Telling Stories in the Dark:
a feminist thinks with virtual reality

By Lauren Connell-Whitney

A thesis exhibition presented to OCAD University in partial fulfillment
of the requirements for the degree of Master of Design in Digital Futures

Toronto, Ontario, Canada, 2020

Copyright Notice

Abstract

This work explores how women can share knowledge through storytelling in the virtual space using a Virtual Reality (VR) headset, to understand how spaces of quiet and being alone, like one might experience in a virtual reality headset can allow for reflective and generative knowledge sharing. Here and in a VR space I created, I share my own stories of how feminism has shaped my life, using storytelling to examine why we might place importance on personal reflection as a form of cultural growth. The VR space, Aspasias, functions as a pilot project to bring these stories into the virtual space to share them with others. Aspasias uses a rhizomatic structure as a cue to navigate through the complexity and multiplicity of knowledge that makes its way into the shape of a story. My hypothesis is that the qualities of presence and immersion in VR can enhance the telling of a story and that the use of a headset as a form of sensory concentration (or some might say, deprivation) can allow for the user to reflect on the story differently than one might in a non-virtual space. The findings of this research contribute to how we might think of VR as a space for reflective (un)learning through personal narrative and how story can make its way into the virtual commons.

Acknowledgments and Gratitude

In a way, this piece is about recognizing the people and stories that build your life, and so, here are some of the people that supported this work in very direct and indirect ways:

To Suzanne, for your utter understanding and innate ability to "eek (yes eek!) out the plumb line". And for so much encouragement and enrichment. As many have said before me, you have gone above and beyond in your support. I cannot thank you enough. A true feminist practitioner, toolbelt included.

To Cindy, for your very pointed look at this work from another perspective. Your critique and guidance have offered good reason to think about my decisions from other angles. You have taken the time to think through this work with a *careful* outside perspective for the benefit of its creation. I say careful, which at its core incorporates *care* into critique.

To all of the faculty of the Digital Futures program. This experience has been something to change the course. Like a wind current taking you in all the directions you never wanted to go or even thought of. For good and for bad, for the sake of growth.

To Ily, my grandmother is 93 at this time, raised eight children, and is the reason I was able to complete this work. She enabled the privilege of education, in so many ways, for her whole family. Thank you.

To J, who turned up when all was lost.

To Sam, for financial support, in times of need. Money is something people don't like to talk about, but is such an incredibly important type of support, especially when these types of educational endeavours are involved.

To my parents, you have always raised me to think past the surface and to think (probably too) deeply about the world. And to tell stories. Thank you.

And finally,

To all the feminists who have made this world a place to keep living in; who birthed the words and ideas before me, that illuminated a dark path to express my thoughts clearly.

 -LCW

Table of Contents

List of Figures

Preface

We all have a story to tell that explains the how and why of ourselves. These stories we are built on mean something; they assist in how we travel through the world. The year is 2020. Sharing wisdom, of course, still happens in person, but many of these conversations are happening on the internet. The way we interact with information on the internet is scattered, yet can be completely interconnected. This kind of learning through the (world wide) web is self directed; this kind of learning has a multiplicity of becoming in an entanglement of (rhizomatically) connected ideas. The virtual reality (VR) space is a newer tool that people are using to interface the internet. Virtual Reality can have the additional attributes of place and immersion that might be experienced in the intimate darkness of the headset. I seek to use the headset and the virtual space to tell stories, share wisdom and unlearn codified ways of being. It begins with me, mutating into an interconnected place where ideas can form kinship and string figures in the dark.

Chapter One: An Introduction

0.0 A Place to Start

> "We tell ourselves stories in order to live." wrote Joan Didion
>
> in *The White Album* (2006 p. 185).

> "The child is the mother of the woman." wrote Rebecca Solnit
>
> in *Recollections of My Nonexistence* (2020 p. 13).

The way we tell stories changes over time, as does what those stories mean to us; they assist in how we travel through the world. Storytelling is a form of generative knowledge sharing.[1] This writing and accompanying virtual reality space is created with the understanding that the personal is utterly entangled with the growth of our cultural commons[2]. I propose that the way forward for a more equitable, feminist future is to share these personal truths and to examine the value sets of the personal as contributing to the outlook of the whole.[3] I am also exploring the use of virtual

---

[1] (Brophy, 2009, p. ix)

[2] See The Commons in Glossary of Terms

[3] See 3.3 The Euphemism of Feminism and the Personal is Political by Carol Hanisch.

reality to share these stories; because how are we to live and understand this world fully, if not to participate in the building of our digital advancements for the commons of everyone.

1.1 The Beginnings

Thinking back to my outlook on life, even as a young child, I was lucky enough to be raised by parents who had given me the opportunity to do all the things the boys could do… except play cricket, or wear shorts to school. I grew up in Zimbabwe for my most formative years from the ages of seven to fourteen years old. I wore a school uniform. Sometimes I watched some of my classmates be forced to eat pieces of the heinous Lifebuoy soap that sat next to the classroom sink after swearing at the teacher. And most importantly I always made sure to follow the rules and be a good student so I never was on the receiving end of the corporal punishment wooden spoon with a smiley face painted on it that sat in the headmistresses office. I was made to play field hockey instead of cricket. The girls wore dresses. At some point in the fourth grade, the boys got to go watch movies, and all the girls were ushered into a classroom where we were told that our vaginas would be referred to as "tomatoes". There we were very badly educated about our soon to come period (a sponsored activity from a woman from the Johnson & Johnson Corporation). The euphemism

of a tomato still makes me cringe in amusement and insult to this day. I always

thought these structures of decorum we were directed through were strange, though

as a child I did what I was told, and banked these memories tightly in my formative

mind's eye. Why did the girls get to do one thing and the boys do another? Gender

was clearly delineated and a definite source of discrimination in Zimbabwe. Race

was another. I was lucky to go to a local school with a racial and cultural diversity

among both the students and teachers.[4] I remember my third grade teacher telling us

about growing up in Apartheid,[5] I remember her rage. She was the best teacher I had

in elementary school and she made us all understand, even at that young age, how

wrong discriminating against someone was, for any reason, not just race. However...

she was the notorious soap feeder; we can't all be pious all the time.

These recollections from my childhood have played a part in the formation of my

reactions and outlook on gender, education and oppression. In writing the above

story, it is interesting to note what parts of these memories shone out in my mind.

The tomato is a marker of why I believe that all genders should be taught the same

---

[4] I was also lucky to be white skinned in Zimbabwe, looking back on it now. But, I wouldn't say I felt lucky to be foreign. My foreignness made me so visible, it was something that terrified me in the newness of moving. Being Canadian was something that made me stick out from the rest of the class, something that I was constantly made aware of, bullied for. It was something I didn't want at the time, but what child wants to be singled out. (See 1.3 Virtual Worlds)

[5] Apartheid was the institutionalized systematic racial segregation that took place in South Africa from 1948 until the early 1990's (South African History Online, 2016). However the effects of these laws are still rippling through all of Southern Africa to this day. The deeply complex human damage that systematized oppression has inflicted in all parts of the world is not something that can be easily undone. I tell these stories to make sense of a time and place; with the understanding that the intricacies of human experience cannot be separate from the problem or solution.

thing, at the same time. It is also why I think that children should be taught about their bodies in a realistic way. I can only imagine the damage that class incurred on the other girls who were learning to be women just as I was. The scorn and hurt in my, usually composed, teacher's voice made me understand that cruelty is not easily forgotten, and that cruelty can be inflicted by all people in big and small ways. What is so powerful about memory is how it is representational of our reasoning.[6] Meaning making happens as we reflect on the events of our lives.

1.2 Feminist

In my early 20's I was a bicycle courier, it is without a doubt one of the toughest jobs out there, especially if you decide to deliver in the winter. It enabled me a lot of freedom, the ability to work when I wanted and being outside for work was a welcomed change after years of being in a darkroom developing photos or staring at a computer for hours. I did this job both in New York and Montreal for a number of years and something that was clear in both places was that as a girl on a bike, you were not respected. Cat-calling abound while riding, and the local bike shop would constantly belittle and disregard my mechanical knowledge.[7]

---

[6] See 4.2 Reflection, Storytelling and Autoethnography

[7] A woman's body, even in 2010 when I moved to Montreal, even in 2020 the year this paper was written, is understood by many women as a source of shame and being not good enough because of this environment of disdain and of oppression. Iris Marion Young writes of oppression as "the vast

When I moved to Montreal, I found a job at what many had said was the best courier company to work for in the city. My dispatcher Louis took, what I thought, was a liking to me. I arrived at the office on the dot at 8am everyday despite my strong dislike of early mornings. I never called in sick at freezing rain or serious snow days like the old boys did. I stayed out on the road until after dark at 6pm in the dead of winter. He could send me on runs that no one else would take; from Old Montreal to the top of the mountain with no complaint (for those who don't know the geography of Montreal, this is a straight shot of climbing extremely steep hills). I never delivered a package late. I was polite on the radio. Louis said I was his best rider and always had a smile. Week after week I was busting my body and mind working as hard as I could, but was barely able to pay my rent, which, in Montreal, is cheap. Courier work is generally commission based, paid by the package and the distance of the delivery. It is a very hard job that is given little respect, for not much pay. I started asking around to my peers if my paychecks were normal, $300 for more than a full week's worth of riding at the best company in the city was abysmal and unsustainable. I had been learning around town that Montreal courier rates hadn't gone up since the 70s. For some reason I considered that maybe the rate was just that bad; I was new to the city after all. I was the only female rider that company had,

and deep injustices some groups suffer as a consequence of often unconscious assumptions and reactions of well-meaning people in ordinary interactions, media and cultural stereotypes, and structural features of bureaucratic hierarchies and market mechanisms—in short the normal processes of everyday life." (Heldke & O'Connor, 2004, p. 5-6)

and was one of three women on the road at the time. I finally confronted Louis about this. Why was I working harder than most of the riders and making exactly half of the rest of the team. His face contorted when I showed him my pitiful paycheck, and he seemed genuinely shocked. He said he didn't know how much the riders made and would look into it.

