advice be for them and would you advise them to take the sort of John Adler approach and be very free with it?

AC: I would say it depends on the player's capacity for like, how much they want to improv, how comfortable they are in that. Or just pre-versing tonal melodies, like, off the page. Whether that's like, in the context of jazz, kind of like John did, or for example, when Chris Delgado played it, I don't think he played a whole lot of improv at all. Just like, kind of finishing an idea from the written line. So all the ... there's like, second marks with, like, a fermata. This is the only movement that I can play myself. So ... and it also, like, it's derived from the improv that I did. So it started within my technical facilities. The first two, completely not. There's no way I'll ever be able to. But this one, it took a sort of different process than the first two. It's also written sort of like, to be, to exist within my own parameters as a player. And I've played this one time where I didn't improv, I just counted out all those grasps. And it's just a really empty kind of outro space. But then it's also like, I guess the advice I would give is just like, be yourself when you play it. Like, maybe challenge yourself to try something else that's maybe not in your comfort zone. Or just like, play to your strengths. And do whatever, like, I don't ever want it to feel forced. I don't ever want it to feel like, this is the way you have to do this piece, there is one

definitive way to play movement three. And I think I touched on this last time we chatted, like, I don't love the sort of authoritarian relationship between the composer and the performer all the time. Like, I think composers tell players what to do like, in incredible detail sometimes, and I'm not saying that's wrong or right or good or bad, like, I'm not saying like, a dogma about it, but I am not super interested myself in giving like, that I write. Especially, this piece was kind of like, helped me hash this out a little bit. I'd rather just let the players have space to express themselves, and not just feel like they need to express what I'm trying to express in the piece. Does that make sense?

BH: Yeah. Yeah, no, it definitely does. I agree what you're saying.

AC: So I guess my advice would be like, try some improv and if you're not ... if like, you're new to this paradigm and you haven't done that a lot, especially in like, the soundscape that this piece is, like, maybe that's new to a player. Just like, sit in it for like, a half hour maybe and just try to play, and then like, the more and more you try, you'll figure out things that make sense in that context. And eventually even construct your own part from there.

BH: Okay. That makes more sense. And I think that's good for folks that are going to attempt that piece, you know? What about, you mentioned the Kuuma Project.

AC: Yeah.

BH: Will you talk a little bit more about that, and like [crosstalk 00:12:00]

AC: Absolutely. It originated as a thing where I needed to figure out a way to play ... so I was accompanying improvisation sessions and like, early rehearsals for a dance choreographer. And so part of my job was to soundtrack what they were doing. So I needed to come up with a flexible way to respond to movement, respond to dancers, but also to like, weave an interesting ... or like, a coherent arc of improvised music over a long period of time. Like, 30 minutes at a time, or even like an hour at a time. And so, you know, I play this monophonic melodic instrument that, you know, essentially you can only play one note at a time. I gotta stop to breathe. Just trumpet by itself for an hour is like, kind of a big challenge to keep the momentum riding, you know? So I used Ableton as like, okay, I have this software, I can amplify my horn and send it through the software, and then I gain access to these other pallets, like, extended pallets of sound and tambour, and you know, through reverb trails or effect processing, I can mask rests, I can play some lines and capture it, and that can exist over a period of time in some sort of ostinato form. I can play a bunch of stuff and then just manipulate, just play with knobs and manipulate the sound and not even touch the horn for like, ten minutes.

AC: So I came up with this infrastructure of all these tools that I wanted to be able to play with the trumpet, so that it would help the trumpet fill in, I guess, the gaps of what were shortcomings like, in these contexts that I needed to use it for. And that eventually became like, a whole live set with its own infrastructure, which Scott called Kuuma for shorthand. The name of the instrument, whatever. I made a bunch of recordings under that like, artist moniker. Many of them started

as just like, board cuts from these dance rehearsals and then they started doing them more in the studio, started sending other sounds through them, not just always the trumpet. But so it's like, it originated as sort of an enhancer performance infrastructure, in order to play trumpet with more options, I guess.

BH: Yeah. Yeah, those are beautiful recordings, you know? Sitting, listening to those things are ... it's incredible. Yeah. Well that's good to ... so that became Synthetic Flora, was one of things, and the Kuuma recordings, is that essentially where the movement came from?

AC: Yeah, the movement of the sonata was derived from, I like ... the track called Synthetic Flora was adapted for the infrastructure of the sonata, which was like, a sort of a cell-based ... you're on notation, then you're off on improv, and then you're on notation, off on improv. Like, that sort of structure that existed in the first two movements, but was extended through that, and the source material were like, excerpts. And some of the melodies themselves from that track.

BH: Okay.

AC: But it ... I almost changed the name for the sonata actually, because it ... like, especially John's recording turned out to be such a vastly different like, listening experience than the original Synthetic Flora, so that it's almost not really the same piece anymore. They're definitely like, just two different players in the same world.

BH: Yeah. Yeah. Is there anything else that came from the Kuuma Project that influenced the sonata directly?

AC: Well, yeah. There's also the tech things that I asked John to do, or that I asked the player to do in this piece. Where it like, moves through these pallets, these scenes in Ableton like, from the top of the ... from the top of the screen down. That like, order of operations was also from the Kuuma infrastructure. And then the effects track, the ADG objects on the trumpet tracks in the sonata movements, those are all ... those sounds and those filters were derived from the same project. They're not exactly the same, because the way I do it is through the Yamaha SILENT Brass mute, the new version, which like, it goes all the way in your bell so it's like, the back pressure changes a lot. And it's like, it's just like, a different mic than the one that John uses, which is like a clip-on. It's like a crook that hooks over the bell. It hooks onto like, the third valve slide, and like, points directly into the bell. But you can play it like a regular ... like, you're unamplified. Whereas like, you know, when you play the Yamaha SILENT Brass it's sort of a really different experience because the back pressure ... So that meant the effects had to change.

