

SHORT DESCRIPTION OF THESIS PROJECT

Our Heart in the Cloud, is an experiment in site specific, audiovisual installation that imagines a future where the line between the technosphere and the biosphere is ambiguous. Through an archive of rasterized, unquantized heartbeats, and digitally simulated 3D growth systems, a creature of design fiction is brought to life--its presence, a call to meditate on the coming collapse of virtual reality and physical space. The implications of this reconciliation are myriad, but this project isn't a diatribe against any social change or technological progress associated with it. Rather, the work reflects on a question that Robrecht VanDerbeeken puts forth in his essay, *Web Video and the Screen as a Mediator and Generator of Reality*, "What do we take as real nowadays?"

PROPOSAL WRITING

Introduction to me **Slide 01**

Hello everyone and thank you very much for attending my proposal for thesis.
My name is Teej Orloski and I'm studying Video & Sound Art.

Let's get into it~I would like to start with a short preamble, to give you some context as to what my brain is going on about.

(Take a drink, breathe once or twice)

Preamble **Slide 02**

As an artist or more importantly perhaps--as a 90's kid, I'm interested in the glass web that we have spun for ourselves. This web, made of transcontinental fiber optic cables, satellites, and glass windows in our pockets; have proliferated reality totally. Its something so fabulous and unreal, and I've seen it change the world in my own lifetime.

I'm interested in the "next 50 Billion devices" and what software is going to be run on them.
What information will these devices access? And transmit?
What spaces are these connected devices creating?

I see monoliths rising from our glass web, platforms like Google and Facebook--institutions in their own right by now,
and understand that these virtual spaces are mediating human connection, and that with new media, old media practices tend to stick around for a while.

Our new digital spaces are practically free to use, but are they really?
What is this mediation costing us.

The Project **Slide 03**

For my thesis, I propose to create a project addressing techno-mediation in the context of human collectivity.

Sender / Receiver is an experimental sound sculpture which utilizes micro-radio technology to **narrowcast** a transmission of heartbeats derived from participants over a hyperlocal space.

Using a specialized microphone I will tap into the electrical signals that every human heartbeat produces, and by combining the signals on looping recording tape will create an **involutionary** polyrhythmic soundscape.

(drink here)

Involution & narrowcasting ~~~~ Slide 04

You'll notice that I emboldened these two terms, **Narrowcast** and **Involution**, these terms are keys to engaging with my work and line of inquiry.

I'd like to share what they mean to my practice.

Let's begin with the latter term: *Involution*

Involution ~~~ Slide 05

Involution, as I understand it, is a concept used in evolutionary biology and brought to the arts by Carla Hustak and Natasha Myers, and further expounded on by Donna J. Haraway.

Involution describes the confluence of evolution.

It essentially says:

No thing and No one acts alone, our world, the creatures in it, the canyons carved by millenia of river water are all a product of involution.

*

Everything is involved with the creation everything.

*

Therefore the idea of involution applies to the internet and devices, and is a lens I use to engage with the technosphere.

Polyrhythmic Heartbeat Module ~~~ Slide 06

The PHM was an experiment with crowd sourced art and involution. In this project the relationship between the participants is the content. The module uses coding and infrared sensors to extract pulse data from the viewer wearing the sensor (on their finger), and triggers a drum hit every time their heart beats. The idea is that two people are hooked up to the module, and create a unique polyrhythm collaboratively.

I'm going to play the video now :)

(watch the video here)

The module is a process evolution. It **involves** multiple people to create an experience only possible because of their involvement.

Narrowcasting ~~~ Slide 07

Now to jump back to the other key term:

Narrowcasting is the opposite of broadcasting. While broadcasting attempts to reach as many people as possible, narrowcasting focuses on an immediate community. In the world of radio transmission, this might be a proximate space from the size of a room to a neighborhood.

It is a term I've sourced to **Tetsuo Kogawa**:

A transmission artist and philosopher associated with the Free Radio movement in 1980's Japan:

Free radio formed around cheap DIY micro radios then, as an anarchic system of communication which allowed political activists to coordinate, and more meaningful local dialogue to be distributed and engaged with.

Microradio offers the possibility of "touching and being touched." in a grassroots organic way.

