The Living Surfaces #2: Rhythmic Wanders

by

Marcelo Lopes Vieira da Silva

MA in Art's Science, Universidade Federal Fluminense, 2011

Bachelor in Cultural Production, Universidade Federal Fluminense, 2006

Project Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Fine Arts

in the

School of Contemporary Arts

Faculty of Communication, Art and Technology

SIMON FRASER UNIVERSITY

Fall 2017

Approval

Name:	**Marcelo Lopes Vieira da Silva**
Degree:	**Master of Fine Arts (Interdisciplinary Fine Arts)**
Title:	**The Title: The Living Surfaces #2: Rhythmic Wanders**
Examining Committee:	**Chair:** Simone Rapisarda Assistant Professor
	Arne Eigenfeldt Senior Supervisor Professor
	Robert Kitsos Supervisor Professor
	Sami Chien External Examiner Professional Artist
Date Defended/Approved:	November 23rd, 2017

Abstract

The Living Surfaces #2 – Rhythmic Wanders is the second of a series of video art projects that uses the projection mapping technique to make projections over sculptures created together with the projected content. In addition, these projects bring up questions regarding spatiality, musicality, movement, performativity and narrativity.

In *Rhythmic Wanders*, I create an interactive multichannel video installation in which a sequence of 8 independent music video loops are projected over four sculptures used as a tridimensional screen. The music videos consist of a collection of beats, melodies and environments, collected from meetings with musicians I met in Canada, Brazil and the United States. Images and sounds, themselves derived from my affective memories of those location as well as my relations with the musicians, are assembled algorithmically as the visitor(s) wander(s) around the installation space filled with strategically positioned presence sensors

Keywords: new media; projection mapping; video installation; visual arts; music

For my parents, Milton Vieira da Silva and Aurora Lopes Vieira da Silva.

Acknowledgements

I respectfully acknowledge that I lived and worked on the unceded traditional territories of the Coast Salish peoples of the Musqueam, Squamish and Tsleil-Waututh Nations during the whole period of work and research for this program.

Thank you to all the great musicians that participated in this project: Matthew Ariaratnam, Dudu Fuentes, Tobias Soley, Soulore Solaris, Angela Moreira, André Fioroti, Daniel Paiva, Marco Serragrande Pedro Araújo and all the musicians of Orquestra Voadora, in Rio de Janeiro as well as the ones from Bloco Energia and The Jazz House, in Vancouver.

Thank you for Marcio Oliver and Julia Schnitman for helping with the production process, the technical advices and motivational words.

Thank you for the SCA's technical crew: Stefan Smulovitz, Ben Rogalsky, Taylor Janzen for all the attention and patience.

Thank you to my committee: Arne Eigenfeldt, Rob Kitsos, and Sami Chien as well as the SCA faculty, especially Jin-Me Yoon, Peter Dickinson, Laura Marks and John McFarlane for the challenges, support and all the inspirational talks and meetings.

Finally, I want to thank my friends, Gina Lupino, Raj Gill, Eduardo Lopes, Craig Irwin, Marie Whimbey and all the other ones living in Grandma's Palace as well as Kyle Rohr, Gisele Kurtzman, Todji Kurtzman, Cesar Filho, Harley Small, Julie Hammond, Linnea Gwiazda, David Bidle, Sydney Thorne as well as my music family from Bloco Energia for being by my side during this journey.

Table of Contents

List of Figures

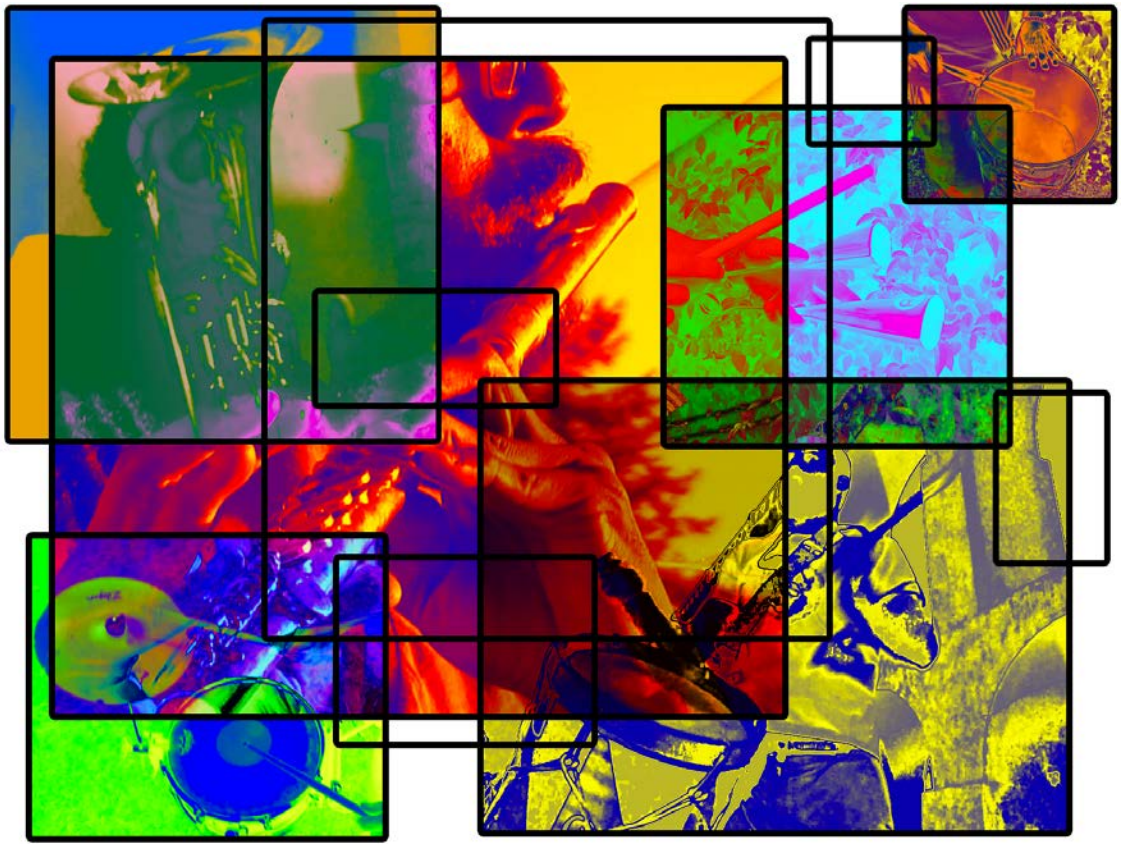

Figure 1. The Living Surface #2: Rhythmic Wanders - Addvertising Picture

Designed by Marcelo L. Vieira da Silva

The Living Surfaces#2: Rhythmic Wanders

Introduction

The Living Surfaces #2 – Rhythmic Wanders is the second of a series of video art works that uses the projection mapping technique[1] to make projections over sculptures created together with the video content. Both the sculpture and the video have connections and complete each other's meaning, being created to be exhibited together. In addition, these projects bring up questions regarding spatiality, interactivity, musicality, movement, performativity and narrativity.

In *Rhythmic Wanders*, I create an interactive multichannel video installation in which a sequence of 8 independent music video loops are projected over four sculptures used as a tridimensional screens – that I call *"sculpture-screens".* The music videos consist of a collection of beats, melodies and environments, captured from meetings with musicians in Canada, Brazil and the United States. Images and sounds, themselves derived from my affective memories of those location as well as my relations with the musicians, are assembled algorithmically as the visitor(s) wander(s) around the installation space filled with strategically positioned presence sensors.

The main idea behind the setup described above was to create a collective polyphonic and multi-rhythmic music video composition. By the arrangement of the visitors' movements, using generative methods to combine the music video loop files available on a database pre-set by myself. One or more visitors could interact with the work, moving their bodies around the installed space the way they wished, triggering the videos of musicians recorded in different times and spaces. What connected the musicians was my video camera and the desire, from us all, to create a fluid, collaborative and unexpectable music video composition.