AC: But that was also derived from the same thing. And then ... yeah, I also ended up using that system to play with other people, and I played it in my Fans of New York Public Library for a few years, which was ... that was essentially like, an orchestrated Kuuma Project with drums and piano.

BH: Oh, cool. Yeah, that would be a nice addition, I think, having some more acoustic instruments involved with that.

AC: Yeah, I can share a recording if you want.

BH: Yeah, that'd be ... so you mentioned the Yamaha Silent Brass. Just as like, a ... do you have anything else to add on the Kuuma thing? I mean, I kind of ... I've been interested in that and you mentioned that there was a connection there, I just didn't realize all of the connections until we just were talking. So ...

AC: Yeah. I probably have a lot more to say on that. This ... I sort of consider it like, an ongoing project and, in a way, like, the Adam Cuthbért magnum opus just because it's like, spawned so many other directions. I don't really know what to say in this moment, like, for these purposes. But it's definitely something that there's more to say about.

BH: Well I'll have to go through and listen more, and if I have any more questions about it ... or if you want to add anything to that chain of thought?

AC: Yeah, yeah, I'll keep thinking about it too.

BH: Yeah. 'Cause I think it's an important thing for people that are interested in your music I think. Yeah, 'cause I think ... yeah, trumpet players maybe are more guilty of this than others. We don't tend to do our homework, you know, and really listen to everything that a composer writes. We just want to play that piece that they wrote for, you know, for our instrument.

AC: Yeah.

BH: You know, so I think it would be good for performers to realize that you really should, you know, take a deep dive here, to get kind of involved in your sound world where you're coming from, you know. 'Cause it is very different than anything I've heard for trumpet at least.

AC: Cool. I hope more trumpet players will enjoy it.

BH: Yeah, me too.

AC: I want it to be accessible too. Like, it sort of bums me out how like, how many times I talked to somebody who said something like "Oh, I tried to do a piece with electronics one time, and nothing worked, and like, stuff was broken and it was a terrible experience. I'm never gonna do this again."

BH: Mm-hmm (affirmative).

AC: And just like, I don't want it to be scary.

BH: Right. The technology can be intimidating. You know, and it's also ... I think the technology is intimidating and it's also ... adds layers of potential problems.

AC: Well for sure.

BH: You know, and ... but I guess, what you tend to do is you offer a lot of technical support, right? For the people who want to perform your works?

AC: Yeah. I think I have to. Just 'cause like, I mean, I try to do written stuff too, but it's inevitably gonna be like ... I don't want like, lack of technology to prevent someone from playing it if they want to play it. So I will do whatever I can to help them set it up.

BH: And that's ... and you said something about how that was ... well one of the reasons that you tend to rent things instead of sell them, or publish.

AC: Yeah, that's definitely one reason. Well, there's a couple reasons. One is, yeah, I don't want them to buy a score and feel like they're on their own trying to figure out how to boot this thing up. Like, I'm still alive, so like, let's engage living composers. In a way, you can't like, call up Paul Hindemith and be like, "What does Bright mean again?"

BH: Yeah. Right. Yeah, I've done nothing with this ... I've been doing a chapter on this ... one of my chapters is like, historical contexts for your stuff. So going through and talking about a couple of examples of pieces from the past that were trumpet and electronics. And I just, Stockhausen's piece, Ares, that we talked about earlier.

AC: Yeah.

BH: Man, that's such a cool piece, but ...

AC: Yeah, his is sick.

BH: But the technical setup is like, I don't even know how I'm gonna find the tape and the recordings with like, the way that he wants you to set it up is antiquated and ... yeah. But it's a really cool piece. I'd like to perform it at some point.

AC: Yeah. I saw, yeah, I think I ... did you just Instagram like, the staff and score?

BH: Yeah.

AC: I thought I saw that.

BH: Yeah, it was funny. You know, the ...

AC: He's a control freak for sure.

BH: Yeah. Yeah, and he wants ... he was really interested in space and sound and how sound relates to space.

AC: Dude, he's from space.

BH: Oh, exactly. Yeah, you're like instructed to walk around the room, and you have to like, adjust your tuning as you move through the piece, and ... it's intense, man. Like, I don't even know ... like, the fact that it's public, and there's instructions there ... I mean I think you can do it, but yeah, it would be much better if you could call up Stockhausen and say "Hey, how am I supposed to do this?"

AC: It's just like, it's so important. And I think, well, I think back to my trumpet experience, which is not necessarily everybody's. Like, I was in one school. One

regionally ... state university. But trumpet players like, didn't really seem to give a sh@# about living composers, except Jim Stevenson. And like, Jim Stevenson seemed to have the living composer market for trumpet players like, kind of cornered. Which is cool. He does his thing, and I like a lot of his music, but there's like, more to offer. And there's like, a super vibrant community of composers who are alive, who would love to like, chat with the players, and work on something in that collaborative capacity. And even if it's just me like, helping somebody like, demystify Ableton live for the first time, like, that's ... I would be happy to do that because I think the more the players ... I think the world would be better if more people like, knew the software and realized that it's actually very simple. And it's super fun to play in.

