

MIDDLE PASSAGE: RECLAIMING WHAT IS LOST

AS PERFORMANCE AND PRACTICE

Anne K. Hege

Princeton University
Music Department
Woolworth Center
Princeton, NJ 08544

ABSTRACT

Middle Passage: Reclaiming what is Lost was written for and performed by the Princeton Laptop Orchestra in the spring of 2010. The work began as a Concerto for Laptop Orchestra and my own instrument, The Tape Machine (a live analog looper) and has evolved into something broader. It currently exists both as a performance work and as a workshop practice that explores grief and loss. It is through this unconventional use of the laptop ensemble that I have come to have a deeper understanding of this piece and the musical, technological, and cultural potential of laptop ensembles.

1. INTRODUCTION

The laptop orchestra is an artistic medium that balances technological and musical possibility. In this paper, I will begin with a theoretical discussion of this statement and continue by applying these theories to an analysis of my composition *Middle Passage: Reclaiming what is Lost*. My discussion is framed by two main objectives. My first objective is to recognize and support the broad diversity of what laptop ensemble music can be. This breadth includes and is not limited to musical style, performance location, engagement of player, types of controllers, and use of technology. My second objective is to explore why the laptop ensemble is a particularly rich and important form of artistic expression for contemporary society.

What I have to offer the laptop ensemble community is a unique perspective shaped by a lifetime of choral singing, extensive training as an acoustic and electronic music composer, six years of experience writing and performing laptop ensemble music, as well as extensive studies in political science, social theory, and embodiment practices. My discussion will be guided by my compositional commitment to the idea that music has social and political significance. A composition demonstrates a way of interacting and it becomes a form of modeling social possibility or reality. Because the laptop is such a powerful tool, the laptop orchestra becomes an especially interesting socio-musical phenomenon that

represents our social relationships as well as our relationship with technology.

2. TECHNOLOGICAL POTENTIAL

Clearly there is immense technological and musical possibility within the laptop orchestra. At the heart of this diverse potential is the laptop. The laptop is more than an instrument: it can be a conductor, composer, performer, listener, or any combination of the above. As an instrument, the laptop can synthesize sounds, use samples, or take live input and can process or combine any of these sound sources. The laptop's power and versatility is based in its ability to abstract sound from its source. In acoustic music, biomechanical energy directly transfers to sound energy. For example, the weight of the bow being pulled across a violin string directly creates the tone of the instrument. Electronic instruments can be designed to mimic this coupling of physical to sonic energy with the use of various sensors and specific programming, but these instruments are rarely as nuanced or sensitive as an acoustic instrument. In "electronic music, electricity is independent from haptic biomechanical energy...the controller is decoupled from sound production."¹ In other words, the laptop allows for disembodied sound production.

Sounds are not only free from embodied physical production, but also free from time, place, sound source, quality, tone, musical style, tempo, or any attribute can become a variable through synthesis, processing or sampling. The ability to mash up different musical styles, time periods, and players as well as transform their ability creates immense musical possibility and meaning. Sonic energy is no longer bound to an embodied source.² We can pump up the volume with the adjustment of a knob without

¹ Leman, M. *Embodied Music Cognition and Mediation Technology*. Cambridge, MA: The MIT Press, 2008, pp.163.

² Except in the marvelous example of *Our Lady of Detritus* (2009) a piece by Jill Sigman with music by Kristin Norderval where all the energy needed for the piece is made by the audience or performers during the piece. Perry Cook and Skot Smallwood have also done work with solar powered instruments.

breaking a sweat. Networking allows for collective compositional control where any compositional parameter can be controlled by any connected laptop. Musicians may play the same instrument while being thousands of miles apart. Sound output also becomes a variable where a laptop may send its sound to a specific location or many locations or nowhere. Multiple players may be run through a single PA system or each player may have their own speaker system. All this allows for immense compositional and technological possibility.

3. MUSICAL POTENTIAL

For me, musicality is defined by the presence of listening, interaction, response, and virtuosity, or the potential to improve any of the previous elements. At the root of these attributes is the ability to learn about sound and sounding, both alone and with others. If musical potential is dependent on our ability to learn about sound,³ technological advances that break the innate relationship between biomechanical energy and sound energy disrupt our embodied learning. We can still appreciate the physics of sound, but sound is no longer directly related to our body. This abstraction of sound energy means that we are not given the same kind of clues about how the sound is made or what it means. The violinist who forcefully pulls the bow across the strings making a fortissimo sound with a strident tone coupled with aggressive physical action communicates tension and force within a sonic and visual context. Here, sound and physical gesture complement each other.⁴ This complementary relationship between body and sound has become very important to musical meaning creation and communication. How then, do we understand what music means without these physical clues?