I kept working at that company for another few months, my cheques did get slightly better, but never were the same as my male coworkers. I started having conversations about how women were treated as couriers with my peers. Many revealed that the company I worked at was notorious for underpaying their female riders. I finally quit and moved on to a company with a weekly guarantee, for all riders. Which meant less back-breaking work for more and equal pay. This is just a small example of the many experiences I have had in my life of working harder and receiving less than my male peers. Something about this story has stuck with me. Louis telling me I was his best rider, because I got the job done and never complained about the hard work, that I always left and arrived with a smile. These are examples of a type of work ethic many women have, with value given to co-operation, support of your peers and mutual respect, over purely financial gains. These values are embedded into the values of feminist entrepreneurship in the same way they are at the core of social enterprise: the goals of business must reach further

than money.[8] The fact that Louis was so appreciative of some attitude changes in daily ways of being in the workplace is an instance, even if small, that could lead one to believe in the power of mutual respect and cooperation.

1.3 Virtual Worlds

When I was in my last year of high school I won an award. Though today I only have a vague memory of what it was and why I received it. I had completely forgotten every memory of this award until a couple years ago when my father mentioned it while we were talking about public speaking. I was dumbstruck, "What award?" I asked. How could I have received a supposed high honor and entirely had no memory of it? The next part of the story was chilling. My father told me that there was a special awards ceremony for five students each receiving a special honor for a particular achievement in school. We each had to prepare a speech for this triumphant event. I had struggled with shyness for most of my childhood and teen years; this endeavour was more than terrifying. Thinking back on this, I have some

---

[8] Ideas of discrimation have been present in my life since I can remember: telling the story of Louis is only one example of how gendered discrimination is embedded into our communities. Louis genuinely liked me and appreciated my contributions, but, coming from his own time and place, could not see the inequity of what was going on. Business and capital is at the core of our society, so using business for change is a way to combat these cultural and institutional discriminations. It is almost like shaking the system from the inside out. By shifting the value set of business to create something that can still function in the structure of our society might actually make widespread equitable change in a wider context than enterprise. (See Feminist Entrepreneurship in Glossary of Terms).

blurry memory of my parents gently asking me about what I had written for the event on the weekend before, and a tiny piece of white paper with not much scrawled on it. — I could not for the life of me understand why I had no memory of this whole thing. "It was a fancy thing, people dressed up and it was at night," my Dad said. "Your name was called, we were so proud of you. And then you got on stage, with the spotlight on you... and you just stood there. Frozen. For a good two minutes! And then someone pulled you off stage." At this point we were both irrationally giggling at the scene he had just painted. Now I understood why I had no memory of this TERROR. My worst nightmare had happened in real life and I had completely blocked out the trauma, the embarrassment, the fright.

I still struggle with speaking in front of people.[9] There is a special feeling that goes with standing in front of a crowd and presenting my thoughts to the world. It is something that is hard to describe and difficult to overcome. I first tried a virtual reality headset at an event for creatives that spoke about power and progress. It was a less than inspiring talk, but the pre-event of testing out a new drawing program in VR was the thing that stayed with me for weeks after. It was a 3D Virtual Reality drawing program called Masterpiece VR. This space felt like an endless box of opportunity for me, even though I was surrounded by a literal amphitheatre of

---

[9] I personally believe that my fear of speaking in public has something to do with the discrimination I have either experienced or seen others experience when sharing their thoughts in the past. Knowing that a woman might face harsher criticism can lead to second guessing one's ideas and might lead one to let others speak for fear of the consequences. (Tessier, 2016)

people, I was on stage drawing like no one was there, and for me as a person with near crippling fear of having the spotlight on my thoughts, this was revelatory. As an artist, this place felt new yet extremely natural to use.

Two years ago I had an opportunity to meet the creators of a VR public speaking tool called Instage. They market it as a tool for management to practice simulations of employee training, though it has other far reaching uses of public speaking. I walked in and shook hands with the creators. Then they said, "Why don't you give it a try?" Headset on, very aware of my audience of near strangers, the demo began, and the avatars in the simulation asked me a series of interview questions. I answered gingerly, because though there were real people standing in front of me, the virtual scene was awaiting my participation. I went through about five minutes of this interview and then we stopped. I think they were chuckling and probably didn't expect me to answer aloud in the simulation. However, this made me think. Even with my fear of speaking in front of people, I somehow met strangers and answered several questions fairly easily with only a tiny bit of that crippling feeling. The only difference was that I was doing it with a headset on. There was an incredible power in being alone in that space that made me begin to understand the properties of this thing. Virtual worlds have been with us always, we dream, we tell stories, we read books; but this digital virtual place is something new that is allowing for new interactions and reactions in both our virtual and real worlds.

Virtual reality has been a place of exploration for me, it has also been a place of quiet reflection. Putting the headset on allows you to travel, away from the room you are in, to another place, be it a complete fantasy space or a 360 video representation of somewhere in the real world. The experiences I had in VR were leading me to imagine a virtual thinking space where ideas could be visualized, and thoughts could be explored. A place where a woman might be able to feel the freedom to explore and unlearn some of the gendered expectations of how she *should* be, so that she might start to think about what she *could* be. I seek to make a place where my stories can be told in the darkness of the headset, what follows will be an exploration in research-creation on a path to seek darkness and authenticity for reflection and growth. The stories I tell act as the process and content for what is to come.

1.4 The Question

How might we use Virtual Reality as a space for reflective (un)learning and personal narrative?

1.5 The Rationale

Gilles Deleuze and Félix Guattari (1987) present the rhizome as a concept to think about learning and sharing knowledge in a different context. As a person who decided to pursue higher learning; education, of any kind, is something I continually think about. How we learn is inextricably linked to our psychology and emotional state (Granger, 2011, p. 188). The process of all kinds of education and learning can support and stifle all at the same time. Formal education can be said to be thoroughly entangled in the capitalist hierarchies of power.[10] Adversely, the rhizome is a way to think about decentralizing thinking and learning. The rhizome is a root system with no center, it grows horizontally and outward (Deleuze & Guattari, 1983, p. 7). It is a way of destructuring how we might learn and share knowledge. To unlearn these codified ways of being that are restrained by our gender, class and power. The rhizome is constantly changing and mutating; if we allow ourselves to (un)learn the vertical structure of how we "should" do things. The opportunity for a new architecture of agency is possible. The rhizome makes possible a constantly changing, connected, system of influence, people, opinions and ideas. Our learning is a becoming.[11]

---

[10] See 3.1 The Currency of Knowledge

[11] In Politics of Touch: Sense, Movement, Sovereignty, Erin Manning (2009) uses the tango to talk about how intricate systems of power can be. "Tango is a movement through politics that both reinforces the status quo of the politics of national identity and transgresses these very politics." (p. 3).

I have always been a storyteller, a tradition, no doubt, passed on to me from my father[12] to whom it was passed on from his father.[13] I grew up in Zimbabwe, a country with a strong tradition of sharing wisdom through story, where the oral tradition of sharing folktales about animals explains the world we live in (Atagucci, 2010). Storytelling, for me, is the most beautiful and appropriate way to share the meaning made from our experiences. The nuance of our lives sometimes cannot be explicitly told.[14] The motivation behind our decision making process is intimately linked to our life story, our system of influence, the people in it, their opinions and their ideas.

In the spirit of interconnectedness and the multiplicity of learning I will use stories from my life to form pathways between feminism, learning and business to

---

A dance that follows strict rules and conventions, yet is completely dependent on a conversation between two bodies. To negotiate the body's movements, and to listen to the becoming of what two entities can create.

[12] My father is a lifelong entrepreneur, however, he has also been an actor and writer for most of his adult life. He is a seasoned teller of stories. I see storytelling as being at the core of business. You are asking for someone to buy into whatever you may be selling, whether that be a product, service or idea, and telling the story of that thing is a tactic of growth.

[13] I have never met my grandfather, he died when I was a baby. He was a showman, and a part of Canadian history; Moxie Whitney and his Big Band Orchestra. My grandfather was the bandleader who played the Imperial Room nightly at the Royal York Hotel in Toronto from 1948 until 1972. A man who told stories through music so people could communicate through dance. The politics of touch – a conversation of becoming – enacted nightly.

[14] Anthony Paul Kerby (1991) writes, "Narratives are a primary embodiment of our understanding of the world, our experience, and ultimately ourselves…to yield a form of understanding of human experience, both individual and collective, that is not directly amenable to other forms of exposition or analysis" (p. 3)

understand how cultivating one's voice through self inquiry and shared inquiry might lead people of every gender to engage in more complex conversations about power and equality.

In Chapter Two: Context I will be telling the stories. These stories are both the content and the context. I am borrowing a page from Colette Granger's book. In *Silent moments in education: an autoethnography of learning, teaching, and learning to teach* (2011) Granger coins the term, "circumnarratives", which are what she describes as, "short passages describing events outside the strict boundaries of the study but which nevertheless affect and guide what goes on within it." (p. 15). These stories I am laying forth will act as the connective tissue of this work.

In Chapter Three: Theorizing on a Dark Horizon, I begin an inquiry into the aspects of knowledge production and the commons seeking to find how we might unlearn some of these structures of capitalism.

In Chapter Four: A Method in the Madness I will continue telling stories, but will be defining some of the methodological approaches that have guided the research. The storytelling, reflection and memory begin the foundation for the creation process. As my creation continued I realized that the process of creating was part of the work, it was in fact a research-creation.

In Chapter Five: A Projected Path, I discuss the creation of this work, which ultimately followed a rhizomatic evolution. Where I began was not where I ended up. Reflecting on the journey is how we can learn and consider the wisdom gleaned in the process.

Chapter Six: The Next Chapter is just that, it is a place to have future vision in light of all that was learned through this process, to see what was found, understood and what was not.

There is a Glossary of Terms on page 88, I urge you to refer to it as you read. It is a place where I spent some time contemplating on what the theory attached to this research meant to me in this work. I also encourage you to read this work in whichever way suits you, it can be read from beginning to end, but many of the chapters and subchapters can stand on their own and be read in any order. If you so chose to follow the rhizome where it grows.