In addition, the described technical setup also let video loops to be played automatically by the computer every 5 minute to call attention to any public casually

[1] Projection Mapping is video projection technique that by making strategic cuts and deformations to an image source enables the artist to project images over tri-dimensional surfaces creating an illusion effect that the projected surface is alive or that instead of being projected, it is the source of light.

passing nearby, as well as to show the visitors the full potential of the video loops being mutually played.

The *Rhythmic Wanders* installation was exhibited from October 10th to October 16th, 2017 on the first basement floor (B1) of the School of Contemporary Arts of Simon Fraser University.

Background and Context

I have developed my artistic profile in a fluid way throughout the years, gathering my interests in film, music and visual arts. I compose, sing and play flute, guitar, and percussion, and have done so since my teenage years. As an undergraduate student, I focused my studies in digital video production. Due to my musical background, I took the role of sound designer and soundtrack producer and composer in several film, dance and theater projects. After finishing my undergraduate courses, I had the chance to work as digital audio and video instructor and my natural curiosity led me to discover digital video performance before it became a trend in my home city. Soon I started working as a freelance Video Jockey in a vast number of events, parties, theater plays, dance shows and collective exhibitions in Rio de Janeiro and São Paulo, Brazil.

One year later, I was starting an artistic collective with Bruno Queiroz and Ricardo Diversi, also known as DJ Muralha, in which we alternated working with video and music performance. We also used to invite other artists to collaborate in some shows, such as the cartoonist Johandson Resende whose cartoons were present in some of our projected visuals. My interest in collaborative creation was definitely fostered during this time.

During this period, I still worked in personal audiovisual performance projects such as *Pintando o 7* (*Messing Around*, 2010) and *Duo* (2010), the first two projects in which I worked with a visual programing language (Pure Data) to make live changes to the video, and *Phitodelia* (Rio de Janeiro 2011 and London, 2012), a site specific video installation/performance in which I first used the projection mapping technique.

Because I have worked with more than one art form, it feels like a challenge to map my main artistic influences. In addition to my electronic music practice, most of my

musical influence comes from the Brazilian jazz scene, represented mainly in the figures of Hermeto Pascoal and Moacir Santos.

For my video art work, the most relevant artistic reference has always been Nam June Paik, a South Korean artist that is "considered by many to be the seminal figure in the emergence of video art" (Meigh-Andrews 11). Since the 60's, his many works have covered most categories within the genre of video art. He explored in many different ways the use of analog video monitors, cameras and players. A common trace in Paik's works was the use of monitors as material for creating large multichannel video sculptures, such as in *Electronic Superhighway: Continental U.S., Alaska, Hawaii* (1995) – a map of the United States made with several different monitors and neon light tubes serving as the frontier lines.

Another artist that inspires me is Henrique Roscoe, also known as VJ 1mpar. His works cover different areas of new media art, like interactive video installations, video jockeying and audiovisual performances. In his project called *HOL*, for instance, he develops digital interactive devices and interfaces by himself to create colorful and abstract audiovisual performances[2]. He also creates mapped video installations such as *Laboratório Móvel* (2007)[3], created in partnership with Sonia Labourriau, in which the visitors could interact with the images projected over a number of house utensils using sensors. VJ 1mpar was the artist that introduced me to the Arduino, leaving me a desire to work with sensors ever since.

Lastly, the greater reference I have, both in music and video, is Amon Tobin, a Brazilian electronic music artist based in London, England. His projects always have a great visual work attached. In the tour for his album *ISAM*, he presented a ground-breaking work of projection mapping and positioned himself and his instruments behind a semitransparent portion at the center of the giant tri-dimensional screen covering the whole stage. This project deeply increased my desire to create projects using the projection mapping technique.

---

[2] I consider both Video Jockeying and Audiovisual Performances modalities of video performances: the live manipulation of a video database combined with a music source. But in an Audiovisual Performance, the audio concept is directly connected to the video concept. They are created and exhibited together. In a Video Jockeying performance, the video content is independent of the audio.

[3] http://1mpar.com/index1.php/portfolio/laboratorio-movel/

In 2015, I started the MFA in Interdisciplinary Arts at SFU's School of Contemporary Arts. For my first year project, I created *The Living Surfaces #1 – Manolith*[4], a mix of live cinema[5] and video installation, in which I projected an experimental movie over the front and rear sides of a sculpture. The movie was about how advertising instigates consumerism and the damages it causes in people's minds. The sculpture's design was at the same time neutral and imposing. It was inspired on the figure of the "stick man", but made in a size that also resembled a giant political figure statue, like a fascist dictator. It was placed in the center of an installation, among other objects carefully chosen and placed.

The *Manolith* experience made me realize how important and exciting it is to consider the observer's body movement in an installation and its creative process. The fact that the two projections couldn't be seen at the same time invited the audience to move around the projected sculpture. I wanted to create a space that could both offer seats so the audience could opt for a more passive experience, closer to the notion of a movie room. But those who opted to move around, could notice that the sitting audience integrated the scenario created by the sculpture and the installed objects. In the case of *Manolith*, I placed two sofas facing the sculpture, center tables full of empty junk food packets, beer cans, etc.

I decided to keep this movement element in my final project but giving a more active function to the audience by using sensors that alters how the installation exhibits its video and audio content. I also wanted to experiment more deeply with the music element by mediating a collaborative creative process between the musicians I filmed and letting this created content be arranged and re-arranged with the interaction with the visitors in the installation space.

---

[4] https://vault.sfu.ca/index.php/s/5ikNTh68FJYk9L3

[5] Live cinema is another modality of video performance. The expression was originally associated to the early years of cinema, when a musician accompanied a silent movie exhibition. Nowadays, it can be understood as a performance that "encompasses forms of audiovisual performance that actively engage with traditional cinematographic conventions" (Menotti, 81). Independently of which approach it may have (experimental, classic narrative, live camera feed, etc.), what differs live cinema from the other video jockeying and audiovisual performance modalities is the addition of more elements to the audio, besides music, such as dialogs and voice over; and the focus on a more centered communication and meaning with the intention of keeping the audience engaged during the whole exhibition period.

Project Description

The installation is described in detail as follows:

Two pairs of identical sculptures were hung from the ceiling, occupying an area of approximately 200 square feet. This ceiling is made up of a series of wooden slats used to suspend electric cables, and hangs approximately 1 foot below a cement ceiling. On the left and right sides of the space, black drapes were installed to isolate part of the audio and light, darkening the installation space and making the projection brighter.

Each sculpture is an assembly of a 20-inch cubic cardboard box glued over four layers of insulation sheets forming a shape that resembles an architectural model. Each sculpture was painted white to reflect a mapped projection that came from two projectors positioned on the opposite sides of the space. Each projector beam could cover all the four sculptures. The mapped projection covered both the sides of each insulation sheet and the two of the four lateral faces of the cardboard boxes (See Figure n.2).

In the front and rear sides of each sculpture, a total of eight presence sensors that were connected to an “I-Cubex Digitizer”, an interface that translated the analog data sent from the sensors into MIDI messages. The I-Cubex Digitizer were connected to a laptop that processed all the digital signals received from the I-Cubex Digitizer, hosted the media database used in the installation, and sent the mapped video signal to the projectors.