His open source designs for electrical circuits have served as both an inspiration to my studio practice and have directly helped me craft the hardware needed to explore my ideas. His manifestos on new media have been a regular reference for me.

Slide 08

An example of one of Tetsuo Kogawa's open source circuits:

This is a micro radio that I built, capable of transmitting audio signals up to 9 meters without an antenna, and on FM frequencies;

Which just so happens to be the legal limit in Oregon for such a device by the way ;)

Electrical devices/tutorials ~~~ Slide 09

The wider DIY community on places like Youtube have also been a great source of inspiration and reference for me

Here I have come up with a VCO, which is a circuit which oscillates electrical signals, into a noise making device. It is an expansion on a design by British musician Look Mum No Computer.

(Watch video here)

Heartbeat Microphone ~~~ Slide 10

This is a work in progress, it's a special microphone that I hope will capture the audio signal produced by the pulse of heartbeat.

It sadly does not work as of yet.

Tape Loops ~~~ Slide 11

I've recently acquired a vintage tape recording machine, and have been exploring its potential for a creating a "space" on which many viewers can interact with other viewers (or listeners should i say?) that have recorded into it in the past.

This example is a simple "four on the floor" kick drum pattern, continuously recorded for 30 minutes. You'll notice that the pattern has generated into something else. It is no longer a simple drum beat, but has been offset by the tape, and tempo to create a more organic sonic environment.

(Watch Video Here)

This is one technique and medium which will prove vital for exhibiting the collection of heartbeats that the viewers will record into the sculpture.

Other Artists and inspirations ~~~ Slide 12

Some artists that are currently inspiring this project:

Nam June Paik:

Was a Korean American artist, often attributed to creating Video Art as a thing.

His work TV Buddha 2 suggests an "antithesis between transcendentalism and technology"

was equally present in his own personality.

And how beautiful is this visual analogy

That he had made.

Christian Boltanski:

Is a French artist working with heartbeats as an ethnographer.

This is an ongoing work, it's an archive of thousands of recorded heartbeats.

The archive is housed in a dedicated structure where visitors can listen to individual heartbeats, and read notes that have been left with the recordings.

Overview of the final project ~~~ Slide 13

So to jump back to why I'm here--to propose a project--let's talk about it a little more.

This project is an ode to togetherness, and sameness, collaboration and humanness.

It's a techno space where human sounds are messages declaring the existence of its participants.

In Sender/Receiver, it is emphasized the Sender **is** the receiver. It is through adding individual "voices" together that we create collective meaning and significance.

Essentially how it works is,

Participants are invited to record their heartbeats into a constantly revolving tape loop. This loop acts as the substrate

Bibliography

Rael, Ronald. *Borderwall as Architecture*. Oakland, CA : University of California Press, [2017].

[Instead of fighting construction of the border wall, become involved in its conception and subvert its purpose from negative to positive]

Case, Amber. *Calm technology*. Sebastopol, CA : O'Reilly Media, [2016].

[Non-Intrusive Design of electronic devices and software]

Related but different media:

<https://youtu.be/D5neEzKMCIA> - Amber Case : Calm Technology ; Thinking Digital

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[gamification of the internet, IoT, and social media]

THESIS ABSTRACT

Our Heart in the Cloud, is an experiment in site specific, audiovisual installation that imagines a future where the line between the technosphere and the biosphere is ambiguous. Through an archive of rasterized, unquantized heartbeats, and digitally simulated 3D growth systems, a creature of design fiction is brought to life--its presence, a call to meditate on the coming collapse of virtual reality and physical space. The implications of this reconciliation are myriad, but this project isn't a diatribe against any social change or technological progress associated with it. Rather, the work reflects on a question that Robrecht VanDerbeeken puts forth in his essay, *Web Video and the Screen as a Mediator and Generator of Reality*, "What do we take as real nowadays?"

The inevitable collapse "...of a transparent, undeniable and convincing manifestation of reality" or, augmented reality, is especially pressing in light of the "50 billion smart devices" predicted by technologists and anthropologists to proliferate the world in the coming decades. It is important to question the institutions associated with the "involution" of intelligence and technology, and to reexamine the interaction design of our devices and the web.

THESIS ORAL SPEECH

Foreword

Hello.

How are u all?

How am i do u ask?

