Timothy M. Shull, Jr.

Berklee College of Music

Valencia Campus

Music Technology Innovation

Master's Culminating Experience

Introduction

My time at Berklee Valencia has been one filled with personal growth as a musician, a technologist, as a creative artist and as an individual in relationship to the world around me. The four years prior to my time here were characterized by a struggle with music that grew out of personal hardships and resulted in both creative anxiety and performance anxiety and ultimately inactivity and writer's block. I chose to pursue a master's in Music Technology Innovation here at Berklee Valencia because I felt that this program would offer me the opportunity and resources to more skillfully use technology to overcome these struggles. Originally, my plan for my Culminating Experience was to build a website that would generate algorithmic music based off of user input. As the year progressed, I came to realize that the Culminating Experience project would offer me the perfect opportunity to force myself to overcome my creative anxiety in a systematic way and build a process that will help me in all of my future creative endeavors.

The Work

It is for this reason that I eventually chose to change from my originally planned project to one that would allow me to focus on writing music and developing and refining the set of tools that I am using to make music. For the physical tools that I am using, part of the project has been to develop a production and performance setup that can be used to create high quality recordings from start to finish outside of a studio as easily as it can be used for live performance. The setup that I have developed uses a MacBook pro running Ableton Live, Max for Live and Resolume at

its core with a UAD Apollo Twin Duo low latency thunderbolt audio interface to process incoming audio from an electric guitar or bass and a vocal microphone in real time. For MIDI input, sequencing and live triggering, I have chosen to use the Ableton Push because of the benefits it offers as a powerfully integrated Ableton Live control surface. During my work, I have used this setup extensively for recording and production on my own and with others. As the project has progressed, however, under the instruction of my advisors and through my own realizations, my focus has shifted away from the technical aspects of the setup and its potential. The concentration of the project is now on my writing and production process and the ways that I am using these tools to combine my knowledge and skills with Ableton, Max/MSP, Max for Live, Pro Tools, synthesis, songwriting and instrumental performance. The music I have chosen to write is music that is cross-genre stylistically, combining elements of indie rock, hip-hop and various styles of electronic music. In my experience, the general approach used for each of these styles of music is very different. Because I learned how to make these styles of music in very separate social contexts and I also generally enjoy these styles of music in very different social contexts, joining them together has presented some difficulties. Because of this, I have spent a lot of time paying close attention to which production approaches and creative techniques have been most beneficial to me. The work in its current state has now been thinned down to the production of three pieces of hybrid electronic music, instrumental music and songwriting, with particular focus on one song. Each song has presented its own difficulties and been finished through similar but unique approaches.   To assist my production, I have

also developed a number of Max and Max for Live patches that I have used along the way in the sound design and creative process.

Innovative Aspects

For me, the most innovative aspect of this project is the production approach that I have developed that utilizes all of the software tools that have now become industry standards but combines them in a unique way. This attribute of my project is more progressive on a personal level because I feel that each musician/artist must find their own path and negotiate the tools they are using in their own different way. In relationship to the rest of the world, this project is advanced in that it is an interesting application of a number of new tools and technologies towards the production of an uncommon synthesis of musical styles. For example, many people are probably using z3ta 2+ combined with Ableton Live, but to increase the customization within z3ta 2+, I modified a simple tool in Max/MSP to be able to draw and save my own wavetables, a feature not included in z3ta.

New Skills Acquired

The main skill that I have been focusing on developing for the past few months is the stage of creativity in music that comes after the initial ideation phase. One common creative adage is, "write hot, edit cold". The "edit cold" part in relationship to music can be a very large and hazy phase of the process. The ability to develop a vision for the end goal that remains flexible but is strong enough to generate a plan for project management is an essential part of this phase. Even though it has long been

recognized as such, more and more creative rhetoric these days is pointing towards

creation as a combinatorial process that culls various sources and results in a

patchwork of pastiches[1]. In music, one extreme of this spectrum can be represented

by the musical mash-ups created by mixing DJs and the other extreme can be

represented by a virtuosic jazz instrumental solo that weaves together various

quotations from any number of sources in real time, on both the micro- and macro-

levels of melody. The creative process that I have developed around this idea and

refined during the course of this project is one that takes as source material any

musical idea that I have generated at any time over the past year and combines it

with any other idea made during this time. This process is then iterated to create

large structures and repeated until enough source material has been generated.

From there, the source material is arranged and re-arranged until it feels complete.

Over the course of the year I generated over 70 Ableton Live sessions. These

sessions varied in size and complexity and source. For instance, for some of these

sessions I worked with the intention of sequencing a MIDI drum beat by hand (i.e.

not playing it with drum pads, but drawing in the notes) that sounded as close to the

sound of a real drummer as possible. Some were created during collaborative music

production sessions that included network synced instances of Ableton Live

combined with live processed guitars and real-time drum sequence programming.

From there, once I had amassed a large resource of these sessions, I exported WAV

files of each idea and created a spreadsheet with information including key, tempo,

qualitative descriptions and other pertinent details. I then created Ableton sessions

and combined anywhere from 3 to 7 ideas and set them back-to-back to listen and

compare. After trying different combinations and re-arranging the ideas, I began

creating large Ableton sessions with each track from the source sessions combined.

In these sessions I created new potential song sections by trying out combinations

of each clip in Ableton's session view. From there, I created rough arrangements

and then systematically refined them by working one section at a time. The next

step was to export each track into Pro Tools to begin mixing. At this point, if

necessary, I also continued the process of adding tracks or parts until the mix was

finished.