BH: Yeah. Yeah, you know, and the other ... I mean, we're off on a tangent here, but one of the things that I think would be a really direct benefit for students, especially music education students, to go through the process of like, learning one of your pieces--or any trumpet and electronics piece, but in particular, ones that deal with you know, software. Because most of them, if they're music ed people, are going to be dealing with marching bands. And at this point, marching bands means dealing with electronics. Like, there's no way ...

AC: Really?

BH: Yeah, I mean most competitive Bands of America-style bands have somebody running a sound board, you know?

AC: Oh.

BH: And synthesizers and microphones and, you know, launching different things, you know, effects and patches and things like that. It's like, it's a pretty integral part of competitive marching band at this point.

AC: Okay. Changed a lot since I was in high school.

BH: Yeah. Yeah, I mean it really has the last 10 years or so. You know, the electronics thing has really become, like, if you go even to a drum corps show, they've adopted that too, you know? But it started with Bands of America, and yeah, it's weird. But I think, you know, one of the things when I was teaching marching band that was shocking to me was how much technology was on the field, and how none of us had any training in it, you know? It was all just, let's YouTube tutorial how to work a sound panel. So anyway, I think being able to work on this kind of thing in your Applaud lessons would be a big advantage to somebody who's gonna deal with that world. Okay. I have a couple more questions. Are you still there?

AC: Yeah.

BH: Okay, so the other two pieces, the shorter piece is No Hipster Hats.

AC: Yeah.

BH: Would you talk about that piece a little bit?

AC: Yeah, I guess. That's a fun piece. So that piece was the first thing I wrote when I moved to New York, when ... I just plugged in, and like, I just got there and I was like, living in this tiny closet and I basically just emailed everybody who I knew in New York and said "Hey, I'm here now. Like, if you ever need anything from me, like, I'm looking for work and stuff. I exist here. Hit me up if you need to or something. I'll play music, I'll write music, I'll like, do your taxes, whatever. I just need money and I need like, to make a life now. So here I am." And Michael Lowenstern hit me back, who is ... Michael Lowenstern is an insane, he's like, the best bass clarinetist in the world. Or, okay, that's maybe ... no, maybe not ... he's just, like, super good. He's a super good bass clarinetist. He writes his own max patches, he's fluent in Ableton, and he creates hybrid electronic music using loops and using like, multi-layers and then combines beats in with like, a really vibrant language of a lot of styles. So he had done a few master classes out at GVSU. He had a duo at the time with Pat Reynolds, who is another one of these artists who's a violinist, into Ableton ... these guys taught me a lot of my ... of like, entry level Ableton and like, entry level electronic music. So I hit him up, and he hit me back, he's like, "Yeah, cool. I'm actually curating a concert series at this space. I'd love for you to do a 30 minute set. Do you have stuff? Do you want to do this? How is like, September or like, October, whatever?" And I said "Yeah, yeah, I don't know what I'll play yet ..." I didn't tell him this, but I don't know what I'll play yet, but I'll figure it out. So I had a piece written for me by my friend in undergrad. It was about a ten minute trumpet piece.

BH: What was that ...

AC: What?

BH: What's it called?

AC: It's called Fuck.

BH: Fuck?

AC:

Yeah, just straight up Fuck. Yeah, this is far out. So yeah, he wrote this super spacey, like, throne piece for trumpet. And I have, okay, I got ten minutes. And I had like, something else, I forget what else. And it was like, five minutes. So I'm like, all right, so I need 15 minutes of a program, like ... oh, I had ......And I'm like, "Okay, what else am I gonna do? I'm probably gonna have to write something new for this." So that was what Hipster Hats was. And it was like, I have to ... this was sort of before I was getting into dance improv, but I knew I had to do something with the computer to, you know, fill out this bill that this like, awesome hybrid electronic musician invited me to play, so I definitely wanted it to be in that vein. What can I do for myself? So I had the old Yamaha Silent Brass, I don't know if you remember what it looked like, but it was bigger and it like, this big black bubble kind of like, stuck out from your bell. And the mic was housed inside that. The new ones go all the way in, and they don't protrude beyond the bell. But the old ones were fat and like, stuck out an extra eight inches or something. But since the mic is inside that enclosure, you can knock on it, you can like, tap on it, and the mic will pick up the taps, so it's sort

of like a contact mic percussion instrument. And that was, the beginning of the piece is tapping and rhythms and capturing loops of these tap patterns, while there is a resonator module in Ableton, which takes any sound and like, reinforces it with like, a spectrum of overtones in like, whatever pitches you decide. If you tap it, you can make a note, and you can mute one resonator that, it has the note E flat, and open another resonator with midi buttons that has like, something. So you could tap it, and it'll play E flat and then you can disable that and enable another one, and tap it again and it plays F. So I'm like, tapping on my horn and then changing the pitch with these buttons. And I thought "Okay, that's kind of fun. I can hold a vibe on this for a little bit." And so that was the first section. And it was just, you know, it eventually became just a developed composition where I'm blowing air inside, I'm tapping this thing, I'm creating momentum with layers here. And then all the while, inside Ableton ... I don't know if I sent you the Ableton file for this. It's really messy. But it's ... it's like the sonata, where you're triggering a theme, and then clips are playing and you're playing like, a fixed part, and then it goes down to the next scene. And you kind of advance your own path through the piece. And Hipster Hats was the first like, iteration of that, where I would turn on some clips, and one clip would be maybe rotating like a pulse pattern, like forte, dynamics. Like a polyrhythm of three then the three, or something. "Ba ba ba ba ba ba ba ba ba ba a ..." like, so that just exists, and maybe that would loop every like, 16 bars, is like, the full cycle of that.