4. RECLAIMING WHAT IS LOST PERFORMANCE

While struggling with these questions, I wrote *Middle Passage: Reclaiming what is Lost* for the Princeton Laptop Orchestra (PLOrk). I decided to try to create a ritual practice for laptop orchestra inspired by Maya Deren's study of Haitian Voudoun practices, *Divine Horsemen: The Living Gods of Haiti*. Specifically, I was interested in the ceremony of reclamation.

The gros-bon-ange [soul of a person], as the repository of a man's history, his form and his force, the final resultant of his ability, intelligence and experience, is a precious accumulation. If, after

³ This learning is not limited to sonic input, but formed through vision, touch, movement and all embodied senses.

⁴ According to Nicholas Cook, complementary movement and sound communicates clearly to an audience and is one of the ways that we interpret multimedia interaction [2].

his death, his descendants were able to provide this disembodied soul with some other means of manifestation to substitute for the flesh which perished, they could salvage this valuable legacy. One of the major Voudoun rituals is the ceremony of retirer d'en bas de l'eau, the reclamation of the soul of the deceased from the waters of the abyss.⁵

My goal was to construct a modern reclamation ceremony. My compositional choices were guided by my decision to prioritize body language and choreography that would promote the idea of ritual. I used archetypal movements to communicate a world of conjuring and calling. I structured the piece around two formal elements, the circle and the line, both of which are used in traditional Voudoun practices [4]. Finally, I tried to take advantage of the benefits of abstracting sound from its physical source (such as the way this represents the disembodied spirit) while supporting musical behaviors such as listening and responding.

4.1. The Rope Instrument



Figure 1. The rope instrument in *Middle Passage*.

In *Middle Passage*, the circle first arises with the use of a rope approximately twelve feet in diameter. The rope is a collective controller. It is attached to six Game Trak Tether controllers placed evenly under the rope. Each tether controller sends information to an individual laptop, hemispherical speaker, and subwoofer triggering and controlling playback of various samples. There is no networking of the laptops. All coordination is created through the rope controller. The piece begins with the entrance of the ensemble, humming a single tone, lifting the rope, and pulling the rope from side to side with resistance, as if pulling to lift an anchor. Through practice,

⁵ Deren, M. *Divine Horsemen: The Living Gods of Haiti*. New York: McPherson and Company, 2004, pp. 27.

the PLOrk ensemble perfected the slow, even, collective pull needed to play the rope instrument and the specific body language that I was looking for. In my instrument design, I was aiming for a dynamic relationship between collective movement and sound production where getting the rope to sound would not be automatic. I was also hoping to support an attention to movement, so that they would have to have a strong collective awareness of movement, change of direction and rate to keep the rope taut and the instrument sounding.

The rope instrument reconnects physical energy with sound energy in two ways. The first is that the sound originates as acoustic singing. The audience understands the sound as coming from our physical bodies and rather than presenting a foreign sound, the rope plays through a sample that reinforces the acoustic singing so that it is not completely clear what balance between acoustic and sampled sound you are hearing. There is a period of time where the audience believes the sound to be embodied when it is not. Secondly, the movement of pulling the rope mimics the tension and resistance found in string instrument sound production. It is reminiscent of the movement used by players of Ellen Fullman's Long String Instrument. We understand tension and friction as a sounding movement. We also understand this as a listening movement. We know that the movement must happen in unison for the rope to remain taut. There is a musical subtlety implied by the required listening and awareness of other ensemble members. Finally, it is a working movement that has cultural and mythic significance denoting hard, collective work, like pulling up an anchor or sail. As the piece aims to call a spirit from the waters of the abyss, this movement seems fitting.

4.2. The Dualvocoder Instrument



Figure 2. Tether pole extensions in *Middle Passage*.