I'm sick and sleep deprived and it's now the time for, arguably, the most important presentation of my academic career.

Hello friends, peers, esteemed panel.....thank you for attending my thesis defence at such an early hour. It really means a lot to me,

I'm also frightened, but that's alright.

(look around the audience at your friends and peers)

So many lovely people

So, Before I get into the project,

I quickly have a few things to say,

And some people to thank,

(Take a drink of water)

Okay...

Can you hear me alright? The acoustics in this space are not ideal

~~~~~  
First,

I want to acknowledge that the land now known as Portland rests on the traditional village sites of the Multnomah, Wasco, Cowlitz, Clackamas, Bands of Chinook, and many other Tribes who made their homes along the Columbia(Wimahl)and Willamette(Whilamut) rivers.

Today, our region's diverse and vibrant Native communities are 70,000 strong, descended from more than 380 Tribes, both local and distant.

I want to recognize those Native communities in our region today, extend my deepest gratitude to those who have stewarded this land, and offer my respect to their elders

past, present, and future.

~~~~~  
Additionally,

I want to thank my instructor during thesis proposal last semester, Sara Siestroom.

And I extend my gratitude to my thesis mentor Stephen Slappe for guiding me through this whole process, holding me to deadlines, and generally supporting me while creating this work.

I also want to thank my friends who are here and those who are not, and my partner Elena.

Alright,
Let's get into it.

Introduction

I am Teej Orloski by the way, just in case.

(change slide to ig handle)

You can find me on instagram @teej.o

Yes, this is a shameless plug

.....

I hope you all got a chance to see the piece before the lights were brought back up.

There will be some time after the speech,
questions and panel meeting to check it out
if you haven't already.