The wooden ceiling was very convenient to fix the sculptures and the sensors as well as hiding the cables that connected to the computer. The computer processed all the digital info using the following software: *Editor X*, which translated the data sent from the *I-Cubex* system into MIDI notes; *Max MSP*, which applied a number of algorithmic rules to the sensor signal translated by *Editor X.* The *Max MSP* patch had the objective to expand the number of MIDI note outputs, avoid the sensor trigger stutter and trigger video loops without someone’s action, as well as automatically triggering all the twelve video channels every five minutes. The application *Resolume Arena* hosted and played the video database executing some rules regarding rhythm. In details, each time someone triggered one sensor and the MIDI message was sent to *Resolume Arena* to play a video loop, it was in charge of start playing the video in the beginning or in the

middle of a 115 BPM music bar. *Resolume Arena* was also used to execute the projection mapping, and applying visual effects to the video loops.

Each time someone passed under a sensor, it triggered one MIDI note that simultaneously played two video channels projected on two side faces of the cardboard box. On one side, it displayed a music video loop of one musician playing a musical instrument, and on the other side, it displayed another video loop showing a landscape image of the same place, city or state where the musician seen on the side was located. All the music video loops had the length of 16 bars in 115 beats per minute, except one loop that was longer, working as a drone to the other video loops. The melodic video loops were all in the key of F major so they could all combine easily and play together, independent of in which order they would be arranged by the visitor's triggering. I made this combination of applications to guarantee that

To help the visitor's perception of the sensor activity in relation to the mapped projection, I took a few strategic actions: First, when a loop stopped, instead of turning off the projected screen, it paused, Arena was programmed to create a visual effect to make the paused visual become an animated mosaic, turning it, little by little into an unintelligible abstract image. This decision was made to show to the visitor where the projection was and which channels weren't already triggered.

Second, I taped red triangles on the ground, right under each sensor. Third, I affixed little white ribbons near each sensor on the ceiling, revealing their positions to the visitor's eyes. Finally, in addition to the eight groups of two videos projected over the boxes, four of the sensors (one on each sculpture) triggered an animated video loop that was projected over the side faces of insulation sheets, approximately one inch high. Instead of starting at the beginning or in middle of the bar, these animations started right away, making the visitor notice the immediate reaction of their bodies in contact with the sensor's beam (See Figure n.3).

The Creative Process

As one of the main aspects of my personal creative research, I tend to let some facts of my personal life influence in the creation of my next artistic ideas, without sticking to a specific theme. I consider casualty, uncontrollable forces, and random facts

of life as important element of my creative process, considering even negative happenings as a source of inspiration.

For instance, what inspired me to create *The Living Surfaces #1: Manolith* was the fact that I was facing some cultural shocks, coming from Rio de Janeiro (Brazil) to Vancouver (Canada), especially in regards to the way many people I met dealt with material possessions. The decision to create an installation around the sculpture-screen was also the result of casual facts that happened during the creative process.

During the *Rhythmic Wanders* Process, I was initially inspired by the fact that I was gifted more than a hundred cubic white cardboard boxes previously used in another art project, combined with the depressing physical isolation I was facing during the winter of 2016-2017, and the cases of racial and cultural intolerance I repeatedly saw on social network websites. I watched the intolerant expressions from public figures such as Donald Trump in the United States and Messias Bolsonaro in Brazil, as well as anonymous internet figures, instigating hate, and highlighting differences.

For weeks, I felt depressed and limited, with my hands bound until I decided to move, to get out of my bedroom and work on a message that could, in contrast, unite people. I wanted to create an antithesis for hate and division, to give the visitors of my installation a welcoming and bonding sensation. I wanted to enforce the idea that what unites us humans is stronger and more important than what divides us.

When I decided to change my project from a performance (See Appendix A) to an installation, I knew I wanted to work with projection mapping, sculpture, music elements, and audience interaction via sensors. I knew that together with all the conceptual issues, an installation's creative process would bring other challenges, such as choosing the right space that could host the sculpture(s), the appropriate equipment, and still give proper space for circulation of visitors in between the elements present on the space, in this case "the sculpture-screens" and sensors.

Then, I decided to create a provisory prototype the sculpture-screen that could be used in my initial experiments. Following my original desire to work with urban architectural elements, I assembled some of the donated white cardboard boxes to create a shape that resembled a city landscape. (See Figure n.4). So I began capturing

images, editing the audio and video material, designing the interaction, while letting the final sculpture design develop together with the other artistic elements.

Fluid Shapes and Sounds

By the end of the winter of 2017, I was still defining the overall concept of this project but I already decided I wanted to work with an interactive installation with music video loops. Those days, I received a call from Gisele Kurtzman, an old friend of mine that was living in Portland, Oregon, and she invited me to spend some days at her new farm house. She also told me about another friend of hers, Dudu Fuentes, a famous musician from Rio de Janeiro. Dudu was coming to spend a few weeks in Portland, to give samba percussion workshops in Portland and he was willing to collaborate with other artists while he was there. That was the casual element I was waiting for! A few days after that phone call, I was arriving in Portland. Dudu was the first artist I officially invited to collaborate with me on this project.

When I met Dudu to record some footage for my project, we decided to drive around the city for an hour with the intention of developing a creative bond, to get inspired and wait until it's time to start his samba percussion workshop. Dudu asked me what and how I wanted him to play his samba instruments. Instead of giving him specific musical and rhythmic patterns, I just wanted him to channel his creativity, and asked him to play whatever he wanted. After bringing an assortment of samba instruments into a parking lot, Dudu played each percussion instrument, one by one, and I recorded his performance. He decided to play part of the beats he was going to teach to the students that day. These were the first videos for the installation.

With that casual experience, I decided how I was going to shoot my next videos and what kind of feeling I would aim to create with my installation. I wanted to fluidly capture multiple frames of my personal time and space, to bring it to the installation, and let the visitor(s) combine it freely. I wanted to let my history, my affections, my own social network show me the way I should trace. I wanted to let my musician friends and places that made part of my life's history to speak for themselves, as if I could gather all these friends together in a room and start a music jam. So, I decided to use whatever camera I could to capture any special musical moment I had with them.

This creative decision made me realize I approached my project to Bourriaud's idea of Relational Aesthetics (1998) by giving a bigger importance to the human relations than to my own personal artistic ideas in the creative process and let the artistic experience be collectively constructed. It can be seen in two parts of the creative process. One in the interactivity decision to let the co-create the music video, arranging and rearranging the loops by triggering them with their presence and body movements. The other expressed in the collaborative and socially fluid way I wanted to film these videos, letting the musicians imprint their own artistic personality to the recordings.

My strategy was to meet them, to hang out for a while creating a nice environment and bond, to talk about the concept of my project, and to ask them to play whatever their hearts told them to play. In effect, I created a kind of chain collective composition between musicians, separated by distance; musicians that sometimes didn't even know any other collaborator other than myself. I was the main bond between them, acting like a catalyst, a mediator of ideas.

During the next few months, I went to my home country of Brazil, and met with musicians that once was part of my life, and I repeated the same experience I had with Dudu Fuentes. We hung out, talked about our lives, my artistic project and anything else we wanted, made jokes, we ate together and at the end of the meeting, I asked them to play anything they wanted. There were no rules, only one suggestion: to play something in the key of F, so I could easily combine it with the other captured videos. But even the key note could be another one. The most important was to let each one of them play something that expressed how they felt at that very moment. For those ones that wanted to record in another key, I would change it to F in the video editing process.

In Rio, I met with my “music family”, the street band *Orquestra Voadora.* Before I moved to Vancouver, I used to play flute and percussion in the band. With them, I could record many Brazilian percussion and brass loops, as well as some dance scenes in the Bohemian neighborhood of Lapa. I also visited the last place I lived in Rio de Janeiro before I moved to Vancouver: *Bernardino Forest House* – a collective house located in Santa Teresa, the most artistic neighborhood of Rio de Janeiro. There, I could film my friends Soulore Soularis, an Australian guitar player living in Brazil and Angela Moura the manager of the collective house, playing Kora, an ancient West African harp. Then I

spent one weekend in Curitiba, where my friend Cesar Filho took me to the city's botanical garden and filmed myself playing flute.