1.6 The Work

This project has many nodes that connect to each other; this paper acts as one node, that can be experienced simply by reading it from beginning to end, or in any order you choose. There is also an accompanying website that acts as another extension of the work. It is a place to find all of the pieces in this work on the internet, it can be found at the URL https://tellingstoriesinthedark.format.com/. The final node is the VR space, that can be viewed using any VR headset and an internet browser at the URL: https://aspasias.glitch.me/. It can also be directly accessed simply through your computer browser and no headset, using the mouse and arrow keys together to navigate the space. Using the headset provides a wholly immersive space, while entering it using a computer provides a slightly different 3D experience. The different ways to experience the work reflects the rhizome through its multiple entry points of access and sensory experience.

Chapter Two: Content is the Context

2.0 The Stories of Becoming

As we go through life, it becomes more and more apparent that the ways that we are now, are a product of what we were before. Reflections on gender, oppression and agency have come at different points in my becoming. As a woman, I have experienced small spatterings of discrimination and then also much bigger ones that stayed in my mind; how situations large and small can influence power and equity. In the coming stories, I begin to weave my understanding of how unlikely tools of personal power can be found, how mentorship can come in large and small moments, and how large of a role business plays in the building and successes of our communities. All of the stories I tell contribute to these moments that have built my personal feminist perspective that includes maintaining a curiosity, openness, and respect for many ways of being. The last story, 2.4 The Dark, brings to light how being alone can be a space of reflection and growth for myself as a woman. How places where no one is watching, might be the most powerful place of unlearning.

2.1 The Bicycle

Growing up in Zimbabwe is a thing I always get questions about. "That must have been different! What was it like? Did you like it?" I never know what to say, because though my experience is different than many, it is the only one I have. One thing that I do know is that I was left alone a lot of the time. I had a bicycle that was black with pink metallic splatter paint and would ride for hours on my own as a little girl, along open roads with no cars flanked by miles and miles of open bush, the dry colour of grassland and red earth going on forever. This time alone was exploratory and reflective. I grew up in houses with lots of land and most of those houses had no children nearby. So I did make my own fun most of the time. The idea of freedom and a bicycle is something I understand.

I moved to New York City at the young age of seventeen. The first year was, understandably, a very difficult transition. Being a teenager is hard, beginning college is shockingly stressful, and living on your own for the first time in one of the biggest cities on Earth is just one of those things I would recommend for only the strongest willed creatures among us. After my first year there, I moved to Brooklyn, which meant I had to start going underground daily and taking the subway into the city for my classes. It was not a routine that suited me. I remember sitting on the train one day after another long week of class, just crying, sobbing, in front of a

whole train packed full of rush hour New Yorkers. It was something that should have been embarrassing, but I could. not. stop. And through my tears I realized that this was the third time this month that I had been crying on the train. Something inside of me came out of that salty haze and I put my foot down. Clearly something wasn't working and I needed to make a change. I went out to buy myself my first bike as a (barely) adult the next day. I went to a dingy used bike shop in the East Village that I used to pass on my way to school. I liked their sign so I walked in and told the owner I was looking for a bike. He showed me all the bikes in the store. My face fell because none of them were the right one. I swear that man knew, when he saw my fallen face, that he was going to bring something very special into my life. "Wait, I've actually got something else, it's in the back".

And it was the one. I made a pact with myself that year. I was not allowed to take public transit or taxis under any circumstance, I could only ride my bike. And I followed through and became known to my friends as the one that would beat their taxi cab by seven minutes to wherever we were heading, every time. The only time that I broke my pact that year was to get to LaGuardia airport to see my family for Christmas, I figured I could give myself a pass because of the luggage.

Riding a bicycle changed my life, mood and outlook on my own independence.[15] The whole city became available for me to explore, separate from the constraints of the subway lines and darkness of going underground. The repetition of pedalling and the metaphor of a circle would start spinning through my mind.

2.2 My First Mentor[16]

Craigslist was the place you could find anything in New York City when I lived there. Anything. Free Stuff, Missed Connections, Jobs, Housing. Anything, I tell ya. While scanning through the jobs section one day I saw an ad.

"Seeking graphic designer to make a website for a soon to open woman-owned bike shop, I can't pay much but am willing to trade bike parts!?"

---

[15] The bicycle has been, since its invention, a symbol of women's independence. The bicycle forced a change in fashion and gave women the freedom of movement (LaFrance, 2019). This was actually something I didn't learn until later in my love affair with bikes, when I met "my first mentor" (see 2.2), however, it is interesting that the affordances of freedom are inherent to its form.

[16] Mentorship is a term that can encompass so many relationships. It can be formally set in the bounds of a business or educational setting. However it can also be something that informally shows itself through forging relationships between people where one seeks to learn from another's expertise. Finding a person that can offer advice, support and wisdom is a way to bolster success. It is also a way to form networks of community that can help each other.

I lit up at this listing that looked like someone had torn through my brain and cherry picked for words that might lure me into a dark alley. Bike shop! Trades! Woman Owned! CHECK CHECK CHECK! I eagerly replied, listing off all of the ways that I might be perfect for this position. When I got an email back my spidey senses were tingling. Little did I know how deeply this ad would change my life.

KT was my first mentor, she was probably only 5 years older than I was but had years of wisdom about things I was only beginning to understand.[17] I learned that KT had been a messenger for years in a city full of boys, she had also worked in most of the bike shops in the city and could wrench anyone under the table. I knew we were the same at our core. Strong willed to a fault and intensely committed to independence and mastery even at the cost of isolation. I got the "job" and began hanging out at the "shop". KT was building a space that one quarter functioned as a bike shop, half functioned as her house and three quarters functioned as a space to learn about what building her first business meant for herself and the community. The math doesn't quite add up, but I'll talk about the importance of faulty math a little later.

---

[17] At the core of mentorship is actually a mutual exercise of exchanging knowledge. I participated in a session with the Fifth Wave Initiative earlier this year, the purpose of this learning session was to have a conversation about what mentorship means in the context of feminist business practice. Some of the core ideas that came out of that session was the importance of valuing qualitative skills, respecting one's knowledge and active listening. All of these things paired with a reflective practice (on both the part of the mentor and mentee) enable a deeper understanding of the diversity of being.

I would hang out at Velo Brooklyn under the auspice of graphic design, though we both knew that we mutually needed each other for company, support and growth. KT taught me almost everything I know about building bikes. Together, through a six pack of Sierra Nevada, we built my first fixed gear bike late one night. This was the bike that taught me how each piece fit together, every bolt and screw was turned by my hands. This bike was the one that made me feel like I had wings. The stop or go movement of the bike was directly connected to my own strength and power. At midnight I took myself for a ride on this newly built bike and flew over the Williamsburg bridge through the city and back over the Manhattan bridge. Propulsion and synchronicity pushing me forward into the night.

I was learning how to correctly use these mechanical tools to your advantage. KT always used to drill into me, "I'm small and not that strong; there's a machismo thing in bike shops, the men like to wrench hard until they break something.". "Leverage," she would say wryly, "it's what makes you stronger and smarter." As she showed me how to extend the wrench with a 2-foot pole and unscrew a stuck bolt with ease. I think about leverage constantly to this day. Audre Lorde says, "the master's tools will never dismantle the master's house" (Lorde 1996 p. 110). KT's toolkit was littered with things that helped her rework those master's tools for her success.[18] When

---

[18] One of the things that has come clear in this writing is the importance of valuing one's own skills. Feminist entrepreneurship places value on authentictity and collective power. By understanding and stating one's strengths, a community or business can utilize the tools of each of its members to thrive (Harquail, 2020, p. 26). Through understanding one's strengths, weaknesses also can show themselves.

someone presents me with a problem that might seem unsolvable, you have to think of ways to wrench that problem with finesse and care from something you actually have in your toolkit.

2.3 Faulty Math: Why 1+1=3

We moved to Zimbabwe for business. In my memory, for most of my childhood the reasons we did things were to seek adventure, in the name of the unstoppable entrepreneurial spirit that my father just could not let go.

Moving your one year old son and seven year old daughter to Southern Africa in 1993, from a successful and stable (though cold) life in Edmonton, seems more than a little wild when I read it back to myself. My father had the chance to franchise and move a growing photo chemical recycling business to somewhere in the world. When the story was told to me, the places we could go were varied, though all were warm in climate; my father used to suffer from seasonal depression and this must have been an exciting prospect. Apparently, I could have grown up in Mexico, or Australia for that matter, but Zimbabwe was the place. My father and his brothers had a thing for Ernest Hemingway and this I'm sure seemed like a once in a lifetime chance for a hero's adventure.

Continu-Fix was a company that recycled black and white photo fixer for reuse.

Fixing is the last part of the development process in sealing a photographic image

into its paper. Their company would recycle the fixing chemicals and sell the silver

left over in it, for use over and over again. One of the defining characteristics of this

company was that its main product was recycling, this process actually saved more

of these one-time use chemicals from going down the drain into our water systems.

A green company from the oil laden Edmonton in the Nineties was somewhat of an

anomaly. However, Kodak and the camera industry had another idea and six months

into our move to Africa, Continu-Fix went bankrupt. I found an article from the

year of our move that tells of Kodak releasing a statement that the process did not

work effectively (Tickell, 1993). Whether true or not, this is what they call a death

knell for a business.

Shocking is a move to a new country on a new continent with two young children.

Even more shocking is the realization that the reason you had moved was rapidly

washing down the drain at the hand of your corporate competition. So my father

began hatching another plan and decided that since Zimbabwe was a landlocked

country, he was going to open a retail seafood supply business. It was called

Oceanarium.[19]

---

[19] Personal aside: Reading this story actually makes me wonder if I'm making it all up. But I am quite
sure these are the facts.

My memories of Oceanarium include a bustling office that smelled like fish, someone stapling their fingertip clear through, in said office, and Jorika, one of the many women that has shaped how I see a woman's power. Jorika was Afrikaans, a personal chef and used to hold cooking classes for children, which I attended frequently. She would insist I cream the butter by hand, rather than microwaving it to soften. Commanding best results always, even if it was the more difficult path. Jorika used to drink and swear like a sailor, no, more like the captain of a pirate ship. Her one and a half year old Tawanda's first word was "FUCK!". Actually, remembering now, it was Jorika who stapled her finger, and guess what battle cry rang out, shattering through the office. She would hold huge parties at her house and would expertly cook a braai for the over fifty people and their children that would show up. She was the matriarch and true leader of her blended family. Jorika cared for others ferociously and always spoke her mind no matter what the cost.