Okay cool.

~~~~~  
I'm going to be taking a lot of sips of water because I've recently gotten down with a sickness  
Only 90's kids will know that reference.  
Okay...

**(BREATHE)**

**(breathe)**

There will be plenty of bad jokes in this presentation

This project,

*Our Heart in the Cloud*, is an experiment in site specific, audiovisual installation that imagines a future where the line between the technosphere and the biosphere is ambiguous. Through an

archive of rasterized, unquantized heartbeats, and digitally simulated 3D growth systems, a creature of design fiction is brought to life--its presence, a call to meditate on the coming collapse of virtual reality and physical space. The implications of this reconciliation are myriad, but this project isn't a diatribe against any social change or technological progress associated with it. Rather, the work reflects on a question that **Robrecht VanDerbeeken** puts forth in his essay, *Web Video and the Screen as a Mediator and Generator of Reality*, "What do we take as real nowadays?"

(bop that water)

The inevitable collapse "...of a transparent, undeniable and convincing manifestation of reality" or, augmented reality, is especially pressing in light of the "50 billion smart devices" predicted by technologists and anthropologists to proliferate the world in the coming decades. It is important to question the institutions associated with the "**involution**" of intelligence and technology, and to reexamine the interaction design of our devices and on the web.

I want to touch back to that word **involution** because it is a very important one to this project, Even if it isn't mentioned much throughout the rest of this presentation.

(water probably)

(breathe)

**Involution**, is a concept used in evolutionary biology by **Carla Hustak** and **Natasha Myers**, and brought to the arts by Donna J. Haraway. Involution describes the **confluence** of evolution. It essentially says:

No *thing* and No *one* acts alone,

our world, the creatures in it, the landscape that was carved by millenia of water and held together by plants are all a product of involution.

Therefore the idea of **involution** applies to the internet and devices and us, and is the primary lens with which I use to engage with the technosphere.

So . . .

(water bop)

As a digital artist or more importantly perhaps--as a 90's kid, I'm interested in the glass web that we have spun for ourselves. This web, made of transcontinental fiber optic cables, satellites, and the *black mirrors* that fit in our pocket, has proliferated the world totally.

And this is an ongoing process. 24/7. nonstop.

Of course, I'm talking about the internet and its myriad manifestations in physical space.

A technology that is barely older than me.

It is something so fabulous and unreal, and I've seen it change the world within my own brief lifetime.

(breathe)

I see monoliths rising from our glass web, megacorporations like Google and Facebook---institutions in their own right by now, and understand that these designed virtual spaces they offer us for free are conflating reality with designed truth, and in effect are reshaping our perception of what is real. Capitalism on our phones is still capitalism, only it's more sly.

I'm interested in, as **Amber Case** cites in her book *Calm Technology*, the "next 50 Billion" smart security cameras, smart fridges, wifi connected billboards, mobile phones, smart glasses, etc. that technologists and anthropologists are expecting to be manufactured and distributed in the next decades around the world.

(bop the water)

I wonder about the semantics of what we call a person consuming content or services online, the "user"

(Slow down)

I don't believe it's a coincidence that the quantitative measure of probably every successful online platform is appropriating a derogatory term that describes someone who might be experiencing the entrapping nature of substance abuse.

(slow down, breathe)

Substance abuse has been a 7 year experience of my life that I have only begun to climb out from this year in a meaningful way, My experience with substance abuse also informs my perspective on the future of technology. For me, it's not hard to square substance abuse with techno abuse. I might've reacted the same way if I had left smartphone or If I had left my pills on the train I wouldn't have left either of them.

(drink water)

So then,

*Our Hearts in the Cloud*, is also a response to my love(slash)destructive relationship with technology

It's an aversion to something that could take over my life,  
alter my behavior and outlook  
slowly without me realizing it,  
like illicit substances have before,  
or how being raised under the strict authority of a fundamentally far-right christian community  
has.

(water bop)

But again, please do not take this thesis project as a diatribe against social media or  
technology, because it isn't my intention.

It is a call for you the viewer,

All of you artists and designers here;

to contemplate, for five minutes--or longer if you are into this sort of stuff

On the opportunities of interaction design in smart devices,

And its ability to manipulate behavior,

especially the way we treat each other,

(water bop)

Full disclosure, I am a proponent of what I call "constructive trolling" in online multiplayer video  
games, but that's not within the scope of this presentation. Perhaps, this is something to tackle  
in a future project, building on this one.

(breathe)

As I've mentioned before,

*Our Heart in the Cloud*, is an experiment in site specific, audio-visual installation art. The project  
utilizes a small archive of recorded human heartbeats that I have collected,

They are entirely sourced for this project from peers and friends,

some of you might be here,

My heartbeat is in the mix as well.

The French artist **Christian Boltanski** calls the heartbeat,

"[a] unique kind of portrait ...

drawing on the unifying life symbolism of a beating heart."

these 'Heartbeats' ...are evidence of boltanski's utopian struggle to preserve life.

this interpretation of Boltanski's work informs how I view the heartbeats in my work,

(breathe)

Those of us in the audio recording, have finally transcended our fragile human containers and  
will live on forever as the binary code of a sound waveform in a digital audio workstation.

(breathe)

In the installation these “heartbeats” are formally crafted as rhythmic landscapes, with its peaks and valleys emanating from the hanging parabolic speakers.

(point to speaker nearest to you)

I chose to use these particular type of speakers as a way to direct the viewer through the space,

(slow down)

The acrylic dome helps to contain the sound’s direction,  