After I returned from my trip to Brazil, I wanted to shoot additional footage in Vancouver. So, I invited Tobias Solei, a talented Brazilian multi-instrumentalist living in Vancouver. He met me at the Waterfront Station and we went together to Granville Island. At the end of the afternoon, I filmed him playing his clarinet by the water, among tourists and seagulls.

The last musician I filmed was Matthew Ariaratnam, my housemate and MFA cohort friend. We met at the Woodward's building, where I filmed him playing his electric guitar by the window. After that, we went for a walk in Chinatown. That day, we both felt a bit melancholic with the end of our MFA program getting closer. Then, Matt had the idea to take me to Andy Livingstone Park. He wanted to show me something special: a public vibraphone located inside the kids' area in the park. When we arrived, the place was full of kids having fun. Immediately, we started playing the vibraphone together, while the kids were playing around the space. That was undoubtedly the most spontaneous shooting I did. The kids and their parents started watching us performing. We stayed there for about 30 minutes, enjoying the beautiful sounds we made together. I realized I finally had filmed all the footage I needed; the last shot was made with the first friend I made when I moved to Vancouver. My eyes got full of tears; the video shooting stage was done.

For all the music videos I made, I had also filmed shots of the place where I met the musicians. But, in the case of the videos I made with Matt, instead, I used footages made from one special day we spent together: our visit to the Stawamus Chief Provincial Park, in Squamish, BC, when Matt had just moved to our collective house.

After recording all the loops and watching to them together, I realized that besides the multiple places where they were recorded, they made interesting stylistic mixtures, not only in their sonority but in social aspects as well: an Australian musician in Rio playing guitar; a Brazilian musician playing Kora, a mix of lute and harp original from West Africa; a Brazilian musician playing jazz in Canada; a Brazilian musician playing Samba in the USA.
The eclecticism, transnationality and transculturality I was exploring with this project

inspired me to design the advertising picture of the installation mixing colors and shapes, straight and curved lines, curved vertex squares of different sizes combined and juxtaposed to create a multicolored mosaic (See Figure n.1). This mixture represents the philosophy of this project, that whatever and wherever we play, music will always be music, a form of art that has a special way to connect people. This idea also resonates with my own national and multi-racial identity. Finally, these ideas also led to the inspiration for the final version of the sculpture-screens, which I will describe in details in the next section.

Putting It All Together – The Production Process

Once I finally knew exactly what I wanted to achieve with my project, I decided to make a mind map, listing and organizing hierarchically each step I should take. I divided my work into the main production stages I needed to complete: Technical and Spatial Evaluations; Software and Sensors Work; Video Production; Sculpture Design.

The “Technical and Spatial Evaluations” stage consisted of selecting the most appropriate space and dates for the installation, as well as the necessary equipment (projectors, speakers, cables, etc), and organizing the installation week work schedule. I noticed that each decision on this part of the process was very important since the space for an art installation might influence its creative process, enabling or disabling ideas I could previously have. Some steps of the process depended on this part of the production. For instance, I could only start constructing the sculpture-screens after defining which space I would setup the installation. After a few meetings with the SCA’s production crew to check what were the possibilities and limitations of each possible installation space, I decided to install on B1 level, the First Basement Floor in the Goldcorp Centre for the Arts. Despite the B1 area being a bit isolated, the space had the proper size for the projectors to be installed and I could take all the time I needed to occupy the space, installing the “sculpture-screens” and doing the projection mapping and the sound played in the installation could still be heard on the main floor.

The “Video Production” stage, besides all the creative process described above, also included the extensive video and audio editing work, preparing the files to play fluidly and fit to the projection mapping, as well as the projection mapping itself. I used a methodology I had earlier for *Manolith* developed to organize the mapping process.

The “Sculpture Design and Construction” was the longer and slower stage. It began before the first filming trip and it ended during the installation process. I wanted to make sure that this part of the project would occur without mistakes, and produce no regrets. A mistake in this part could represent a serious failure on the project. After two prototypes, I finally reached the final design.

I still wanted to use the cardboard boxes, but I wanted to make something more than just stacking them; therefore, I reduced the number of boxes used, and instead of one large sculpture, I settled upon 4 smaller ones distributed on the space as if each of them represented a different location (See Figure n.5). This reduced the number of faces I could project onto and gave more space for the visitor(s) to circulate. The curvy and straight-line shapes also enforce the mix of styles present in the project. Lastly, hanging them on the ceiling made positioning of the sensors and the projectors much easier, while more visually interesting. One personal interpretation of these unusual upside down architectural sculptures was to see them as an ideal parallel universe, where all the differences commune, keeping the harmony between themselves independently of whatever external forces were applied.

Gluing the cardboard boxes to the cut insulation layers reduced the sculpture's "ready-made" feature and enriched its possible associations to the idea of an architecture model, a building, a map... The insulation layers also served as mapped projection surface, using a more complex screen deformation by following its curvy shape, instead of the squared shape of the boxes' screen. This kind of effect is one of the reasons that justify the use of projection mapping instead of using real video screens. Naturally, having lower expenses with material in general, lower technical complexity, and lower physical weight making it easier install and disassemble also justifies my preference for the use of projection mapping over sculptures. After the advent of projection mapping technique to achieve such, or even similar, visual effect with any other kind of video exhibition technique, from analog video to led screens, sounds too complex or expensive.

The “Software and Sensor Work” stage was one of the most exciting and challenging parts of this project. While I knew exactly the kind of interactivity I wanted to produce since the beginning, I didn’t know what best equipment to fulfill these visions.

With the support of Stefan Smulovitz, I selected and purchased the I-Cubex system and the motion sensors.

My wish was to trigger a specific music video loop from the database every time someone walked into a specific area of the installation space. I had to make sure that each of the music video loops would be triggered, with proper rhythmic alignment while maintaining the original key. This was one of the reasons I chose the software Resolume Arena, in addition to its Projection Mapping abilities. But I still had to select the most appropriate sensors, tune them with the I-Cubex System's software, and test them with my video database.

With the help of Professor Arne Eigenfeldt, we created a Max/MSP patch that expanded the number of available video clips that could be combined among the 8 mapped screens. The files were divided into 3 groups of 8 files, and the Max patch would switch between groups every 5 minutes. Another function of this patch was to automatically trigger the videos every 5 minutes, regardless of audience interaction, so it could call the attention of anyone who could be casually passing by the space.

On the penultimate night of the exhibition, I decided to do a surprise meeting, inviting all the collaborators and some friends to visit the installation and to participate in the video registration of visitors in interaction with the piece. The meeting turned into some kind of artistic happening, we were all playing and dancing with the piece. It was then that I noticed the different ways of interaction with the installation, reaffirming how the body's movement added to the performative potential of the piece. This is one aspect that I hope to explore more deeply in the future.

Reflections

As a final project for a Master in Fine Arts, I felt pretty proud to create *Rhythmic Wanders*. The initial objective I had with *The Living Surface Series* was to do creative research on novel ways to combine several different aspects of my practice: the creation of sculptural screens, whose artistic concept had a direct connection to the projection content; projection mapping, a technique that I still have a lot to discover and experiment with; and interactive performance, which connects with Lev Manovich's concept of

Database Narrative (2002) as a narrative created by the interaction with a predetermined media database.

In *Rhythmic Wanders*, I put the narrative and performativity in the hands of the invited musicians with the story of our friendships and their own vision of our meetings, the visitors with their wandering bodies, and the installation itself. During the production, I saw myself as a combination of mediator, film director, and music conductor, as well as a musician in some of the music video loops. But also I had the opportunity to act as a social agent, offering a feeling that could (or try to) go against so much hate, fights and sorrow which I have witnessed recently.