My father also began a beef jerky business called African Smoke, bringing North American style beef jerky to Zimbabwe, a place that had biltong, its own distinctive style of dried meat snack. People loved it, I remember going to the grocery store and watching person after person grab a bag by the cash register. Among all of these zany ventures that my father created, most of them failed. High risk can sometimes lead to high reward, but more often than not, it doesn't. Though one of the things

each of these businesses tried to do differently was to bring value of some kind to all of the people involved in it. To make 1+1=3.[20]

I have not yet mentioned my mother in this entrepreneurial adventure. Which is actually quite analogous to her role in our family as the less showy but most important player among us. She has always been the one to manage the finances properly and keep our heads above the water. My mother had been a graphic designer in Edmonton and was the one who made sure we were computer literate as children, even in Zimbabwe, which at the time seemed so far behind the technological development of the first world. She was the one who created the branding for many of the businesses mentioned above and soon after we moved she opened a computer school. She taught Zimbabweans how to type and how to use Corel Draw; how to create using tools that were not readily available to many people at that time. I would visit her school when I was done at my school; memories of a darkened room with many people rapt in the blue glow of their computer. The darkness was a soothing place of quiet learning and growth.

---

[20] 1+1=3 is a term that has been used in business for a long time. It might be impossible to find it's original creator, however, I attribute its use to the African Bronze Honey Company, a social enterprise B Corp that markets and sells organic wild African forest honey all over North America. This is the current enterprise that both of my parents co-founded, embarking on this new adventure many years ago. It is also a business that I worked on with them for three years. It is, to date, the longest standing business I have watched them build. 1+1=3 was the slogan my father, the storyteller, chose to use to talk about how buying a bottle of honey really could impact the lives of people all over the world. It was a part of the story that explained how our customers might learn to understand how participating in business could make real social change. B Corp was the catalyst for my interest in Feminist Entrepreneurship. The idea that business should not harm, and can make positive change all while making money, is something I feel we all need to implant into our minds for the betterment of our future.

2.4 The Dark

As a child, I was quite good at school; the academics, not the sports. Much like my

fear of public speaking, having to participate in team sports would send me deeper

into a fit of dread. The prospect of letting down my team due to a lack of skill or

knowledge about the game was always looming. I rode horses instead. I was an

everyday rider for seven years and spent a large portion of my childhood at the

stables. It was the only sport that didn't feel like one; in riding, the sport part was

about individual growth but the more important part was in caring for your horse.

Memories of turning over the stalls full of compacted hay and horrific smells of aged

manure. Learning to groom gently or roughly, depending on the preference of touch

that each horse had. Circadian cleaning of your tools, the tack, to ensure a

comfortable ride for you, but more importantly, for your horse. Riding is a

negotiation and bond of trust between you and that large animal. It is a language

you have to learn how to speak, without speaking.[21] Most of the time, we would

groom our horses in their stall, a dark, small room where you and that giant creature

would begin to understand each other's likes, dislikes and needs. The darkness was a

---

[21] See Making Kin in the Glossary of Terms from Donna Haraway. The critters in our lives have a vast ability to share stories with us, and to explain complex ways of being through non-verbal language. Rosi Braidotti speaks of "nomadic subjects", "critical consciousness that resists settling into socially coded modes of thoughts and behaviour." "It is the subversion of set conventions that defines the nomadic state, the literal act of travelling" (Braidotti 1994, p. 5) The ways we can travel through ideas and thoughts relates to our language, and the multiplicity of ways of communicating. I posit that storytelling in one's own language and tone can be a way to share in this idea of nomadic thinking, exposing others to your own language allows for an evolution in your language and others.

place to silently communicate with another creature, gently, at each other's own pace.

When I was fourteen my mother told me one afternoon that we were moving back to Canada. It was the year 2000. All of their businesses were failing, she and my father had separated earlier that year, and Zimbabwe was quickly becoming a dangerous place to live. There was no diesel fuel to run the cars, the lines at the grocery store were two kilometres long and white farmers were being attacked and killed in their homes by war veterans that had been sent by the President himself. This beautiful country was being attacked and destroyed from the inside out. Abuse of power at its worst.[22] I cried at the thought of leaving behind my friends, leaving behind my home and told her I wouldn't go. But as is the power of a parent, we did go. My mother, in her caring so intuitively and quietly of my evolution, had found an arts school in Canada that I would have to prepare a portfolio for to attend. Other than being at the stables, making things and drawing were the other things I

---

[22] This event changed the course of Zimbabwe's history; a once fertile, successful, thriving country. The economy was destroyed. The Zim dollar reached an inflation rate of 79.6 billion per cent in April of 2009 and was no longer a viable currency (Frisby, 2016). A country in which capitalism failed. The very colonial idea that one race must be pitted against another as retribution seemed wrong. In my young mind with a wholly simplistic understanding of the racial conflict involved in Zimbabwe's history, it was an eye for an eye, which meant two eyes were missing and no one was left in a better position than before. Something I remember thinking was how this impacted my peers and their families. Before my family moved back to Canada, I was a student at the prestigious Arundel School, which offered day and boarding attendance. I remember the day when three of my classmates (who were boarding students) came to class crying. All of their families had been targeted in the violence, and one had lost a family member the night before. To think of all ways that violence affects a generation and how it ripples forward into its collective memory.

loved. It was a way to follow the rules very closely but also stray very far away from prescribed ways of doing things to make something new.

I was accepted to the Visual Arts program at Canterbury High School. A school with a large focus on artistic pursuits, there were programs for dance, music, drama and visual arts. We were able to exchange some of the required math and science classes for our intensive daily arts practice. Every morning for four years I had a four hour long art class. We practised painting, drawing, ceramics, mural creation, design and photography. I think of the freedom we were granted through this atypical way of participating in education. A flexibility within the structure to really make sure each student was thriving by way of their own strengths.

The darkroom was a place where I learned another type of finesse and care. We were given a brief introduction on how to use the tools, but were given the freedom to learn how to let our own creative toolset form. The chemicals worked on the paper with a strict regimen, but understanding light and dark is the core of photography, and there are endless ways to manipulate its form. When you are developing an image, you are almost in darkness, with eerie safe lights enabling a restrained sight. Processing follows strict times for exposure, development and fixing. This is time you cannot speed up, and is time you must spend in the dark. It is a time that many use as time to think.

Out of the dark comes light.

The dark might be where no one is watching you, and where expression flourishes.

2.5 Conclusions

As a woman, I have been told how to be, both explicitly and implicitly. These stories are recollections and reflections on the path from childhood to womanhood. The moments I found most exciting and liberating, were these moments of being alone, with no judgement on my worth. I see the darkness as a metaphor for this space of openness and growth. I mention the various places of dark that have run through my life; the darkroom, the computer school, the stables, all of which enabled a quiet way to think through to the core of the thinking that was going on at the time and place. I wonder if others have this same perspective on darkness? Rather than a place of fear, the dark is a place to overcome and grow. In my most recent explorations into VR with Insight and Masterpiece VR, the closed darkness of the headset was somewhere that I felt alone to create and play. For this reason, the virtual reality space will take on these characteristics of darkness and quiet so that the users might

reflect on the knowledge being shared. The dark might enable a time and space for personal growth.

Chapter Three: Theorizing on the Dark Horizon

3.0 The Frame

This work has been generative and rhizomatic throughout it's creation, but there are some texts that formed the frame of the understanding of each decision. This project prompted several reflections for me on how and why we learn and if there is a new way to understand how to share knowledge. Much like feminist entrepreneurship is seeking to shift the value set we attribute to success in business, I wondered if narrative could provide an alternate way of sharing learning both academically and culturally? The cultural commons is a shared space of idea making that can help the collective create and make change (Federici, 2011), but also making change on a more personal level can assist in this wider scope of community. I wanted to understand how idea making from the individual can assist in a propagation of flourishing for the benefit of the whole. What follows is an inquiry into the theories of how we might do that.

3.1 The Currency of Knowledge

Karen Spiljak (2014) examines the necessity of "banking educational" structure, a term that Paolo Friere (2000) uses to talk about our current educational system. One in that the teacher "deposits" knowledge and the passive student accepts this knowledge. There is no focus on reflection and understanding in this model.
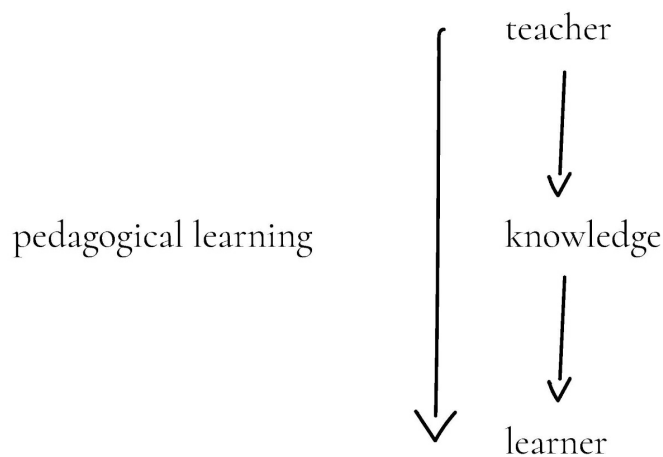
Figure 1. Pedagogical Learning: A diagram I created from some of my past experiences in some regular systems of pedagogical learning.
Source: Lauren Connell-Whitney, 2020

Spiljak speaks of the value in situated knowledge and understanding one can use that understanding in their own lives. Something Freire talks about as the "changing

of consciousness" (p. 74). Some tactics to promote this change: collaboration, critical thinking, and active participation in the creation of knowledge. Hierarchies of teacher and learner are disposed of by a careful new interpretation of how knowledge is valued and situated in conversation. (p. 75) This is a change in the way we view learning, giving each person the autonomy of being an expert on their knowledge, and redefining knowledge as a process, rather than a product on a timeline of learning. (p. 75)

conversational learning
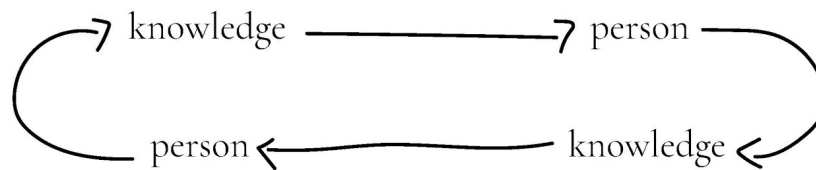
Figure 2. Conversational Learning: A diagram I created to illustrate
what happens in a conversation of shared knowledge.
Source: Lauren Connell-Whitney, 2020

Many businesses function with the top down approach that traditional pedagogy follows. If we could apply this changing of consciousness to how we find value in business there is an opportunity for something different. Innovation is a word that is used constantly in entrepreneurship, to make the newer, better, faster thing. The 1+1=3 method of faulty math can help support the stakeholders in a business, by

using alternate methods of creating value. There are several models of this idea of value creation, *The Innovation-Friendly Organization* (Simpson, 2016, p. 17) speaks of five cultural elements to support growth and creation of new ideas, diversity, integrity, curiosity, reflection, connection. These are worthy of implementation into our own learning as well.