And offers a rewarding clarity when you stand directly underneath them.  
I’ve placed them strategically,  
Hoping that the viewer will connect the sound emanating from one of the speakers,  
To The visuals of the pillar most visible from that location

There are two different sound pieces for the two speakers,  
In one of them

(breathe)

I’ve superimposed each heartbeat onto the others on a digital substrate, i.e. a .wav file,  
Like the nodal relationships of “friends” on Facebook might be, this creates a relationship  
between the people that have contributed their rhythmic identities to the sonic landscape.  
These “symbols of life” are brought together to echo the fact that we do indeed live together on  
the substrate called Earth.

It is important to me that we are here together, to remember that sparks empathy, and perhaps  
a path to harmony

(water sips)

(bop the waterrrr)

the other sound piece,  
Consists of a single heartbeat recording,  
This is my heartbeat.

(show video/audio of a single recording of a heartbeat)

(Close eyes, nod to the beat of the heartbeats)

(next slide of growth sim)

On the pillar you might have noticed the organic forms straddling its facets.  
They are procedurally generated growth simulations,

Which are vectorized 3D meshes that follow computer logic such as booleans and for-each loops to emulate things like coral growth, or cell growth.

It is a logical way of image making, where rules are set up, and then strictly followed by the simulation software.

The simulations here are by no means scientifically accurate representations of growth, but my hope is that the viewer can find something organic or natural about it.

I have only been introduced to this mode of image making this semester, and so all of these simulations are from tutorials.

Granted they have my own twist to them,

But they begin from simple geometry like cubes or toruses,

I've chosen certain patterns and shapes based on

resemblance to something like coral or lava or tree roots.

Something elemental and easily identifiable as originating in the natural world.

In any case they look natural enough, don't they?

(water?)

It's my hope that the formal qualities of the growth systems

Such as their form and magnitude

help the pillar move past it's function as an architectural object, but something more like a tree with digital bark, something that is alive and with us

That is Simply borrowing the form of the pillar.

(breathe)

I used this pillar to plant my virtual tree because of what it represents.

It is structurally integral to the building being held up above us right now.

This pillar informs the structure of the rest of the building.

Online social platforms facilitate communication in much the same way.

**Where else could this take place? Or what might be a better location/space?**

Together, I imagine the audio and visual design of this project to be a speculation of some future creature or object, a *Design fiction*, as **Julian Bleeker** put it in his paper, *Design Fiction*, "a conflation of design, science fact, and science fiction ...

an amalgamation of practices that together bends the expectations as to what each does on its own and ties them together into something new."

In *Our Heart in the Cloud*, my design fiction is where the line between the technosphere and the biosphere is ambiguous. Of heart palpitations and simulated machine models.

Not quite human, not quite machine. This is a cyborg future that I don't believe to be far away, if it isn't already being stitched together in some secret lab of the remotest kind...  
Probably deep beneath the ocean or a mountain cave...

But Where is the overlap between the Technosphere and the Biosphere?

It is here and now. It is in the overlap of our daily excursions through the city, neighborhood, or office and those moments when we check our phones for emails, inboxes, links and likes, news, status updates, or amazing shit on Reddit...

As **Robrecht VanDer beeken** writes in his essay,

*Web Video and the Screen as Mediator and Generator of Reality*,

"[The screen] ...is not a neutral supplement to what we experience with our own senses.

Rather than just representing our world, audiovisual media radically mediates our perception of reality, including our perception of ourselves and our relation to others. To a large extent, the screen dictates how we perceive reality."

Perhaps one of the most significant and a recent example of this dynamic can be seen in the role FACEBOOK played in the U.K.'s Brexit referendum, where swing voters in forgotten parts of the country were targeted relentlessly by emotionally evocative Vote Leave ads.

**Lauren Lee McCarthy's**, *Facebook Mood Manipulator*,

Is a web browser extension

based on Facebook's research into massive-scale emotional contagion through social networks. offers the viewer an opportunity,

"Why should Zuckerberg get to decide how you feel? Take back control. Leverage Facebook's own research to manipulate your emotions on your terms."

**I think more interventions like this are needed**

(breathe)

I think this a good segway into where I want this project and line of inquiry to grow in the future.

This project as it is in this room right now,

Is meant for an audience of artists, and other creatives that are associated with PNCA.

I can't escape the thought that I'm projecting onto a pillar in the basement of an art school.

In my proposal, these soundscapes were going to intervene in radio broadcast, but I think I respect radio too much now. I couldn't live with myself if I inadvertently interfered with a station like X-Ray fm.

Instead,

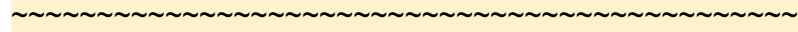
I want to continue finding analog to digital conversions,



Similarly to how I've converted the pulse of individual heartbeats into a soundscape.

I see this kind of work developing into organic interventions in clean virtual spaces like google maps, facebook, youtube.

Online, our social infrastructure can dictate what information we are exposed to, and even encourage us to feel a certain way about it.  
I want to do something about that.



Again,  
Thank you for attending and listening,  
I really hope there was something you can take away from this.

## **ARTIST STATEMENT**

Teej Orloski is a digital artist and technologist whose work investigates interaction design in “smart” devices, and the rasterization of Earthly biology on digital substrates. Their work often takes the form of audio signals produced by analog means--such as the pulse of the human heartbeat--and computer generated graphics of simulated natural occurrences. The work is a composite of the real and the digital, asking the question, “What do we consider real?”