AC: And then I'll trigger another scene, and that thing will keep going, but then the new thing will come in that's at like, you know, it repeats every 13 bars. So now these two things are running, and if you treat them as a composite, then that's like, you know, 350 measures before they explicitly line up again the same way. So I had a bunch of these layers going on, and it became sort of this organically moving thing, where like, it would stack up momentum with these layers of polyrhythms. And it would kind of sound like it's developing, but it's actually maybe just, I'm adding this thing here, I'm adding this thing here, I'm adding this thing there, and it's ... it sort of like, all these sounds are kind of on their own path. And like, when you hear it all together, it seems like it's developing on its own, but it's just repeating at these like, polyrhythmic ratios.

BH: Right.

AC: Anyway, so the piece came out like that. And then ... I guess I have to talk about this. Even though I don't really like him anymore. Kanye West. I was like, a super fan of Kanye West. He's like, off the deep end right now, so I don't endorse anything that he's saying publicly lately. But I was super into his record, "Beautiful, Dark, Twisted Fantasy." And there was a ... there's a thing he did on a bunch of tracks, where he's like, singing into a distorted auto-tuned. And it's coming out an octave down, and he's like, riffing and singing, and it just makes this really cool tambour of like, low, growly, kind of human-sounding melodic lines. And I'm like, "Okay, I gotta figure out how he does that, and like, recreate that so I can play trumpet in like, this Kanye way."

BH: Mm-hmm (affirmative).

AC: So that's ... I figured out the sauce for that, and it's what comes in at the end.

And sort of the beginning of the distorted trumpet sound, like, that sort of flavor of distortion was because I was trying to rip off this Kanye sound. And then I, yeah, I found this picture online of him like, working on that record in the studio. He's got a bunch of like, printed papers with like, meme font, saying like, "No acoustic guitars, no cell phones, no hipster hats," like, all the rules for his studio. And like, they were all kind of like, normal rules, like, "No tweeting, don't tell anybody what we're doing," and then "no hipster hats." Like, why is that a rule? So weird. And so that just became, it was like, the working title, 'cause I'm like, I'm trying to figure out how this sound is made on this record, and then like, here it is on the wall of the studio as that record's getting made. So like, wearing hipster hats.

BH: Yeah.

AC: And then the working title just stuck. It was too silly, it was too fun.

BH: Yeah, that's fun.

AC: Yeah. So that's why the piece is called No Hipster Hats. But it was like, I think the piece is like ... people dug it. But I thought it was kind of undercooked. I thought it was kind of like, the beginning of a lot of processes rather than the end of it, so I don't really shop that one out at all. It's kind of just ... I see it as a learning piece at this point.

BH: Yeah. Well, I think it's interesting, because the extended techniques that you know, you use a lot at the beginning, with the tapping and the blowing through the.... 'Cause there's not too much of that in your later things for trumpet and Ableton, you know? I just, I don't know if that's like, just an evolution thing, or it it's a conscious thing, or you thought that you played out that gimmick, or ...

AC: I think it's exactly that. I think it is kind of a gimmick. I think there's a whole smoke and mirrors thing you can play with electronic music. Which, I thought I was being super clever in this piece, making sounds live and then like, kind of stacking live layers, and then while that's going on, I'll trigger some samples of recordings or that thing that I'm doing live that I just recorded. And then slowly allowing like, the fixed parts, the fixed orchestrations, to take over from the live stuff that I was doing. Give the audience potentially the impression that every sound is being created on the spot. So if they see like, a one to one relationship of like, I'm knocking on this mute, and this pitched tap sounds, these pitched pulses are coming out, it seems like, okay, like, I can tell that that's like, how this sound is being made.

AC: And then eventually the piece starts going on, and like, these taps are coming again, and like, these other sounds are coming, and the idea is like, "Whoa, what if I could bamboozle everybody into thinking that every single sound in this track was woven on the spot?" And then that makes it like, maybe more impressive when they start to line up in like, really tight, rhythmic ways or what.

But just to have that thing in the beginning in order to establish certain expectations or like, assumptions on how the sounds are being made.

AC: And I thought that was really cool, and I thought that was really crafty and clever, but I don't really think that anymore. Like, more and more, as I made more music, the more I just got interested in ... I don't care about virtuosity or cleverness so much anymore, I'm like, more interested in just coming up with interesting sounds and new sounds and like, sounds that I've never heard before, you've never heard before, and maybe doesn't matter so much, like, that part of the performance execution, like, became less interesting to me.

BH: Yeah.

AC: And then when they came out with the new Yamaha mute, you can't do the tap thing with the 2.0 mute anymore, also. So that kind of sealed the deal. Like, when I upgraded to that, it's like, definitely a better microphone in every other way, but like, I can't do the tapping thing in No Hipster Hats, so ... okay, maybe that's a sign that that's just like, it's time to move on.

BH: Yes. That its lifespan has ended.

AC: Yeah. Yeah, so that's I think why ... there's like, more interesting ways to make pulses and stuff live now.

BH: Yeah. Okay. So the other piece, the Scarlet Moon Rising.

AC: Yeah.

Ben: So the video that I found online of that was with you performing with someone else, and ... I don't remember who it was.

AC: It's probably Chris. Was it a big red stage?

BH: Yeah.

AC: I think he played on flugelhorn too.

BH: Right, yeah. So, does that piece ... could you perform that as a soloist, or do you need somebody to run software?