I could bring together much of my musical life, not only as an artist, but as integrant of a community, a network that goes beyond the limits of language, nationality, culture, and style. I could pre-arrange these affective memories and let other people create musical narratives with their bodies.

The project required a significant amount of organization in moderating all the stages of this production, including organizing performers and locations in two continents: this represented a particular challenge to me. The end result was not only a learning experience, but an opportunity to further develop my multidisciplinary artistic practice in the combination of filming, designing, and creating the sculptures, to the design and programming of the sensor system. I feel that my future artistic research will continue to explore such multi-varied approaches.

References

Bourriaud, Nicolas. *Relational Aesthetics*. Les presses du reel, 2002. Print.

Cameron, Allan. *Modular Narratives in Contemporary Cinema.* New York: Palgrave MacMillan, 2008. Print.

Carvalho, Ana; Lund, Cornelia, Ed. *The Audiovisual Breakthrough*. Berlin: Collin&Maierski, 2015 Online.

Lévy, Pierre. Cibercultura. Trad. Carlos Irineu da Costa. São Paulo: Ed. 34, 1999. Print.

Manovich, Lev. *The Language of New Media*. Cambridge: MIT Press, 2002. Print.

Meigh-Andrews. *A History of Video Art*. London: Bloomsburry, 2014. Print.

Menotti, Bruno. “Live Cinema.” *The Audiovisual Breakthrough* edited by Carvalho, Ana; LUND, Cornelia, Collin&Maierski, 2015, pp. 80-108. Online.

Salter, Chris; Sellars, Peter. *Entangled – Technology and the transformation of performance*. Cambridge: MIT Press, 2010. Print.

Spinard, Paul; Ulto, Melissa. *The VJ book – Inspirations and Practical Advices for Live Video Performance*. Los Angeles: Feral House, 2005. Print.

Small, Christopher. *Musicking*. Hanover: University Press of New England, 1998. Print.

Vesna Victoria, editor. Database Aesthetics : Art in the Age of Information Overflow Mineapolis: University of Minessota Press, 2007. Print

Other Pictures

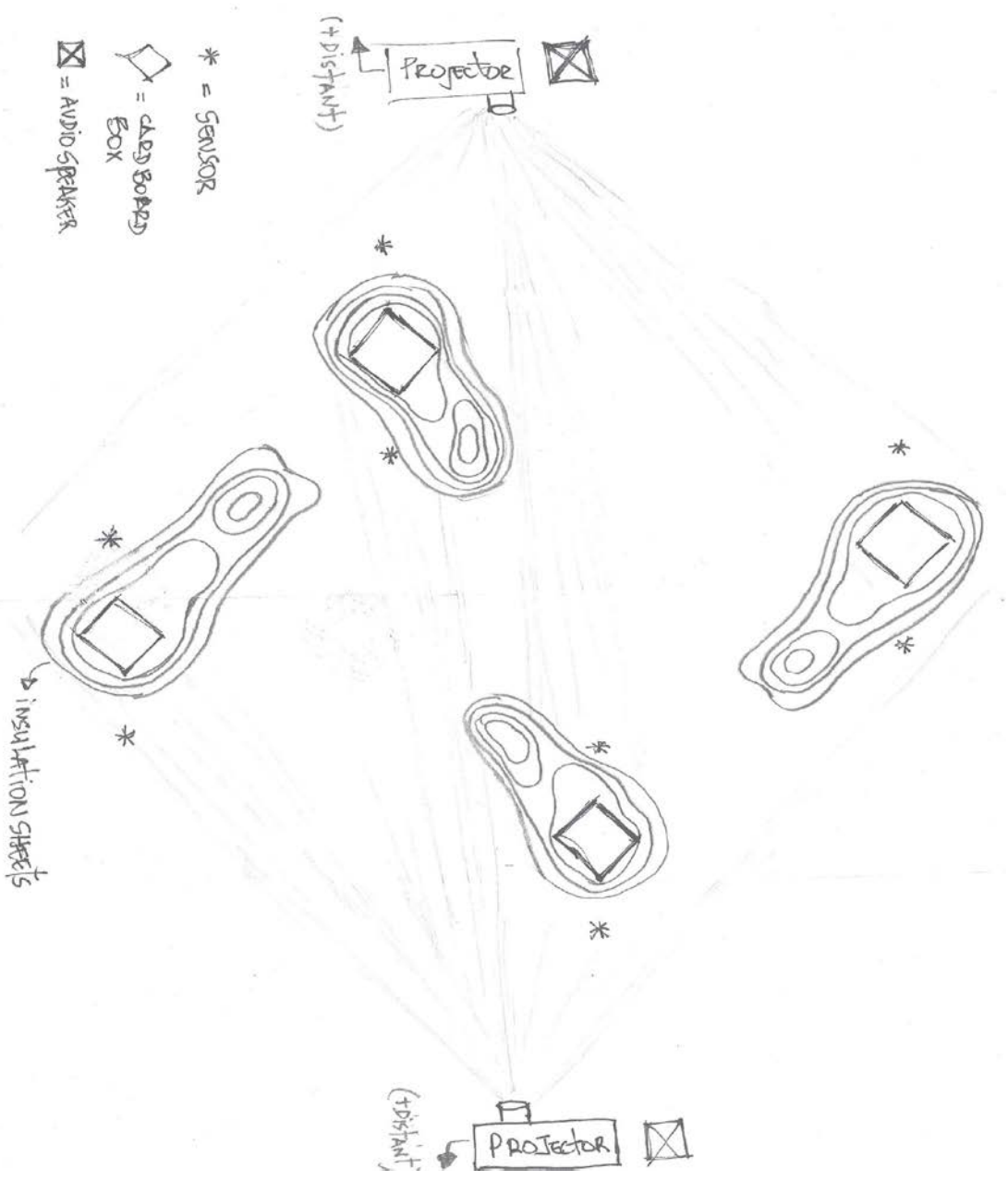

Figure 2. Overhead Diagram - September 2017

Handwritten by Marcelo L. Vieira da Silva

Figure 3. ***The Living Surfaces #2 – Rhythmic Wanders,*** **Exhibition on October, 2017 – Vancouver, BC**