Over time, the rope sample crescendos until it is the dominant sound so that what starts as human voices becomes otherworldly. The piece continues with vocal

solos, a solo by my live analog cassette looper, "the tape machine," and finally the addition of pitch consistent sampling. For this sampling, I used an instrument developed by Dan Trueman called the "dualvocoder." This instrument uses delay lines to play through a sample so that the playback speed can be varied without pitch shifting the sample. The length of the tether string (z axis) controls where the player is in the sample playback. Sonic moments can be elongated, repeated, frozen, or played quickly. The dualvocoder is an instrument that is immediately playable and something that players can practice and perfect [3]. The tether controller inspires a fluid and graceful duet between player and tether line. As the player improvises through the sample playback, their intent listening is performative and musical. When two dualvocoders are played simultaneously, the players are both listening and watching, responsive to sound and movement. This observation and responsiveness is innately musical. The player is learning about the instrument, the other player, their own body, and the body's of others while performing. Embodied Cognition Theory suggests that this learning through interaction and a cycle of observation and response is central to how meaning is created.⁶ The dualvocoder tether line is the linear structural element of the piece. The tether line dynamically interacts with the circle. In the end of the piece, players use poles to extend these tether lines so that the heightened line visually balances the rope circle.

5. RECLAIMING WHAT IS LOST WORKSHOP

After the premier of *Middle Passage: Reclaiming what is Lost*, I did not feel that I had answered my original compositional challenge to create a piece that could call a spirit from the waters of the abyss. Following the suggestion of fellow composer MR Daniel, I designed and facilitated a workshop on loss based on *Middle Passage*. The workshop was held at the Oakopolis Gallery in Oakland, California in the summer of 2010. I asked participants to bring a sonic memory (5-10 seconds) and a physical object relating to their loss. I taught the basic elements of playing the rope instrument and, during the break, recorded their sonic memories and prepared the sound files to be played by the dualvocoder. We began by placing our physical objects in the center as an altar. We publicly stated whom we were calling. Then, we began singing the drone and pulling the rope. When this became strong, one by one, workshop members played the dualvocoder instrument in the center of the circle as an aural altar. It was a very different piece. There was an intention to the pulling of the rope and singing that felt both cathartic and supportive as we each entered the circle. The attention and listening to others was not limited to

⁶ Johnson, M. *The Meaning of the Body: Aesthetics of Human Understanding*. Chicago: The University of Chicago Press, 2007.

sound and movement, but also included an emotional listening. The memories from the center aural altar were beautiful. They felt more like thoughts or hopes, as if we were hearing the inner voice of the player. I had a deep feeling of connection with the ensemble members and my personal loss as well as the loss of others.

The workshop allowed for a sharing of the grief experience that was not language based, but centered in movement and sound.⁷ The rope supported connection without the discomfort of direct contact. The movement and exertion demanded while playing the rope became a physical and sonic mantra that helped to focus each individual and the collective ensemble energy. The dualvocoder instrument provided personal input into the sonic landscape. My compositional focus on connection and listening helped me to make technological and musical choices that clearly established the role of each player and what was expected of their participation. This experience gave me a broader view of the potential for *Middle Passages: Reclaiming what is Lost* and of laptop ensemble works as performance and ritual practices.⁸

6. CULTURAL POTENTIAL

Music has a fascinating way of communicating very subtle cultural values. As a relatively new musical practice, I think that there is a lot of possibility for diversity in laptop ensemble music within some of these cultural signifiers. Most people I talk to have no idea what a laptop orchestra is and no preconceived ideas about where we should be playing, what kind of music we play, or how we play that music. It is a beautifully blank canvas! We, as laptop ensemble composers and players, get to explore the cultural potential of the laptop orchestra, and this is important. It is important because these pieces model a balance between the spirit and our mechanical tools and this is a relationship that we have struggled with for centuries.⁹ There is an exciting moment of cultural meaning when, in a laptop ensemble piece, people bend down to really listen to their laptops or, as in Perry Cook's *Lux Aeterna*, they gracefully tilt the laptop, singing to it and to each other. This creative and playful interaction with the laptop reinvigorates both what the laptop can mean and how we use technology and our collective resources to make something beautiful together.

7. REFERENCES

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⁷ Research in Somatic Psychology by Eugene T. Gendlin, Peter A. Levine and others suggests that psychological trauma can be captured in the body and must be released physically as well as psychically [5 and 8].

⁸ LOrk pieces are especially accessible as ritual works because they are often constructed for elementary players so that the instruments can be adequately mastered within a limited amount of time.

⁹ Stories like *Icarus*, *John Henry*, and *2001* are examples of attempts to understand this balance.