AC: It was meant to be a solo. I did ... so that performance is a little off the script for this piece. The story of this one is, it was the first thing that I played ... so my composition teacher told me when I was a freshman, "Don't write music for yourself until much later, like, you don't want to learn composition with your own technical limitations in mind. You want to just learn what the instrument can do. Just work with other players, at least for the first couple years." And so this was done for my junior recital, so like, second semester of my third year, I'm like, over the hump. I'm over halfway done with the program, and I'm like, "all right, I want to do the thing for myself. I'm like, starting to learn Ableton now. I want to figure this out and, you know, see what I can do."

AC: And then like, it's junior recital, should be like, kind of a survey of what you're interested in a little bit I think. So I said "Okay, I'm doing this composition degree, I have to do a trumpet recital, I may as well blend these worlds. May as

well. I should." So I wrote myself a piece, and it was also in the Ableton session view, but it was way before I really knew how much of that worked. So I had a couple effects going on. I played with my shoes off and a makeshift midi controller, which was just an old, like, a Walmart USB keyboard, and I popped all the keys out except for like, six keys. Like, caps lock and D and H and L or something. So like, I could trigger these things with my feet essentially. And I only had to pay like, \$20 or whatever the cost of the keyboard was, instead of like, buying an expensive record pedal.

BH: Right.

AC: So I pressed these buttons with my feet, and advanced scenes on that either changed the effects of the trumpet from section to section or triggered some sound samples. And that was what went on in the back of this piece. And the original score had some like, numbers from two points on certain measures that would say "Okay, now you press this button on the keyboard." Those mappings were long lost on the hard drives of the public computer lab computers at GVSU. And the sounds didn't really ... I don't think I could find them anymore. So Chris wanted to play this piece ... or, no I think ... no, I guess I gave it to John first. Yeah, 'cause Chris just copied off John. No, don't tell him ... delete that. John, I just sent him...

BH: Were you in the ITG journal?

AC: No.

BH: No, I'm kidding.

AC: I don't know if he'll read that. I forget wh-... I think this when we started talking about putting a record together. And I was like, "Oh, if we're gonna record everything, there's also this two-page thing that we can have some fun with." And then, so when I brought it to John, I didn't have those files anymore, the original backing tracks, or the mappings or the effects ... from the premiere of this. I may have the premiere recording somewhere. And it's very different than John's. But ... so the one we did for the studio, the one that John and I did for the studio, I was there so I was ... may as well have just like, "Hey, do you want to just play trumpet and I'll take over the effects?" He's like, "Yeah, that's perfect. We'll do it together, like, as an ensemble." I just had him playing the piece as if it were a cadenza, just like the third movement of the sonata, kind of, in terms of flexibility, and ran him through a bunch of my Kuuma instruments while he was playing. And those, like, we did a bunch of takes and piecemealed together a version based on like, all these different recordings of the ... just like, different takes.

AC: So that's that version. And then when Chris played it, the video that you're referring to, I had a different ... like, my Kuuma was taken apart, and there wasn't really, it's like, in the shop essentially. So I had a different Ableton infrastructure to play along with Chris. And that was the system I used for my dance. It's a duo with a cellist. It's called skullcap5050. And ...

BH: Could you say it one more time? It kind of broke up ...

AC: Yeah, yeah. The band is called skullcap5050. And it's me and a cellist and sometimes a drummer. And we like, so we mic up the space, we have a couple mics just pointing into the sky or like, pointing into the street or something. And then I have a mic on the cello and a pickup on the cello, and a bank full of some sealed recordings of interesting spaces that he and I had recorded from wherever. And he is just improvving and sort of reacting to the space, and I'm just hitting there with a mixer, with a midi mixer, a bunch of faders and knobs, and just EQing all these different mics and in [inaudible 00:51:20] feedback loops based on like, what's in the room. And I can, like, he can drone on the low notes and I can kind of play melodies in the overtones of this low note using EQ bands and stuff. So this is super fun. It's really slow and really quiet, but it's kind of like a therapeutic dance.

BH: Yeah.

AC: And so that was the most like, put-together electronic instrument I had at the time, so that's when I played with Chris.

BH: Cool.

AC: So it's more like, just reinforcing certain frequency zones or ... yeah, it's like a different ... it's just played a little differently than the Kuuma was.

BH: Okay. I have, will you talk a little bit more directly about like, your experience with recording with John?

AC: Yeah.

BH: Just to fill in that gap, 'cause I think I'd like to hear more about, like, where you recorded, how long it took, that kind of thing.

AC: Yeah. So I went out there. After we decided we were gonna do this, he got a little budget from his university, University of Northern Colorado in Greeley. Which is like, two hours north of Denver. It's by Fort Collins. Anyway ... so he got a small residency stipend for me to come in and the deal was, I was gonna do an electronic music master class, we were gonna do a gig, and I talked a little to the composition, like a few composition students that were interested in electronic music, and we were gonna record this record. So I think we did like, a solid three days, three afternoons in the studio. And they had ... the guy on faculty at UNC was Greg Heinbecker, and I think he's just the like, sound engineer in residency. He teaches music tech at the school. And he was our recording engineer.

AC: And we came in like, it's a gorgeous studio space, like, pretty brand new. And we both, John and I both rigged out rigs up in the space, and went under headsets to do a lot of these pieces. I think the first thing we did was Rikai, 'cause it's the easiest. It's like, it's the most inflectable I guess, also, of everything we were doing.

BH: Yeah.

AC: And then ... yeah, then the sonata, like, I think we started with the second movement. And we put down ... we mostly put down all the parts that were fixed, and then we went back and did the improv sections. And we did multiple runs of most of those sections unless ... like, I think a few were down, but that was the one, and I'm like, "Yeah, that one exactly." You know the records. But, so we ended up with a bunch of versions, you know, a bunch of takes. A bunch of freestyles in all these sections. And what he and Greg constructed, like, the arcs of these improv sections, they kind of splice these different takes together to create like, the best arc. Like, all the best material from everything, from every take, and kind of creating like, the definitive version.