  With this process, I can very easily separate the ideation stage of music

making from the editing stage of music making. The reason why this particular

process is so invaluable to me is because it allows me to use the instantaneous

inspiration that comes from free improvisation but then look back on it from a

macro-view and find new associations, ultimately refining the work and smoothing

out the rough edges. To explicitly state this process may seem like it puts into

words what other people do intuitively. However, it is exactly this explicit

understanding through which I have become much more confident in my

musical/artistic personality.

  What I have not mentioned in the discussion so far are all of the technical

skills that I have developed over the course of this year that feed this ability and this

process. These skills include, but are not limited to: sound design using Max/MSP,

z3ta 2+, FM8, Massive, and countless other plugins; electronic music production

using Ableton; effective and creative use of various MIDI controllers; studio

recording skills that allow me to confidently work in large or small studios and work

with high-quality mics, mic pres, and other equipment; music production and processing using Pro Tools; and mixing and mastering using a wide assortment of plug-ins and outboard gear. Without the advances I have made this year in these technical areas that were prompted, guided and aided by the teachers here, I would not be where I am with my own creative process.

Challenges

When setting out on this project, I knew that I would have to face the issues with creative anxiety that I have struggled with and the hindrances that they present to my productivity. Eric Maisel is a PhD psychotherapist who has written books about the issue of creative anxiety. In his book <u>Mastering Creative Anxiety</u>[2], he outlines 24 generalized sources of creative anxiety, which include the anxiety of failing, the anxiety of ego bruising, and the anxiety of surviving. Most people experience some levels of basic anxiety at the very least as a result of physiological mechanisms. I have struggled with varying degrees of difficult and sometimes overwhelming levels of anxiety. As an adult, this issue has become deeply intertwined with my professional and artistic pursuits as a musician. It is for this reason that I knew that I had to take the opportunity of the Culminating Experience to work to overcome this. I have found that the solution to this for me lies with technology. Ableton Live presents an important solution to problems at the stage of ideation by providing me with the ability to quickly and easily prototype many musical ideas and subsequently trying many combinations to further develop them. When combined with the Push, I can interact with Ableton in a more tactile mode of creation that is

closer to the improvisatory nature of idea generation with the guitar that I am used. The next problem is the issue of sound quality. Sound quality is, for me, an important subconscious aspect of feeling like an idea should be pursued further. This is where the MacBook and the UAD Apollo Twin come in. With these, I can hear the ideas in a high quality sound format instantly and I can combine acoustic instruments and vocals with ideas generated within the software domain. I do not have to demo the ideas in a low-quality format and imagine what it is going to sound like when I have the chance to record them in the studio. Another major problem that I have encountered is the question of where to go with an idea. Thanks to increased digital storage capacity, I can generate ideas, save them for as long as necessary, and revisit them as often as I want to see if they work with more recently created ideas. The final hurdle presented is finalizing a piece of music to a professional level. This is where Pro Tools and mixing/mastering plug-ins come in. With these tools, I can take arrangements and refine them to the level of commercial release all on my laptop. This is something that I did not feel I was able to achieve prior to my time here at Berklee.

One unexpected challenge that I encountered was the need to re-learn how to work with others on my own music. Because of my personal journey with my own music creation, before coming to Berklee Valencia it had been a long time since I had worked with others on my own music. This project has made me realize that I cannot do all of these tasks on my own and that I need help. It has also made me realize that the end product is greater than the sum of the parts when other people are involved. I have worked with Ben Cantil, Ben Houge, Ganavya Doraiswamy, Ian

Kagey, Michael Sean Harris, Ryan Renteria, and Will Clark at varying stages of this project. The work that I have done with these collaborators has been both fulfilling and invaluable to my progress. Another unexpected challenge has been time management and the process of alternating between helping others on their projects and then returning to my own work. In many other areas of my life, time management is not an issue. Being adaptive to the ups and downs and differing demands that my time here has presented is a skill that I have been forced to refine because without it l would not have been able to keep up. For me, mental and creative energy is a limited resource from day to day and time constraints add to this tremendously. For many of these issues, the act of intuitively dealing with the problem has helped me to find solutions in a more efficient way.

Future

This project has grown from a simple exercise into a holistic learning experience. I have chosen to discuss this project here in a way that reflects my subjective internal experience in place of describing technical details because I feel this more accurately communicates how important this project is to me. Because of the time I have spent here, I have learned to incorporate technology into my life as a creative individual and an aspiring professional in a way that is more seamless and more intuitive. To assimilate to ever-changing technologies is to make them work on our own individual terms instead of those dictated to us by the user manual. The future of this project is creating more music with this understanding and this fearlessness; it is incorporating this method of music production into my daily life; it is moving

this music over into the realm of performance; and, finally, it is using this project as a stepping-stone outside of myself to be able to connect with others. For the lessons that I have learned during this project to become second nature, I must make them part of my everyday practice. It is in this way that I can let go of the things that have been mental barriers and allow them to become a source of inspiration, motivation and creativity.

Footnotes

1. Popova, "Networked Knowledge and Combinatorial Creativity," http://www.brainpickings.org/index.php/2011/08/01/networked-knowledge-combinatorial-creativity.

2. Maisel, *Mastering Creative Anxiety – 24 Lessons for Writers, Painters, Musicians and Actors from America's Foremost Creative Coach (California: New World Library, 2011)*