Mentorship, as found in 2.2 My First Mentor, can be a sharing of knowledge between the mentor and the learner, with both parties providing value to each other. There are some ways of levelling the learning environment to enable this kind of process in the non-formal framework. By holding sessions with no tables and having the chairs in a circle, or even by holding the class outside, the behaviour of the learners are drastically changed. Taking away the inherent hierarchies of this banking education leads to students being empowered to share by not being forced into the position of "the knower".[23] Learning about learning really got me wondering about what part I wanted to play in sharing knowledge and passing on wisdom. The final chart I thought about was how learning happens on the internet. The internet is a place of generativity in its web of inputs and innumerable outputs of code. The internet seemed like a good place to share these stories I had been creating. A place where the sharing of ideas could transform and mutate into new conversations and situated

---

[23] "We're never inside another human being's mind. We're not even inside our own mind. The notion that if I can only kidnap for a minute my own self so that I can actually know who I am — that fantasy of full knowledge is a violent fantasy." (Paulson & Haraway, 2019) Haraway aptly connects this stance of all-knowing as being connected to ideas of possession of self and other. We are on a continuum of learning and falling into the trap of valuing a singular knowing directly relates to the ways that capitalism places value on ownership and oppression.

knowledges. I began to imagine a space to share stories where one might reveal the

path of knowledge and illuminate a path in the dark through this exploration.

learning in the internet
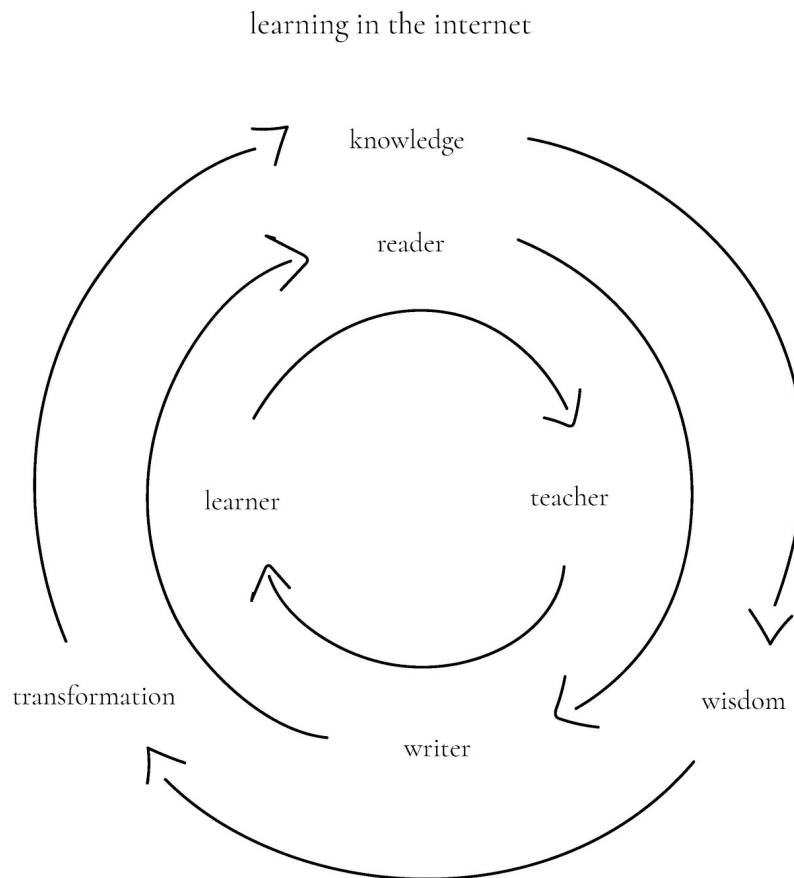
Figure 3. Learning in the internet: A diagram I created showing the
multiple directions of learning the internet can support.
Source: Lauren Connell-Whitney, 2020

3.2 The Commons

"You live the commons, you cannot talk about them, and even less

theorize them." (Federici & Linebaugh, 2019, p. 77)

Silvia Federici is an Italian feminist theorist who's work has centered around

understanding the commons and their place in our communities' ability to grow and

succeed. The commons is a place of shared community space, shared ideas, it is the

vastness of a collective relation to our basic human needs. The internet is a place

that satisfies these qualities, leading me to the conclusion that it is an important

space for my VR space to situated itself. Capitalism uses the balance of power to

divide the collective resource of commons into sections of ownership, giving one

group or individual more power than another because of accumulated ownership of

fundamental and auxiliary needs. That is the curse of neoliberalism in our current

system of life. As Federici notes, "the privatization of the 'commonwealth'" (p. 88)

extends into all aspects of the globalized world. I mention this state of the privatized

commons for its relation to feminism and equality. Rethinking the distribution of

resources for community building and protecting the land we live on for the benefit

of future generations to come. Sharing stories and wisdom is a form of common wealth sharing, if knowledge is power[24] then shouldn't we share it?

3.3 The Euphemism of Feminism

My father used to tell me about his great grandmother, in his words, she was a strict, poorly educated, rural Baptist Matriarch, hellbent on rules and decorum. She would delicately refer to the toilet only as "the euphemism". Conforming so greatly to the idea that a woman must be so genteel and pure that she would not allow herself the vocabulary spoken out loud of our daily human function. Language can be empowering, yet being unable to tell the stories of our lives effectively in our own language can be felt as a form of oppression.[25]

---

[24] "Discourses are not once and for all subservient to power or raised up against it, any more than silences are. We must make allowance for the complex and unstable process whereby discourse can be both an instrument and an effect of power, but also a hindrance, a stumbling block, a point of resistance and a starting point for an opposing strategy. Discourse transmits and produces power; it reinforces it, but also undermines and exposes it, renders it fragile and makes it possible to thwart it." (Foucault, 1978, p. 101).

[25] Rebecca Solnit writes of the indescribable colours of sunset and darkness, "The names of colours are sometimes cages containing what doesn't belong there, and this is often true of language generally, of the words like woman, man, child, adult, safe, strong, free, true, black, white, rich, poor. We need the words, but use them best knowing they are containers forever spilling over and breaking open. Something is always beyond." (Solnit, 2020 p. 8). Language is a tool, yet we need to recognize the multiplicity of meaning it can hold. (See Rosi Braidotti's Nomadic Subjects, 1994, the Nomad as Polyglot, p. 8)

My understanding of feminism has always been intertwined with an insistent and natural sense that storytelling is important. Story is how we can begin to hold space and grasp the how of why people do things or think the way they do. Carol Hanisch wrote an essay in 1969 that her editors Shulie Firestone and Anne Koedt retitled *The Personal is Political.* In this essay Hanisch brings to light that for women's liberation, the personal is directly related to equality for women. There is no way to get to that end path of equal, if we don't fully understand the parts of the equation that are missing. She talks about the "shuffling techniques" (act dumb and look pretty), that women have learned as tactics of survival in this world.[26] How these techniques of survival are actually a collective experience for many women, and how by telling your own story, whether politically motivated or not, it contributes to the very political mission of equity for the collective. Telling these stories contributes to commons of navigating our equitable path for the future.

Finding the language to tell these stories authentically is also important. I have realized and probably continually will notice that a lot of conflict is the result of two people saying the same thing, just in different languages.[27] Allowing for one to tell their story, and to contribute by first truly listening, without imposition, is how

---

[26] Maybe I myself have participated in some shuffling techniques, see 2.1 The Bicycle and my insistence on a smile no matter what.

[27] "Writing is pre-eminently the technology of cyborgs, etched surfaces of the late twentieth century. Cyborg politics is the struggle for language and the struggle against perfect communication, against the one code that translates all meaning perfectly, the central dogma of phallogocentrism." (Haraway 1991, p. 176)

small and then larger changes can really happen. When I was a teenager my best friend's mother would speak to me playfully in Hindi. I would listen and then try and repeat back what she said to me in English, more often than not, I knew exactly what she was saying. She would gleefully call me her honorary Indian daughter because of these dialogues. Listening and understanding how other people tell stories is the key to uncovering your own.

With this idea in my mind, I wanted to share my stories with others, with the hope of sparking reflection and quiet learning on telling one's own story. The dark is a place to listen and concentrate, we tell stories around the fire, we tell stories to children before bed with only a nightlight to show the way. The dark is a place that many of us find comfort in when sharing the experience of storytelling together.