BH: Yeah.

AC: And a lot of that, I just gave them, like, prearranged on that, because I couldn't stay all week. And they had it too. And then, so as we did that, Scarlet we recorded I think three times, and we shut off all the lights and like, went super slow and just like ... kind of lived in the darkness for a little while on that one. Which was fun. It feels, I think it's reflected and the recording is like, super dark, like, black magicky kind of vibes to that one.

BH: Yeah.

AC: And then we just like, also ... just riffed. We just did a bunch of improvs and ended up putting some tracks together on that. And at one point he was like, "Do you have any like, any like, tracks you just want to like, riff over?" And I was

like, "Oh yeah, yeah! I got some beat tracks I haven't used for anything yet, so let's play on those." And so I think ... yeah, there's one that's just like a techno beat with super loud trumpet all over it, and he found a tonality, like a harmonic minor tonality that worked really well with like, whatever sound was going on. And he's just like, "Yeah." That's the thing I like to do with improv, like jazz often has like, you know, some recognizable tonal worlds. But like, you can improv them anywhere. And like, "so this thing that you just brought in, like, I don't know what key this is, I don't know like, what you were thinking when you created this, or where you decided to put the tonal center, if you even like, gave that direction at all. But to me, this feels like, I don't know, like it's like, B harmonic minor or something." He's like, "all right." So I'm just gonna lean into that and like, my improv is going to be based on this scale.

BH: Mm-hmm (affirmative).

AC: And I'm just gonna go. And so we talked about moods a little bit, like, "Okay, you're going to play over some techno, so like, let it bang. You know? Be really trumpety about it, and this can be our opener, whatever. We'll figure out the track opener wherever. But this can be like, a loud statement and it can be very much a drawn statement." So we did a couple takes on that. And like, the final version is actually like, multiple layers. Like, let's not even worry about whether this is a playable composition anymore. This just like produces like, a super dense like, trumpet chaos kind of track.

BH: Yeah.

AC: And that was cool. Like, that's not something I was really expecting, going in.

Like, what else we were going to do besides the compositions that were on paper. But he turned out to be super like, really chill about it and really down to explore, like, "what can we do? Since we're both in the room, what can we do that can only be done since we're both in the room?

BH: Yeah.

AC: And we ended up making like, way more recorded material than I think either of us had expected.

BH: Yeah.

AC: 'Cause we were having fun, you know?

BH: Yeah. That sounds like it was a really enjoyable experience all the way around.

AC: Yeah, definitely. And it was like, I think almost everything on the recording was like, I mean, I don't think we scrapped too much. Like, I was going in thinking "Okay, we'll do the sonata and we'll do Rikai, and like, if we have time for Scarlet then that might be cool, I'll just bring that in the pocket. But then we just kept jamming, like, there was just more and more to do, and like, his chops are endless. But I think we started with the second movement, just to get the high E or the high F or whatever out of the way, and then everything else can be ... that was the thing he had to be fresh for.

BH: Right. Yeah, that's the most challenging range part for sure.

AC: And that only even exists in the piece because John said he could tackle it. And I trust him.

BH: Yeah. Yeah, I think, you know, with everything that's going on, it's doubled in several octaves, so it wouldn't be like, missing, dramatically missing if you, you know, didn't have it there, the high stuff.

AC: Yeah, yeah.

BH: So ... okay, I have like, just a couple more questions. Hopefully, do you have time? Do you have to go?

AC: Yeah, I got another like, 30, 45.

BH: Okay. So I ... as far as the record goes, how is it being released, and like, when is it released? Is it already out? I'm not sure if I recall seeing a release date.

AC: No, it's not out and there's no release date right now. We've hit a couple snags on production. The record is done, it's mastered. The music is done. But then he hit some snags with his schedule, and matters at his university, and there's also the ... we need to have a frank talk about what budget is available to like, press physicals. Like, when we put it down, I was like, "Oh yeah, let's make CDs.

Trumpet players still buy CDs." But then even like, a year and some change after that, we're like, "Wait, do trumpet players buy CDs? Does anybody buy CDs? Are we shooting ourselves in the foot by not making CDs? Should we?

What should we do? Like, should we farm this to another label? Should we put it out on my label?

AC: And then just like, other projects got swept up, and we still need to put it out. I want to put it out this fall. In fact I need to call John sometime this summer and just be like, "All right. How are we doing this?" 'Cause like, I was originally like, "Oh yeah, I'll put it out on my label." I have a small label. It's mostly just for me and a couple friends' recordings. Since I do this for a day job, like, I know how to make the infrastructure, so I made this platform for myself. But it's also kind of limited in resources, and my availability for ... my press contacts across the country are somewhat lacking, so it's like, a question of do I have enough to like, do this record justice, or should I farm this to another label? And then I hit a snag because I'm like, I'm struggling to talk about this music and like, how to describe it to make anybody else care about it. But like, I don't have program notes for the sonata. Like, I have not been able to write them. I don't know how to talk about this music, beyond how it's made. Like, the under-the-hood stuff that we're talking about.

BH: Right.

AC: So I'm hitting that snag, I'm hitting the release resources snag. John's got a bunch of busy stuff at the university, like, since last year, that we kind of had to pause for. And also, there's the Kanye sample in movement two that needs to be cleared. And I haven't been able to get in touch with the major label that would

license that, to even get a quote. So I need to go through some other channels still. Anyway, this is all why it's not out yet.