Photo by Marcelo L. Vieira da Silva

Figure 4. “Sculpture Screen” First Design - March 2017

Photo by Marcelo L. Vieira da Silva

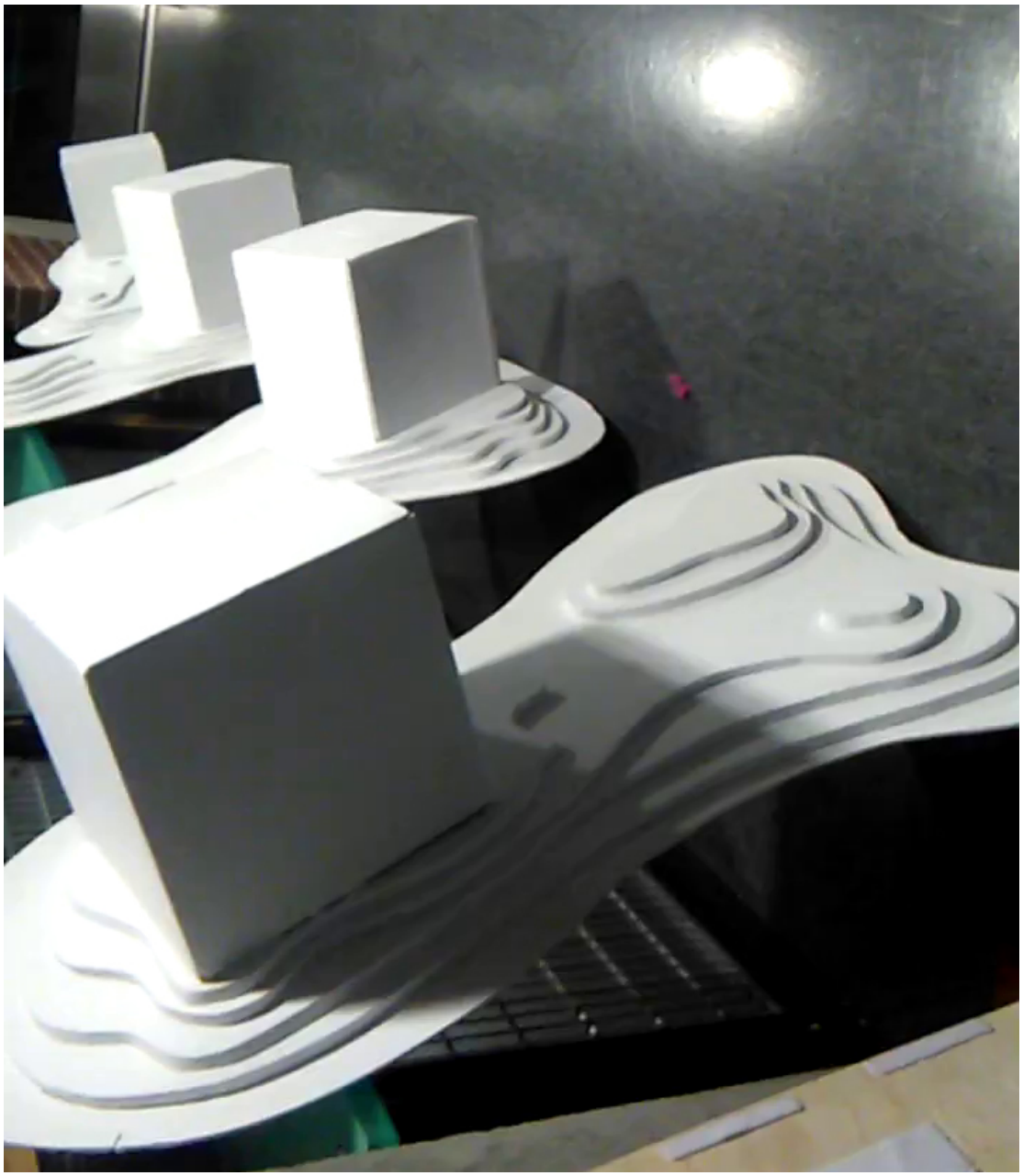

Figure 5. “Sculpture-Screens” Final Design – September 2017

Photo by Marcelo L. Vieira da Silva

Appendix A.

The Living Surfaces - A Hybrid Live Cinema Series

1. Introduction.

Since the beginning of my studies at Simon Fraser University in the Master of Fine Arts program in September 2015, my artistic research has been focused on creating digital video performances that promote crossings between narrativity, spatiality and the materiality of the screen. I decided to turn my latest video performance work “The Living Surfaces #1 – Manolith” (See Figure n.6) into a series of works and create The Living Surfaces #2 – The City Opera (temporary title) as my final project.

Part of the challenge of my theoretical research has resided in the fact that the different terms that name the different kinds of “artistic live practices that present sound and image through technological means” (Carvalho and Lund 5) are confused both in the academic and professional environments. So, based on my own artistic experience I choose to use the term “Video Performance” or “Digital Video Performance” as a general term that divides into the following modalities: Live Cinema, AV Performances and Video Jockeying, among others. These three terms were popularized worldwide over the last 20 years by a growing number of artists working with the increasingly cheap new media tools. Each of those modalities presents particular characteristics and contexts, but all of them have common characteristic of live manipulation of digital images.

Another important reference for one in search of a deeper understanding of what Ana Carvalho and Cornelia Lund call the relatively new “Audiovisual Breakthrough” is Gene Youngblood’s concept of “Expanded Cinema” as a work of art that tries to discover and understand new forms of (audio)visual communication, and deconstructs the established audiovisual forms of fruition (TV, Movie Theater, etc.) through experimentation with ~~the~~ media content and technology, its narrativity as well as the spaces of exhibition. It has been an important reference for my artistic research as well, especially for the **Living Surface #1**, which I will comment later in the next section.

I consider it important to briefly expose some differences among Live Cinema, VJ and AV Performances before we move to the next section. To begin, the acronym VJ stands

for either Visual Jockey, Visual Jockey or Video Jammer. Each translation emphasizes one of its technical features, but all of them relate to the live manipulation of video images in public events, in general accompanying a live or mechanical soundtrack. This expression was first used in the New York club scene, inspired by the DJ acronym (Disk Jockey). Besides having previous connection with analogic techniques, Video Jockeying is nowadays closely connected to the electronic music scene. The VJ media set is a database of easy access image files made mostly by pre-edited video loops, photographs and live rendering graphical tools with which the artist interacts in the presence of an audience. Part of the VJ's and DJ's expertise is to improvise his set based on this audience feedback. The content projected has a deeper connection with visuality and rhythm than with the narrativity and creation of meaning.

The idea of an Audiovisual Performance or AV Performance is the same as in Video Jockeying but the performer (or group of performers) also creates the music, through electronic or analog ways. While a VJ casually connects his/her usually rich content of images to the performance of a DJ, musician or band that in many occasions he comes to know only on the day of the performance, without deeper information about the music repertoire, in an AV performance, the projected content is conceptually connected to the performed music. In both VJ and AV Performances it's common to make use of multiple screens to call lose attention of the audience to the images. In a dance floor or a music show, the screens share audience's attention with many other elements coming from social interactions.

The expression Live Cinema had originally been associated to the early years of Cinema, when the silent movies had musical accompaniment, but in its refreshed version nowadays, it can be understood as a video performance that "encompasses forms of audiovisual performance that actively engage with traditional cinematographic conventions. Precisely which conventions depend on whom you ask" (Menotti, 81). Some artists defend an approach closer to the notion of Expanded Cinema, in the search for a rupture with traditional narrative, exploration of other spatial and projection settings. Others defend that structured narrative is a rich and important asset of Live Cinema. One example is the British VJ Toby Harris, who created what he calls a *Live Cinema Documentary* - "*Experimental Documentary About a Contemporary Art Practice"*

(2010)[6]. In this work, Harris follows the documentary narrative style mixing his media set, composed by music files, video loops, captured testimonies, etc., with live capture of his own computer screen to talk about the act of making Live Cinema.

Another interesting approach to Live Cinema is the use of live camera feed. The acclaimed film director Francis Ford Coppola with his recent ambitious fiction project entitled *Distant Vision (2010)*[7]. This production design reminds one of Live TV and live drama and musical shows. In this project he and a big group of artists and technicians make a live action fiction, captured by a large and complex set of cameras and microphones, edited live by himself and broadcasted live to a movie theater.

All of these approaches to Live Cinema are agreeable and what remains as a common characteristic is that the music driven VJ and AV performances give space for a more centered communication with the objective of the creation of a meaning strong enough to keep an audience engaged during the exhibition period. To achieve that objective, a performer or a group of performers can make use of numerous elements that video and film may offer. That includes live acting, voice-over narration, animation, music soundtrack, sound effects, live camera feed, live effects, multi screen, projection mapping [8], etc. The novelty of this art form starts in the arrangement of any of those elements in a database with which the performer will interact, triggering, combining, transforming and improvising on the fly.

Even if we still do not have a consensual definition of Live Cinema, and even if we do not know what the boundaries between it and the VJ and AV Performances are, the extensive creative potentialities of the concept of Live Cinema are clear. Because of the wide range of creative options offered by the concept of Live Cinema, as well as my desire to use narrative in my performances, I became more interested in this modality.