3.4 A Room of One's Own

 Virgina Woolf's book *A Room of One's Own* (Woolf, 2004) was a piece I had read many years ago. The idea that one needs their own space has always been very dear to me. We moved a lot when I was a child, and in all of the eight houses I grew up in,

I was lucky enough to have my own bedroom.[28] My room, wherever it was, was sanctuary. To close the door for a space of your own was my most prized possession as a child. However, over the years, that space has become a more figurative endeavor. As you go through life, your space can become constrained, thousands of people and ideas crowding for attention in the limited space in your brain. Still, I would like to mention the criticisms of Woolf's work, the history of her thinking coming from a fairly white patriarchal space. The idea that people must have their own space is not accessible to all, and is still quite a privilege (Barrett & Macintosh, 2005). The room of one's own is the idea that a bit of money and a space to work in can bring back that power. However we must be aware of who is left out of this place of power among feminists, women and people.

When I started using the VR headset, it felt like a place of quiet, with no one watching. It was also a tool I understood quickly. Virtual Reality has the ability to immerse the user in the content and afford a sense of place in the headset. Mel Slater speaks of VR "as a technological system that can precisely substitute a person's sensory input and transform the meaning of their motor outputs with reference to

---

[28] I would like to fully acknowledge the privilege I have been gifted in this life. I make mention of "prestigious" schooling (see 2.4 The Dark), travelling, and the opportunity to grow up in many vastly different places. My family has struggled through various stages of financial wealth and despair, but all the while moving through the world with a pale skin colour and Canadian passport. All of this has led me to imagine a place of sharing of resources. In times of struggle someone helped to pick myself or my family up from desperation, someone cooked a metaphorical meal for us; the many faces of care and nurture are important for flourishing. There is a great divide when some feminists speak in waves of feminism, and this makes me think of not trading an eye for an eye (see footnote 22). Political stances are important, however understanding and care can enable vast change when it comes to dealing with conflict and opposition.

an exactly knowable alternate reality." (2014, p. 1). We have been striving for new realities for just as long as business has been part of our cultural commons. Something that the headset affords is a place to be, on your own if you choose. A place to explore and master at your own pace.

Virtual worlds allow you to participate in situations that may not be available to you in your reality, they also can allow you to converse or reflect with a person that may have a different world view than your own, this is an opportunity to learn about new experiences and push one's imagination to places of learning and innovation. The creation of these virtual spaces could be a place to spark that seed. The virtual world I envision will be a place of quiet and exploration.

3.5 The Rhizome

The rhizome is first raised by Gilles Deleuze and Félix Guattari in *A Thousand Plateaus: Capitalism and Schizophrenia* (1987) to talk about structures of sharing knowledge. The rhizome proliferates as a decentralized root system. One broken piece or node of a rhizome can promote growth wherever it lands. It is a system that creates pathways and connections beneath the soil.

Figure 4. The Rhizome: A mind map of my findings on
the nodes and qualities of the rhizome.
Source: Lauren Connell-Whitney, 2020

It does not grow vertically, rather it grows horizontally through a complex system of

rhizomic nodes. A beautiful concept of how we might be learning in today's

intricate system of knowledge that we access through our nodal system of the

internet. So deeply woven into our lives with no sight of unwinding. Deleuze and

Guattari's vision of the rhizome is a starting point for the way I am approaching

sharing knowledge in this work, as having multiple entry points (Deleuze &

Guattari, 1987, p. 12), and rather than tracing or reproducing knowledge, to create

something new from those pathways and connections that form through allowing

new ideas to grow and change. To let pieces of one idea break off and create

something new.[29]

How can we begin to follow an idea through conversation? It may be helpful to

understand what kinds of knowledge might be suited to think through using the

concept of the rhizome. We might talk about knowledge as tacit and explicit

(Reardon, Sanzogni, & Poropat, 2006). Explicit can be understood as knowledge that

is knowable, systems that are codified, can be classified, and ordered. These types of

knowledge may not stray off the path of ordered learning. Tacit knowledge we

implicitly understand from a learning and acquisition of that knowledge at some

point. Micheal Polanyi uses the example of being able to recognize a face after seeing

it once before. (1967, p. 4) Tacit knowledge is much harder to index; it may involve

experiential reasoning or have multiple consequences or answers. This is the kind of

knowledge that may benefit from sharing through a rhizomatic system. This is the

type of knowledge that is often shared through mentorship or community. There is a

---

[29] Deleuze and Guattari's rhizome was the starting point of my use of it in this paper. Though I am not using their concept of the rhizome directly from their text *A Thousand Plateaus: Capitalism and Schizophrenia* (1987); rather I am using it as a metaphor to understand and make clear the connections of many ways of thinking in the world. Deleuze and Guattari talk about several specific characteristics of the rhizome: some of the more useful are the "principles of connection and heterogeneity" (p. 7), meaning that any point of a rhizome can be connected to one another that anything can be connected, and secondly that the rhizome allows for a "decentering" (p. 8) of the homogeneous systems in which we live. There are several other principles that Deleuze and Guattari express, but I am using this text as a reference to discuss how stories can activate networks of ideas. Further findings on the rhizome, led to Dave Cormier, the creator of Rhizomatic learning, a methodological approach to education that he began writing about in 2007. One of the important aspects about this approach is that " the community is the curriculum." (Cormier). The most important aspect of both of these ways of interpreting the rhizome, is how ideas are connected and can lead to new understandings of our world.

magical quality of learning from mentorship and reflective knowledge, which may

produce new ways to understand the world.

Chapter Four: A Method in the Madness

4.0 Method Making

The trajectory of this work has followed a non-linear path. I used memory as a tool to create and to make visible the themes and explorations. Reflection on these memories enabled me to tell my story and situate these rememberings in my own autoethnography. Each piece of this work is part of the work and so it stands as a piece of research-creation. Lastly, I use the qualities of generative technologies to think about why we should be making open and shareable work for the commons. What has occured in the making of this work is an acknowledgement of the entanglement present in knowledge. Trying to uncover and study one aspect of research is a worthy cause. However, it is also important to understand how many themes, methods and ideas can make themselves shown in the process of discovery. This work does not fit into a small box, or even a large one. I found that it was important and very necessary to write these stories and use them as part of the research, even if it may not be a traditional approach. Through my initial research I saw myself as a part of the themes I was exploring. Including the storytelling was critical in giving a base for this writing, to explain how entangled with the world we

really are. I have begun to think about the knowledge dug up in this research as a web, a tapestry, a rhizome, where the interactions and intersections of different forms of knowledge can give rise to other connections. Methodologies can guide and help shape your discoveries, but it is important to understand that there is not always one method, answer or finding when talking about these kinds of entangled knowledges. It is also important to recognize that as researchers we are utterly entangled in the world we live in.

4.1 Memory

We now live with technology so deeply entwined in our daily lives. As people that live and function in the digital age, we have begun to use digital tools to remember for us both culturally and personally. Much of our lives are recorded on social media by our own choosing and in the commons of public space which is not explicitly opted into. These recordings are taking the place of a previous need for the skill of remembering. Memory is a transformative thing. Memory isn't stable, yet it can offer important insight into our cultural exchanges and into our own selves. Roger Silverstone speaks of memory as a tool of control or persuasion, but also as a tool of generational growth. How telling our human tales can enable cultural strength both

in public and private; "Stories not fragments. Beliefs not fantasies. References not representations." (Silverstone, 1999, p. 125)

Telling stories is a powerful method of recalling memories; "It is where the private threads of the past are woven into public cloth, offering an alternative vision, an alternative reality to the official accounts of the academy and the archive." (Silverstone, 1999, p. 126). The reason I make mention of memory here is to support the importance of practicing how to tell stories and why sharing them is critical for our societal growth. As mentioned above we are on a possible precipice of letting our cultural memory be remembered by a computer, by a digital recording, by corporate conglomerates. Writing, telling, remembering and reflecting on our own memories creates a strength between individuals that eventually builds values into our historical memories. Jac sm Kee notes, "Memory is resistance, especially when our histories and contribution have been and are actively being rendered invisible. The act of recalling, of naming, is to also make visible our claim in shaping the world we are in." (Kee, 2017)

4.2 Reflection, Storytelling and Autoethnography

Storytelling is how we pass on knowledge from generation to generation. It is also how we can reflect back on ourselves to see the growth that occurs over time. Using narrative can help explain context and share tacit knowledge (Fowler, 2003, p. 160-162).

Storytelling has been a part of my life for as long as I can remember; all of the important life lessons my father tried to impart were shared by story. Understanding the world through story is a thoroughly tacit knowledge to me at this point in my life. Telling stories to laugh, cry, learn and understand the people around you. It is a sense making tool that we are taught at a young age, whether intentionally or not, which then transmutes into the ability to read and tell our own stories. (Berger, 1997, p. 9) Laurel Richardson writes, "Narrative is both a mode of reasoning and a mode of representation." (1990, p. 118) We use stories to shape our outlook about our world.

For most of my life I have always felt the need to talk about women, girls, feminists, probably as a way to understand the power imbalance of gender that I have experienced.[30] As a child I remember watching movies over and over again, and

---

[30] (See 1.2 Feminist)

devouring books that had smart, intuitive, female protagonists that were about my age. There weren't that many, so when I found them, those characters filled me with excitement and power. Now as an adult I understand the importance of seeing yourself represented in media (Blay, 2016); it is an acute agent of change to find role models that might light a path of your place in the world. This project initially began with the intention of creating a place for feminist entrepreneurs to share knowledge with one another using VR as a tool of communication. As the research moved forward, I realized that something very important was missing in the work from the original intent, it was me.

Over the years I have amassed a vault of experiences that have stuck in my mind over the years. I have mulled over and come to certain conclusions about why they have become a part of my telling of my life. Reflecting on these stories I began to understand how my single experience was deeply tied to the collective experience of many other women.[31] I began writing these stories as a method of understanding the content of the work. Using storytelling and reflection as a methodology of creation made sense. And thus, themes began emerging, weaving themselves from the stories

---

[31] (See 1.2 Feminist, and see 3.3 The Euphemism of Feminism) Being the only woman in a whole workforce of men is an experience that is common to many women, however, as the lone woman in that situation, it feels isolating, stilfiling. Through sharing stories of these inequalities faced by many, we can start to see these systematic oppressions that need to be fixed and rethought.

of my life as a tool to talk about gender, business and learning in a way that was

multifaceted and full.[32]

Autoethnography is a research method that requires one to think deeply about

storytelling (Granger, 2011, p. 31-32). As a methodology it can be used to foster a

connection between the facts and the soft malleable stuff we might call memory.