BH: Okay.

AC: It's not because it's not done, 'cause it's definitely done. It's ... there are some like, business matters to figure out.

BH: What's the Kanye sample from?

AC: It's from the track "All of the Lights."

BH: Uh huh.

AC: And it's like, a French horn choir at the beginning of the piece. Which, I just took like, a second, not even two seconds maybe, of this sample. But then I stacked it all up and it's like, it's the main harmonic grounding for the entire movement, because it sort of developed from permutations of this horn sample from the Kanye track. And it's like, relatively ... if you know the track, it's like, relatively recognizable.

BH: Okay. I'll have to listen to it. I'm not ... I have to admit I'm not up on my Kanye

West so ...

AC: At this point, you don't need to be. But yeah, I mean, listen to that track. That whole record is a pretty seminal hip hop record. But yeah, I mean, you'll know it instantly when you hear it, and maybe understand why that's a ...

BH: A snag.

AC: Yeah, I mean that's ... not that like, contemporary classical trumpet music is going to like, cut into the revenue stream of this already ten year old record.

This is just how the majors are though. They'll stiff you coming and going.

BH: Yeah, you gotta clear it with them, or they will pin you down for it.

AC: Yeah. So I'm still figuring out the legal arrangement, 'cause I want to keep that above the books.

BH: Yeah. Yeah, I think you're right to do that, 'cause if they find out after the fact, it could be painful.

AC: Yeah. I don't want to deal with like, a C&D, or like, having to make CDs and then recall them or something. So yeah, suffice it to say there's a number of reasons why it's not out yet, but it's ... the music is finished. Like, the recordings you heard are done. Those aren't gonna change.

BH: Yeah.

AC: Yeah, it was mastered as of last October, so it's like, it's time. We gotta do something, we gotta move on to ...

BH: Yeah, for sure. Okay. So on a totally separate topic ... maybe not totally separate, but you know, one of the things that you mentioned in the recording process how you turn the lights down in the room. And it seems like, to me, that

like, the whole environment, especially when you're performing, is really important to you. I mean, Rikai has a film that goes along with it.

AC: Yeah.

BH: So is there anything you could talk about your ... the visual aspect, the environmental aspects of what you would like, your aesthetic, I guess, in that regard? I don't know. You can riff on that.

AC: Well, yeah. I think it's imperative to think about like ... when you see music performed, even if you're listening to a recording, you're always in this space.

Like, and this space is always contextualizing the music, and like, what are your other four senses doing? Like, we're making art for one of the five senses. But you're never only experiencing the one. So like, what you see and where you are and everything is like, I think, super important to think about. And maybe I think about this more because I've done so much music for dance and theater. So it's like, you know, when you're at a concert music performance, it's like, okay, the music is the thing that people are looking at. Like, you're watching the players. I'm sort of ... I get a lot stage fright, especially when I'm just like, the only thing for people to look at. And I'm playing a trumpet, and like ... no offense, but trumpet's like, kind of a weird looking thing to play, you know what I mean? It's like, you're tooting this thing, and I don't know, it's not as fun for me to like, look up and everybody's like, staring at me.

AD: So like, I guess the Rikai film was really like ... I met this videographer who does like, really cool stuff in like, a class in the university. I'm like, "Great, I need a film for this because I'm like ... I'm playing trumpet and I'm like, clicking on stuff on the screen and I don't want that to be the visual thing that people are like, seeing when they're hearing this. Like, I think there's something cooler to look at." And so we made this film so like, "okay, look at this film, don't look at me." So at some point it was sort of a vehicle to avert the eyes from me in order to alleviate my own stage fright. But like, that's like, half a joke. The other half is that I sort of got used to the context of the theater or having performers meant to be like they're ... okay, like, musicians ... people see us play, but our real craft is what people hear us do. But then actors and dancers and like, theater performers, their craft is to be looked at and be watched while they do something. So that's not our ... like, we don't play concerti in order to be watched. We play it in order to be heard.

AC: So teaming up with other artists who do stuff specifically for the eyes, I think, kind of takes the pressure off of the music for maybe having to also look, like, be visually engaging in addition to being sonically engaging. And I just, I came to really appreciate that like, collaboration, that team-up. And I felt like a lot of the music I do is maybe ... like, I often joke that dancers "get" my music more than musicians do.

BH: Yeah.

AC: Just 'cause, I don't know, something about it makes it feel like ... dancers like to react to it and then like, dancers are far more interesting to watch perform than like, me playing trumpet and turning some knobs.

BH: Yeah.

AH: So that started making me think more about the space the music is heard in. And then also playing like, environmental, communal compositions by John Luther Adams. And like, composers who are doing music for like, site-specific places or like, the music is tightly linked to a place to be in, and like, an experience you're having rather than just like, a fixed sonic object. Or like, a specific roadmap of like, "make these sounds in this order" and that's it. But it's also like, "make these sounds in this order, if you want to, and then like, you know, change the order and go off this path for a little bit if you want, and then stop and smell the roses, and look about you and feed the other things." And I just think like, it's just a more powerful experience when you're using multiple senses together, than ... and sometimes that just means like, turning off the lights. And that's enough to like, put you in a different zone.

BH: Or you know, like, your video with ... the Scarlet video with a whole light show going on, and really kind of capturing the mood of the piece--there's really only two, you know?

AH: Cool.

BH: Yeah. I think that to me is really interesting, and I think also more fun for an audience goer. Like you said, a more powerful experience.

AC: Yeah.