My intention with this paper is to discuss the *Living Surfaces #1* in the context of Live Cinema, its creative process and the gradual discovery of its production particularities. I want to show how this experience guided me to my current thinking about what I want to

---

[6] https://vimeo.com/9065736

[7] https://vimeo.com/130273727

[8] Projection Mapping or Video Mapping is a video projection technique for projecting over irregular object usually made for giving animated abilities to the object.

create with my final artistic projet, temporarily called “The City Opera,” as well as to compare its production process to a traditional movie process.

2. The *Manolith* Experience

I define the *Living Surfaces #1* – “Manolith” as a hybrid of Live Cinema and art installation in which a tridimensional sculpture serves as a screen. It was created and first presented during my studio classes at Simon Fraser University in 2015 and posteriorly exhibited in the Master of Fine Arts Spring Show in 2016.

My initial desire was to bring in experimentations with the exhibition space and the projected screen, working with the techniques of mapped and multi-screen projection and some questions that appeared in my artistic practice over the last years.[9] These were techniques that I have used before in several projects but my video projections were often used as a complementary element to projects of other nature, such as music and dance shows. I had the sensation that the screens with which I worked were only shifting from the central position of the movie theater to the condition of prop in a spectacle. My wish was to use the mapped projection technique for a work in which the projection occupied a more central position and the screen seemed to be the lost link to achieve that.

The projected surface is a sculpture about 3 meters high, made with wood, paper maché, and a white round balloon filled with helium gas tied on top of it (See Fig 2). The sculpture is inspired by the figure of the “stick man”, this faceless anonymous and sexless effigy of human being. In the way it is placed in the space, the object resembles some kind of monolithic totalitarian statue. The round balloon is used to represent the stick man’s faceless head. The paper mache is made of several pieces of appealing newspaper and magazine ads lightly painted white. Inside the sculpture (in the chest region) there is a mini wifi infrared camera recording what happens in one of the couches and sending live images to my computer.

As the viewers come inside the studio room the lights are on and they are able to see what the sculpture is made of, and even read some parts of the ads, strategically selected and painted lighter. While the audience gets inside the room, the lights are on

[9] The most of these works can be seen in my blog: http://celo-vieira.blogspot.ca

and there is an ambient song being played. The first song I selected was “Que Será, Será”, performed by Doris Day and in the Spring Show, I changed it for the song “True Love Ways”, performed by Buddy Holy. This song was used in Egypt as the soundtrack for a controversial series of TV ads for Panda Cheese products[10].

The spatial setting also represents an important part of the work. In the installed space (a 25 square foot studio with dark walls) two couches are placed, each one facing opposite sides of the sculpture. In front and beside the couches, four coffee tables are filled with paper tea cups, old newspapers, empty beer cans, candy bars, potato chip bags, 7-Eleven paper boxes, and all sorts of used packages. The placement of the couches and the coffee tables creates an ambient setting that resembles a western middle class family living room, a traditional place for TV entertainment and advertising consumption. In the center of this living room there’s not a TV or a Computer, but the *Manolith* sculpture. Behind one of the couches, there is a mirror of 10x4 feet and behind the opposite couch, my table, where my all my gear is stored.

The live movie projected over the sculpture/screen is about 10 minutes long and is projected on the front and rear side of the sculpture. It mixes dance, poetry and animation to explore how humanity has become a prisoner of its own desires in the deeply technological and consumerist society we are all living in. These desires are the consequence of a constant attack of our self-esteem conveyed through advertisements we are excessively exposed to in our daily life. Unlike traditional narrative, this narrative is not constructed based on cause and effect, but metaphoric and metonymic associations between what’s shown in the different parts of the screen, the installed space, the soundtrack and the audience movements.

What follows is a brief description of the projection: It starts with the smiling and welcoming faces of a man and a woman on opposite sides of the balloon. As the entrance music finishes, the lights are suddenly turned off, revealing that all the time there was a pulsing image of a human cardiovascular system projected over the sculpture body. A dark soundtrack starts to play. It’s a low frequency drone with frequency waves in the same rhythm of the pulsing veins. Little by little, the cardiovascular system is covered by an animation that transforms the image into a sort of street map, like the ones extensively used on mobile phone map applications.

[10] https://www.youtube.com/watch?v=XYz3sl0LEA4

When the map is fully covered, another face (Raj Gill) covers the smiling faces and starts to recite the apocalyptic poem “Huxley's Kaleidoscope: O Brave New World” by Cherylyn Vardi[11]. As the poem is recited, the chest exhibits a mix of time lapse footage of the city of Vancouver (scenes of cars and trains, people shopping, stores in downtown, etc) and the live camera feed of some of the viewers sitting on the couch. The squared base surface starts to display an animated sequence of old unrecyclable products. After the poem, the face (balloon) screens exhibit a random sequence of a collection of aggressive TV ad excerpts on both opposite sides. These images are video loops dubbed by a group of actors (Marie Wimbledon, Anwar Nasr, Eduardo Lopes and myself) in English, Portuguese and Arabic – it’s a choice I made to intensify the international nature of the theme. While the ads are sequenced randomly, sometimes on the front side, sometimes on the back side, the body part of the screen displays a sequence of choreographed movement loops performed by the naked bodies of a man (Mark Abordela) and a woman (Minah Lee) on each side. These movements are inspired by possible psychological reactions to what is being said by the head’s ads. One of head screens then starts to recite an increasingly frantic sequence of common advertising sentences (Raj Gill). At this moment, the opposite side of the body screen displays Raj’s arms executing choreographic movements inspired by military movements. This video, as well as the dubbed ad videos, are sometimes displayed on only one side of the head, suggesting that the audience has to keep moving around the sculpture if they want to see all the images. Raj’s frenetic sentences then start to mix and glitch with the ads’ voices, reaching an overwhelming level. At this moment, the increasingly stressed and repetitive movements of the naked bodies projected on the chest are juxtaposed with the live camera, and random city images shown before. The juxtaposed videos and their simultaneous sounds helps to create a tense mood until a moment that both bodies scream out loud. All the images stop and the head displays a TV static image.

The experience of transmitting this message with a structured meaning, which I organized in the form of a table for reading as if it was a screenplay or even a music score, represents a full experience of working with what Lev Manovich calls the Database Narrative (2002): A Narrative that results through the interactive use of files

[11] Huxley's Kaleidoscope: O Brave New World” by Cherylyn Vardi : http://www.poemhunter.com/best-poems/cherylyn-vardi/huxley-s-kaleidoscope-o-brave-new-world/

organized in a database. The art of video performance resides partly in the construction of this database in a video performance software and mapping the files of this database in a control surface generally via one or more MIDI control surfaces[12].

Within this project, playing with the sculptural aspect of the projection surface became just as integral and influential in my work as the content of the video that I would be projecting and this became the key concept that led me to see the Living Surfaces as a series of projects I wanted to continue to develop.

During the creative process of the *Manolith,* I faced a number of production questions and challenges that made me learn much more about the production particularities of a Mapped Live Cinema Project. These will certainly be useful for my final project.

First, due to the use of the projection mapping technique, the creation of a model, even if temporary, is crucial. Therefore, the sooner this part of the work starts, the better. A well devised spatial distribution of screens counts as an important part of the concept of the work. In this series, the images influences the screen and the screen influences the image.

Second, the production plan for filming and editing the footage has to carefully consider the number of simultaneous screens you want to share your sculpture into work. In the case of *Manolith* I shared my sculpture in 6 screens, which requires about 6 times more video footage to produce and assemble in my performance database. Another important part of this writing process is to create a screenplay adapted or adaptable to a multi screen context. This adapted version of a screenplay can begin as a table where you create a column to address specific scenes or dialogue to a specific part of a screen or even specific controllers of your control surface.

Third, one of the most complex parts of the creative and production process of a Mapped Live Movie project is the creation of the database. Technical choices such as which software and MIDI control surfaces are going to be used, which file types are going to integrate the database can guarantee the success or the failure of a performance.