Enabling one to make connections between the cultural and the personal. The story

of one is tied so deeply into the stories of our family, friends and strangers. Rebecca

Solnit notes in an interview about storytelling, "Our lives are actually these very

complex tapestries, and I wanted to bring those other stories in and convey that

texture." (Kimmey, 2013). The texture of life is something that autoethnography

empowers, giving license to examine the intricate facets of life that involve empathy,

subjectivity, vulnerability, creativity and change. There are many comparisons to

narrative as tapestry, as fabric; the materiality of story is the very tactile reason why

stories are so impactful.

The rhizome was an idea that intrigued me early on in the process of creating this

work, and it made sense to start thinking about the ways that stories from my own

life were references to the literature I was reading that supported the formation of

the work. The rhizome is the structure that holds the creation of this work

---

[32] (See Multiplicity in the Glossary of Terms) One's experience can take on different meaning when applied to certain contexts

throughout. Storytelling is the method of transmission. Carolyn Ellis, Tony E. Adams & Arthur P. Bochner wrote about autoethnography as a research method and note, "as a method, autoethnography is both process and product."

4.3 Research-Creation

This work looks to research-creation or practiced-led research for its making, the process of making in itself has been found to be critical to the findings. Hazel Smith and Roger Dean, define practice-led research as the work that is created and the process of creation leading to discoveries in its making (2007, p. 7). This frame of creation leaves room for the unexpectedness of making, and the reflection of self on the practice, showing perspective and speculation. Natalie Loveless notes, "alternate research stories create alternate research worlds. Conversely, different story-telling strategies (methods), emerge from different worldviews." (Loveless, 2015, p. 54). This idea that we can make new worlds from our work, our art, our research. The whole course of making this work has been a progression and reflection on the findings of each part of creation. Writing stories led me to filming videos, which led me to recording audio snippets, all along the way shining light on new understandings of narrative, autonomy and darkness.

Gaylene Perry writes her reflections on practice as research, "As I wrote, I learned my own lessons. In my enquiry, I found the autobiographical traces affecting me." (Barrett & Bolt, 2019, p. 39) As Perry writes, she notices that the act of writing is an act of searching. (p. 42) When we search we find something, even if that something is unexpected. Something she finds, as I have found through this process of creation, is a sense of self growth through exploration in writing and creation. (p. 35) I want to tie this notion back to *The Personal is Political* (Hanisch, 1969), if we can start with the individual growth, the collective will find those rippling effects also.

4.4 Generative Technologies

The internet is, increasingly, becoming a place of closed systems that are monitored for the (usually financial) benefit of the gatekeepers (larger corporations, think of places like Facebook, or even content management systems like Format and Squarespace). I have written about generativity as the care of sharing knowledge between generations so that values and beliefs can be passed on and cultivated. Jonathan Zittrain writes about generativity in a technological context, it is "a technology's overall capacity to produce unprompted change driven by large, varied,

and uncoordinated audiences." (Zittrain, 2006, p. 1980). This generativity is similar to how stories can evolve as they are shared and used, and how memories change over time, important pieces coming to the fore and insignificant thoughts falling to the wayside.

Zittrain lists five qualities of a generative system that are needed to proliferate and continue its generative nature. (p. 1981-1982). These are qualities that I wanted to build into the VR work, as an iterative process of becoming on the internet: capacity for leverage, adaptability, ease of mastery, accessibility, and generativity revisited.

Capacity for Leverage

Zittrain notes, "A generative technology makes difficult jobs easier." (p. 1981) KT, my first mentor taught me about leverage with her wrench extended with a pole. A generative technology. The VR work is intended as a place to examine these complex ideas that may have multiple themes and connective tissue in a way that allows for generative thinking.

Adaptability

Adaptability refers to a technology's ability to be useful in a range of ways. Many entrepreneurs have highly developed their aptitude for adaptability; in 2.3 Faulty

Math: Why 1+1=3 each of the businesses and entrepreneurs mentioned had specialized skills that were applied and developed as necessary to keep the business going. And for me, the bicycle as a catalyst to learning about a wrench enabled knowledge about how a wide range of things work and how to fix them.

Ease of Mastery

A tool must be easy to use to be the most useful to the largest group of people. The special thing about story as a techonology is that it is relatively easy to begin and can adapt rapidly as the practice goes on. VR is still a relatively new technology and in order for it to proliferate as a usable tool for the masses, making experiences that are easy to grasp is important, as well as making tools to make experiences for VR.

Accessibility

A tool must be accessible for people to get use out of it. I would like to note that as a technology, VR is currently not very accessible to the masses and also not very usable for groups of people, as I found out as I first tried it by chance in front of an audience full of people.[33] However, that is one of the reasons to use it and share it, the more people are able to test and use a thing, the more accessible it becomes. Another barrier to VR is the specialized programming language needed to make things for the virtual space. This was a particular barrier to creating content for VR

---

[33] See 1.3 Virtual Worlds

for myself, which meant that it was probably a barrier to many other women. This led to the decision to make the VR space using WebVR (now WebXR)[34], a relatively new way of making content for VR, it is browser based and can be made with simple HTML and Javascript. WebVR is a technology that can truly assist in the accessibility of VR.

Generativity Revisited

Leverage, adaptability, ease of mastery, and accessibility all enable a technology to proliferate generativity. Simply, generativity allows for more generativity. The hope of the pilot VR space is for it to keep growing and evolving, so building these five concepts into its creation is of utmost importance.

Each of these qualities of generativity found their way into the creation of the work. In the next chapter I will light the way through the progress and creation of the VR space I am calling Aspasias.[35]

---

[34] In 2018 WebVR began the shift to encompass Augmented Reality and become WebXR to become responsive across all platforms for the goal of accessibility (Bozorgzadeh, 2018).

[35] Aspasia of Miletus, born around 470-460 BCE, an educated woman who some say was the true force behind the creation of the Socratic circle. Aspasia shared knowledge and taught the skill of oration to Pericles and Socrates among others. She is also said to have opened a school for girls to learn, unheard of in Greece at the time. (Mark, 2012)

Chapter Five: A Projected Path

5.0 Process

This work has taken a wildly rhizomatic path. Each triumph or failure leading into the next place of creation and discovery. The stories function as both the context and the content. The rhizome weaves these stories together for the complexity that they hold. Feminism is the theory of why these stories might matter. The VR headset is the tool of dissemination for it's qualities of seclusion, immersion and darkness.

5.1 How It Began

This project began with the intention to create a space for women to share learning about business, using virtual reality as the tool to disseminate this learning. This work is still mostly about that, but has evolved through careful and conscious exploration of the themes that emerged in the process of storytelling.
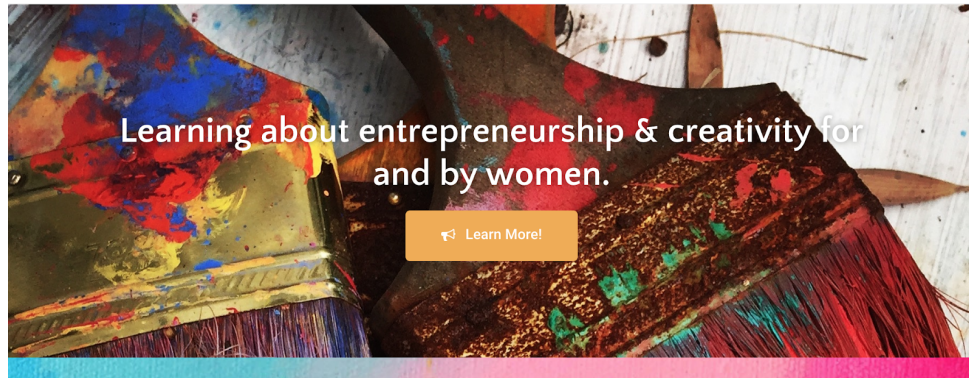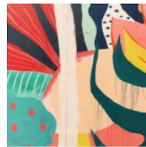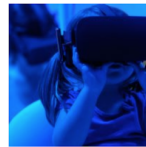
Figure 5. An original design prototype for the space called Aspasia Academy.
This prototype was to function more as a school for women.
Source: Lauren Connell-Whitney, 2019

The stories from my life are the most articulate way I can talk about feminism,

learning and business in a way that understands how intertwined all of these things

are. Writing a research paper, and submitting research into the world in a prescribed

way is so important to the wealth of knowledge that we as humans can share in a

categorized way. However, it could be said to be inaccessible to some. I was finding

through this process, how inaccessible it was to me: the system of reviewing

literature, finding a methodology, then creating a project, to synthesize some

findings to be dispersed in a research paper; it was not yielding the results I had

hoped, nor was the work expressing the complexities of the ideas I was pondering in my mind.

