SILHOUETTES OF MEMORIES

A graduate project submitted in partial fulfillment of the requirements
For the degree of Master of Music in Music Composition

By

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The graduate project of James Christian Hoffman is approved:

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ABSTRACT

SILHOUETTES OF MEMORIES

By

James Christian Hoffman

Master of Music in Music Composition

Silhouettes of Memories is a digital audio composition in three parts: “Stu.tte.rbeat,” “A Breath, Held in Space,” and “In a Crowd.” From conception, the goal of this piece was to take familiar sounds—guitars, drums, piano, voices, etc.—and, through various computer processes, transform them into new entities. The creation of each movement began with an idea of the end goal sound, the recording of the basic sounds that I wanted to use as my “color palette,” and then those recordings being hacked, mangled, distorted, stretched, delayed, compressed, sampled, resampled, and mixed back together.

The first movement, “Stu.tte.rbeat,” focuses on percussive sounds, with a musical cell on piano providing bookends for the percussion. Drum patterns were created from samples of individual acoustic drum hits in Image Line’s FL Studio, and then run through a plugin called Glitch, which can alter timing, speed, pitch, and direction. Using Glitch, I created dozens of variations on my drum patterns. Choosing only the best of the patterns, I arranged them into a larger work using Ableton’s Live. The newly created drum
segment was then imported back into FL Studio, where it was mixed with the piano and the other sound effects into the final version.

“A Breath, Held in Space,” the middle movement, grew forth from several hours of electric guitar and bass improvisation recording. The goal of the initial recording was to create sounds using guitar and bass, manipulated through analog stompboxes, that did not sound like guitar and bass even before they were sampled into the computer. This was accomplished by using delays, reverbs, modulations, filters, and distortions, along with several playing techniques such as pick scrapes and striking the strings and the body of the instruments with different objects. As in the previous movement, I then filtered through all of the recordings to find the exact sounds that I wanted. The sounds were then modified even further through computer effects, and arranged and mixed in Digidesign’s Pro Tools.

The final movement, “In a Crowd,” emphasizes the most familiar sound to all of us: the human voice. Like the previous movements, the creation began at recording—seven voices, to be exact—and manipulation. The majority of the processing was done in FL Studio by slicing each voice sample into roughly one hundred tiny, fraction-of-a-second samples and assigning those samples to individual MIDI triggers. Each sample was then randomly triggered, creating a flurry of broken syllables and noises. The composition ends with a recording of a string quartet, pure and dry. I found this particularly interesting because, after fifteen minutes of modified sounds, this simple, familiar sound seems oddly out of place.

Accompanying the recording is a score that I have created, which has proven to be a taxing feat indeed. From the beginning I knew that I would not be able to create a
score for re-creation purposes—the style of music and the process of creation do not at all lend themselves to using the traditional staff-and-notehead style of notation. For that matter, I could not imagine a case in which someone would want to recreate a piece such as this one. So, I was forced to reconsider the purposes that a score serves. Upon considering the various personal uses I have had with them, I realized that the score provides incredible analytical functions. So, it was with analysis in mind that I went about brainstorming a score.

The next challenge was deciding what would actually be shown on the score. Seeing as how, in our digital age, there is a somewhat common familiarity with the digital waveform (if nothing else, at least as something that a person would recognize having seen before), I decided to make the waveform the centerpiece of my score. The waveform shows amplitude, allowing the reader to follow the “hits” in the recording with the score, as well as general quiet or loud sections. Above the waveform, I also decided to include a time scale, knowing how easy it would be for a first time listener to get off track.

While the waveform can be ideal for showing amplitude and passing time, it has some obvious limitations. When all the audio is mixed together, the waveform is very inadequate in allowing the reader to discern the actual sounds that are being played. Thus, I included a cue section below the waveform to allow the reader to have a clearer understanding of where the various musical parts come in and out. This will also help the reader follow the timing of the score by tracking clear entrances and exits.

While at this point the reader should have clearly been able to follow the score along with the recording, it did not give as much analytical value as I would like. I had
taken careful preparation of frequency levels while creating the piece, so I decided that would be an important aspect of the composition to show. The system I developed includes an Average Frequency Response meter on the right side of the wave form, and four lines transposed over the waveform that indicate Low, Low-Mid, Mid-High, and High frequencies. While this may only be a broad frequency analysis of the piece, it will give the reader a good sense of what is actually going on in the piece aurally over time.

In such a fast-paced age of technological transformation, I see this piece as just a small part of the foundation of where I see music headed in the future. Every day there are new breakthroughs that reduce problems related to processing speed, audio quality, latency, and portability, all of which push the computer ahead as more than just a playback device, but rather a legitimate instrument for creation and artistic expression. In short time, it will not be uncommon to see a laptop on stage and the "computer performer" to have just as much flexibility and expression as fellow musicians.
**SILHOUETTES OF MEMORIES**

-How To Read This Score-

*AFR stands for “Average Frequency Response”. With the AFR Lines, this score shows EQ between -60.0 dB and 0 dB. See Legend at right for meanings of the lines. Amp stands for “Amplitude”. This shows the volume of the waveform, broken into Left Channel on top and Right Channel on bottom.*
Stu.tte.rbeat

0:00

0:10

0:20

-5.0

-2.5

-1.0

-0.5

0.0

0.5

1.0

1.5

2.0

2.5

3.0

3.5

4.0

AFR : Amp

Atmosphere [Fade In]

Chime

0:20

0:30

0:40

Drums

Piano

[Fade Out]
1:20

[Drums]

1:30

[Drums]

1:40

[Drums]

AFR: Amp

1:50

Drums

2:00

AFR: Amp
AFR : Amp

[Drums]

Static
A Breath: Held in Space

[Graph showing sound waves labeled Piano and Chime]

AFR:Amp

6:00 6:10 6:20

6:20 6:30 6:40
A Breath, Held in Space

Space Noise 1
AFR : Amp

[Bass]

[Space Noise 1]
AFR : Amp

[Bass]

[Space Noise 4]
[Voices]

[Voices Begin Stutter]

[String Quartet]
AFR: Amp

[Voices]

[String Quartet]