BH: If you're trying to reach people that are not traditional classical music lovers, you know, it's going to ... I think that it's going to be something special for many listeners that maybe wouldn't otherwise enjoy a trumpet recital.

AC: Right, right. And I think we should all be thinking about that, like, every time we perform. Like, I don't know if just current classical music enthusiasts, I don't know if that's a wide enough audience. For me at least, but I don't think that's a wide enough audience.

BH: No.

AC: There's so many more people in the world.

BH: Yeah, I mean, you know, I went to Joe Burgstaller's recital at ITG this year. And this is like, a total tangent, but he did ... his, it calls to mind kind of the same ideas that you're talking about. 'Cause he ... it was one of the coolest recitals I've ever been to, and it was the first time I had seen somebody do ... he had like, consciously created segues between pieces that were like, improvisations basically.

AC: Cool.

BH: And then he also had collaborators with ... he collaborated with a piano player obviously, but he collaborated with a percussionist that was doing a lot of hand percussion, world percussion, and he actually like, featured that percussionist at one point. And then he did a really cool electronics effect, and I'm not sure how he did it. You probably have a better idea. But he kind of mimicked Black Lady Smith's Mombazo, is that right? Is that ... the group from South Africa that sang with Paul Simon?

AC: Oh cool. I'm not sure.

BH: It's really cool music but it's, you know, it's just like, triadic harmony stuff, you know, that they kind of improvised harmonization really. But he figured out a way to create those sounds through electronics on his own instrument and like, displaced octaves and things like that.

AC: Rad.

BH: Make it sound like a full choir of flugelhorns, you know. It was really cool, man.

AC: Oh, sweet. Yeah, that sounds like fun.

BH: And you know, everybody that I talked to afterwards was like, gobsmacked, you know? They were like, "That's the coolest thing I've ever seen." I don't know why we don't think about that kind of stuff, you know? And I'm glad that there's people out there like you, Joe Burgstaller, and John Adler, and ... that are expanding our palate, you know?

AC: Who's this guy? Joe Bergs?

BH: Yeah, Burgstaller. He's ...

Adam: B-E-R-G?

BH: It's B-U-R-G-S-T-A-L-L-E-R, I think you're close, something like that. I mean, I might be wrong, I'm probably misspelling ...

AC: I think I found him.

BH: He's a Canadian Brass alum and soloist and ...

AC: Oh, cool.

BH: But yeah, I've been to a couple of his recitals and he always tries to break down the wall between the audience and the performer, you know, and make it a more informal setting too where it's more intimate.

AC: Sweet.

BH: I think all of that's really how you move people. You know?

AC: Yeah, yeah.

BH: Well that's all I really have for today, you know that I have a list of things that I wanted to talk about, and ... if I have any other questions.

AC: Was this a little helpful?

AC: Oh yeah, that was really helpful. I mean, just being able, the talking about all of the pieces in depth I think is really a big aid, and I think it makes the interviews, you know, very valuable.

AC: Awesome.

BH: For an oral history, you know?

AC: And I know your work is trying to focus on like, a performer's intro, or a performer's guide?

BH: Yeah.

AC: Have I talked enough about that stuff, I guess?

BH: I think so. I mean, I'm still kind of ... I'm trying to put together ... I feel like the more I dive in and try to figure out the pieces, the more questions I'll have about that. But I'm, you know, both the sonata ... I'm just sort of getting all of the technology figured out, you know? For myself. And ...

AC: Yeah, call me anytime if you've got questions on that.

BH: I will. Yeah, 'cause I ... that's my big thing, is I just need to I think get my hands dirty and figure out how to perform this sonata, technology-wise, you know?

And I think that experience will really inform the performer's guide aspect of it, if that makes sense. I think your talking about the way that you conceive these pieces and all of that is giving a lot of perspective as well. And I think you did

talk quite a bit about technology and, you know, more than most people who want to perform this piece probably know, I would imagine.

AC: Okay, cool. As long it's doing the job here.

BH: Yeah, I think it's doing the job. I mean, I am ... I might have some more questions as I dig deeper this week. For the rest of the week I'm gonna be trying to ... the next five days I'm gonna do like, a really intensive ... I've basically cleared my schedule to be able to do as much as I can in the next five days as possible, so ...

AC: Let me know how I can help, if questions arise.

Ben: Sure. I might ...

AC: I'm always available for you.

BH: That's awesome, man. Thank you so much for your generosity, your time, and everything.

AC: Thank you.

BH: Yeah, of course. All right, well have a good day and I'll be in touch, and I'll send you those screenshots too.

AC: Yeah, awesome. All right, Ben, thanks man, we'll talk soon.

BH: Yeah, talk to you later.

## **Appendix C: IRB Outcome Letter**



## Institutional Review Board for the Protection of Human Subjects

## Final Report - Inactivation

**Date:** March 11, 2019 IRB#: 9403

To: Benjamin Louis Hay Inactivation Date: 03/11/2019

Study Title: A Performer's Guide to Adam Cuthbert's Works for Solo Trumpet and Ableton Software

On behalf of the Institutional Review Board (IRB), I have reviewed the Final Report for the above-referenced research study. You have indicated that this study has been completed and should be inactivated. This letter is to confirm that the IRB has inactivated this research study as of the date indicated above.

Note that this action completely terminates all aspects and arms of this research study. Should you wish to reactivate this study, you will need to submit a new IRB application.

If you have questions about this notification or using iRIS, contact the IRB at (405) 325-8110 or <a href="mailto:irb@ou.edu">irb@ou.edu</a>.

Cordially,

Aimee Franklin, Ph.D.

Chair, Institutional Review Board

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