---

[12] Midi Controllers are hardwares that generates and transmit MIDI (Musical Instrument Digital Interface) to the computer generally used to trigger sounds and control interactive parameters of MIDI enabled softwares.

Fourth, once the content production and the database assemblage is finished, it's important for a Mapped Live Cinema production to save a considerable amount of days for the stage setup and rehearsals. This part of the production is like any theatrical spectacle and many unexpected problems can arise during the setup process. For the *Manolith* setup I saved 3 days and it still had a tight schedule. If there are other types of live performance such as live music, dance or live acting, the necessity for rehearsal time becomes more critical.

Finally, exhibition of a Mapped Live Cinema project is not as easy as the exhibition of a normal movie, because of the screen setup process and the fact that it needs performer action for it to happen. Because of that, a Mapped Live Cinema performance is closer to the notion of spectacle and tour of the performing arts' universe than to the notion of exhibition and distribution of the film's universe.

3. The City Opera

My initial plan for the second project of the Living Surfaces Series is to invest deeper in storytelling, to interact with other performing arts on stage, and to change the spatial settings. My wish is to move from an installation setting where the audience can freely move around to a theater with chairs, turned into a movie theater by placing the sculptural screen close to the proscenium. In this spatial setting the mobility of the audience is drastically reduced and the focus on what is being projected increases. The screen will be made of a mix of opaque and semi-transparent surfaces and all the performers will be placed behind this big screen.

The reason I made these changes is because I want to experiment working with a setting that permits me to arrange a bigger space for the live performance of the projected and audible content and have the option to hide and be revealed by the control of the lights behind the screen and the projection brightness. This setup will permit me to bring live music and even live acting via camera feed into the performance.

Currently, I am working on the screenwriting process and one important way I found to move ahead with this part of the process without knowing exactly how much funds I'll have available for this production was to create a story that can be shorter or longer, a story that can adapt to external limiting factors.

An inspiring concept that I discovered during the latest days of my research is the notion of Modular Narratives, coined by Allan Cameron in his book *Modular Narratives in Contemporary Cinema* to define a trend of complex and intricate stories inspired by the modular subdivision of databases, and that subvert the notion of time and space. Stories such as *Pulp Fiction* by Quentin Tarantino and Roger Avary (1994), *Run, Lola, Run* by Tom Tykwer (1999), *Eternal Sunshine of The Spotless Mind* by Charles Kauffman and Michel Gondry (2004), *Groundhog Day* by Danny Rubin and Harold Ramis (1993) and *Timecode*, by Mike Figgis (2000) can be seen as one of the four different kinds of Modular Narratives exposed in his book.

Thus, I decided to organize my narrative into modular stories that happen in a common space: initially a city. I am creating a collection of little musical stories about the collective and private spaces. These modular stories will show how the combination of the urban architectural space and the digital spaces of new media gadgets are remodeling the human behavior both negative and positively.

4. Conclusion

In this paper I presented my Live Cinema project The Living Surfaces and reasons for turning it into a series of works. I started from briefly contextualizing Live Cinema between the confused flood of concepts the scene of Video Performances, stating that one of the main differences between the notion of Live Cinema and other modalities of Video Performance such as VJ and AV performances is present in the approach to its communication flow that in Live Cinema is more centered. Then, I showed how my experience resulted in the discovery of a number of particularities in my artistic work.

Now it’s time to work on the production of *The City Opera* and the notion of Database Narrative and Modular Narrative serves as a reference for understanding such a new form of work. As well as it happens with the scene and the concepts around the Digital Video Performances, there are a lot of questions to be answered in regards to the production in the next months. But many of these answers are going to be discovered by

trying.

Figure 6. Living Surface #1 - Manolith, Photo by Marcelo Vieira.

Figure 7. **Living Surface #1 – Manolith (Sculpture and detail), Photo by Matt Ariaratnam.**

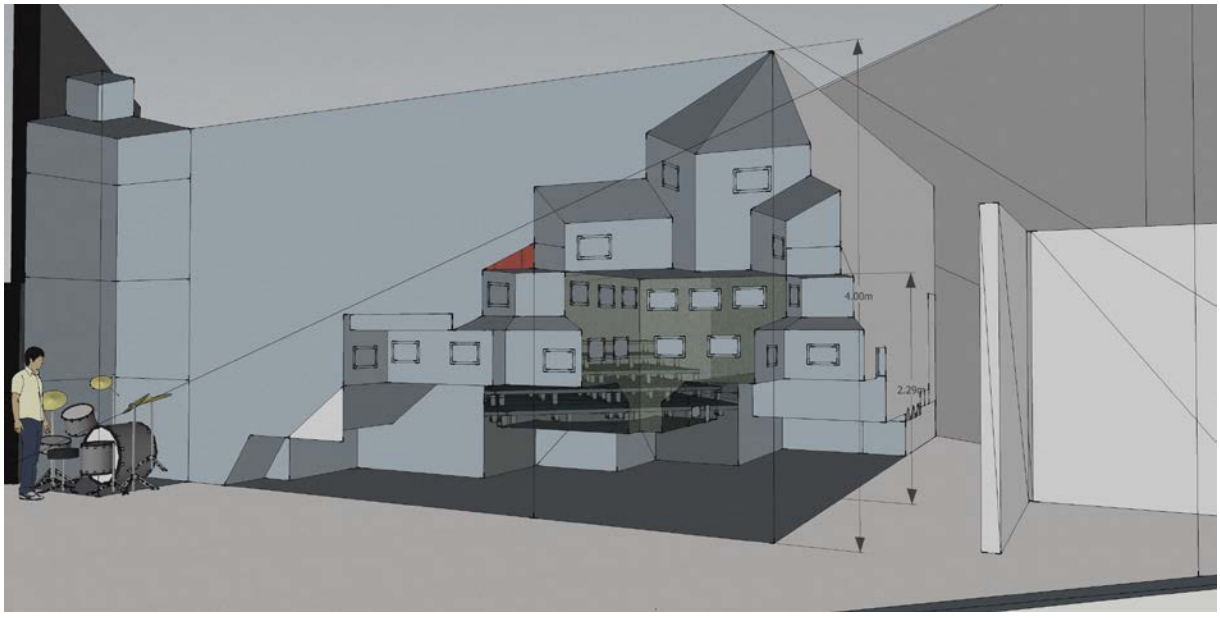

Figure 8. **The City Opera 1st 3d Draft (Backstage) – by Marcelo Vieira**

Bibliography

Bordwell, David; Thompson, Kristin. Film Art: An Introduction. Reading: Addison-Wesley. Ninth edition, 2009. Print.

Cameron, Allan. Modular Narratives in Contemporary Cinema. New York: Palgrave MacMillan, 2008. Print.

Carvalho, Ana; LUND, Cornelia, Ed. The Audiovisual Breakthrough. Berlin: Collin&Maierski, 2015 Print.

Manovich, Lev. The Language of New Media. Cambridge: MIT Press, 2002. Print.

Menotti, Bruno. “Live Cinema.” The Audiovisual Breakthrough edited by Carvalho, Ana; LUND, Cornelia, Collin&Maierski, 2015, pp. 80-108.

Salter, Chris; Sellars, Peter. Entangled – Technology and the transformation of performance. Cambridge: MIT Press, 2010. Print.

Spinard, Paul; Ulto, Melissa. The VJ book – Inspirations and Practical Advices for Live Video Performance. Los Angeles: Feral House, 2005. Print.

Vesna Victoria, editor. Database Aesthetics : Art in the Age of Information Overflow Mineapolis: University of Minessota Press, 2007

Appendix B.

Video Documentation

Filmed by:

Marcelo Vieira and Anwar Nasr

Description:

The Living Surfaces# 2: Rhythmic Wanders - Installation's video documentation

Filename:

LS2 VideoDocumentation.mp4