The research took me travelling through the facets of learning about what feminist entrepreneurship means academically, to what education vs learning really means. The rhizome stayed as the connective tissue; recognizing that no idea is inherently bad and that one idea can lead to the other sprouting new pathways at any point in time.
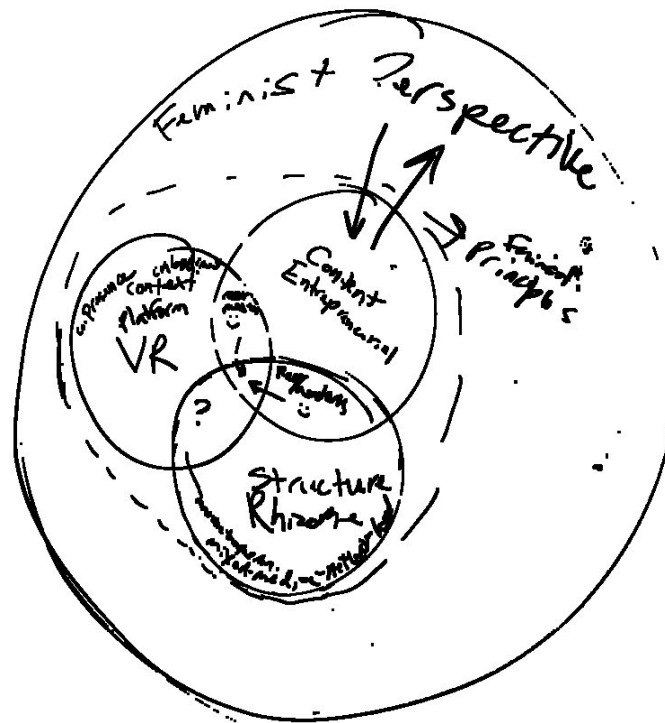

Figure 6. Sifting through the plumb line of the work.
Source: Lauren Connell-Whitney and Suzanne Stein, 2019

Whole humanness is a quality that C.V. Harquail speaks about as a principle for flourishing,[36] which entails recognizing all parts of what makes up a human; to be authentic about your being. This led me to realize that authenticity was the fundamental part of the work I felt was lacking. Early on in collecting literature for review I had found a research paper written by Chloe Humphreys called Rhizomatic Writing and Pedagogy: Deleuze & Guattari and Heidegger (2013). Humphreys clearly states that the aim of her work is to rethink the structures of pedagogy for a more rhizomatic reading (p. 192). She has conversations with the work of Deleuze, Guattari and Heidegger, though the meat of the work is written using footnotes telling stories from her memory, stories that converse with the ideas of these scholars. Stories express a wider contextual meaning through narrative. In one of her stories she speaks of growing up off the coast of Vancouver Island, "All this unlearning that I have done in school: I have lost sight of how to tie a clove hitch, how to run the boat, how to spot a yellow bellied sap-sucker.". (p. 200) The structure of pedagogy places value on certain kinds of learning, that only some people have the ability to access, for reasons of learning difference, financial reasons, or a vast number of other possibilities. The rhizome allows us to access these ideas that hold value from many adventurous paths. The very path of this project has followed the structure of rhizomatic learning. The ideas have been allowed to flourish and to flow

---

[36] CV Harquail 5 principles of flourishing include: equality, agency, whole humanness, interindependence, and generativity. (Harquail, 2020, p. 26)

into new ideas and pathways of knowledge as each story is retold and experienced in different ways.[37]

5.2 Telling Stories to Myself

I recently got a dog and I think she is the most beautiful creature. Through our training I have begun to think about the psychology of learning. As a rescue dog, she has some trauma from her past that shows up in funny ways. I began to read about positivity training using a clicker, which is a small button you press to make a click sound. It stems from the idea that you encourage and praise good behaviour, while ignoring bad behaviour. To shape behaviour using positive markers rather than punishment. It is one of the quickest ways I have found to train Lilah, and she loves it, mind engaged, she wants to please... or she just wants her snacks. I just listened to a podcast called When Everything Clicks: The Power Of Judgment-Free Learning (Schmidt, Lu, Boyle, & Vedantam, 2018) about clicker training being used to teach people how to learn skills more efficiently, the difference between using a clicker

---

[37] "...Mediation breaks through the limits of the textual and offers accounts of reality as well as textuality. It is both vertical and horizontal, dependent on the constant shifts of meanings through three and even four-dimensional space. Mediated meanings move between texts, certainly, and across time. But they also move across space, and across spaces. They move from the public to the private, from the institutional to the individual, from the globalizing to the local and personal, and back again." (Silverstone, 1999, p. 19)

with an animal and a human, is that humans have the motivation to succeed built in. Looking at how a skill, like shooting a basketball or resetting a broken bone, can be split up into a set of learnable steps and by using the clicker to mark each time the learner accomplishes the step correctly, you can build the muscle memory effectively.

Performance anxiety is something that most people face at some point in their lives. The fear of doing something wrong and having to face the shame and humiliation of failure. The clicker takes away this need to perform and the idea of failure, rather it encourages the learner to only focus on completing a task. Once each of the pieces is understood and able to be performed the whole skill can come to light. In the episode Dr. Martin Levy used clicker training with his border collies. This led him to think about how this training could be used for him to learn a skill like throwing a frisbee into a net. He started using a mirror to watch himself until he could connect the correct movement to the correct muscle memory. The mirror gave him the ability to watch his own actions and see when the moment of success happened and what his form looked like at that moment. This made me think about my fear of public speaking and how I could use the VR headset to train myself out of the fear. Could watching myself perform reshape the way I felt about performing?

5.3 Stitching Together Nodes

To answer this question of fear in performing, I decided to film myself telling my stories. To film myself I initially had been exploring volumetric video capture for a true 3D virtual experience. However, as a creation tool the accessibility of the equipment and the quality of the capture was lacking in several ways; needing a specific operating system to process the footage, blurry edges around the subjects, and lack of portability. So I started investigating the 360 camera.

Figure 7. Telling myself stories in a blackbox theatre.
Source: Lauren Connell-Whitney, 2020

These cameras are now at a price point and usability level that allows many consumers to try the technology. There were several cameras that were small to carry, high quality in their output and available for me use as this project was developing.

I studied photography in my undergraduate education. I think that images can hold as much narrative as a story if you learn how to read them. I consider a single image as an important opportunity to share the story of one's perspective; "your eye" as my inimitable teacher Charles Harbutt[38] would say. My thesis work was completed in 2008, just before cell phone photography became common or of any quality to be usable. I became frustrated with hauling around the large, heavy (and not to mention, expensive) digital SLRs that were available to us. This was about the same time that I was on my mission to bicycle everywhere.[39] There was something about the freedom of the bicycle that was permeating into how I viewed the tools of my work. It became very important to carry a camera with me everywhere, but it needed to be small, quick and accessible.[40] The downfall of the small, quick, accessible cameras of the time, was the quite low camera resolution that only looked

---

[38] Charlie was a former president of Magnum Photos, he was a documentary photographer, artist, and brilliant mentor to many future photographers. Your "eye" as he taught us, was a cultivated marker of your story. Just as one can speak of a different perspective through telling a story, photography should do the same, but through images. A skilled practitioner has been carefully developing their "eye" throughout their life. Photography is not about having expensive tools, it is about showing your sight and telling a story.

[39] See 2.1 The Bicycle

[40] See 4.4 Generative Technologies - Accessibility

sharp when printed at a small size. I had grown accustomed to the quality associated with shooting on the professional grade cameras that I had been borrowing from the school. As my education progressed, so did my desire and knowledge of how to appear professional in my work. It was of utmost importance for the work to have the ability to be printed and shown in larger sizes while keeping a certain level of image quality. My subject was New York City; it wasn't the people, it was the buildings that held my attention. At night, in the dark, when all the buildings became an indistinguishable network of lights revealing the ecosystem of humanity. Each little light and window held the possibility of a person with their own individual perspective. Each little light contributed to the vast web of knowledge that we as humans hold; a visual reference to this rhizome of our collective wisdom.

Figure 8. The city at night as seen by me.
Source: Lauren Connell-Whitney, 2020

The sheer size of the city always held me in awe; the never ending vastness in the patchwork of lights was this enormous macrocosm of creation. I began to think about how the expanse of New York City was not created all at once, it was a layering of buildings that each held life from different times in history. So I decided to shoot these scenes this way on my little point and shoot Nikon that had become my everyday carry camera. I would stand for long stretches of time shooting every inch of the scene in front of me, slowly, methodically capturing my "eye" from slightly different, yet slightly the same, perspectives. Then these hundreds of images would become part of a single image that I would stitch together on the computer, weaving a huge digital tapestry. My final pieces were many feet high, and each one made up of a multitude of images that began as only inches high. I made many panoramic scenes using this technique, the width of the panorama frame revealing so much more of the scene than the conventional photo frame.

I am telling you this story because these little sparks of light I saw more than ten years ago laid the compost on the ground for the rhizome, the dark, the stories and the 360 camera, that utilizes that very technology of stitching that I painstakingly manually processed myself years ago. The evolution of ideas in practice.

I began using the 360 camera to film myself telling stories on camera. The moment of performance (even on my own) brought up small feelings of fear. But what I

found is that by performing and rehearsing these stories on my own, some of that anxiety that formerly was allotted to performing correctly, was shifted to paying attention to my delivery, to the joy of mastering this skill. I tried many methods of delivering my story, reading from a screen, from a paper, looking at the camera, looking at my words on the page. The thing that I realized was that practice was the important part of all of it. The very practice of practise helps us form habits that assist in mastery.

5.4 The Quest for Headset

After exploring filming myself, I needed to watch these videos I was creating in the virtual space. I had been (graciously) borrowing a headset from one of the labs at OCAD,[41] but needed to return it often. I was quickly realizing that if I was going to fully explore the capacity of virtual reality, I needed my tools with me all the time, like that little Nikon camera I carried with me everywhere. One of the barriers for ease of mastery that VR headsets had been suffering from for a long time, were the wires connecting the headset to the computer. VR has the ability to envelop the user in a space, and the opportunity for them to inhabit this space and walk around in it,

---

[41] Game:lab Thank you!

all of those wires seemed completely counter intuitive. Another quality of generativity that VR was lacking was accessibility, all of the headsets on the market did not work with my laptop, though my 2014 Macintosh computer was (at one point in time) expensive and still powerful in it's own way, I would need an even more expensive and powerful computer if VR was to become a part of my toolset.

Enter the Oculus Quest. Clearly I was not the only one in the world of VR suffering and puzzling over this burgeoning tech that could be something great if not for the tangle of wires and computer platform woes. Oculus[42] had newly released a headset that had no wires and you could develop for it on any computer, it was called the Quest. Another interesting point about the Quest was the price point they offered at, while it was not inexpensive, it was hovering around that consumer tech price of about $500.

Someone once told me, "As an artist, you must have your tools. Painters buy those tubes of oil paint, sculptors use big bricks of clay. All art costs something. You have to invest in yourself." This is not to imply that you need money to be a creator, but acquiring and learning how to use the tools is part of the process of making.[43]

So I bought a headset. My toolset was building, and the Quest continued.

---

[42] I will note, Oculus is owned by Facebook, is not a generative system.

[43] See 3.4 A Room of One's Own

5.5 A Glitch in the Rhizome

The idea of the rhizome as a growing multiplicitous entity was the catalyst for many of the decisions made in this project. The stories were written using a network of themes.
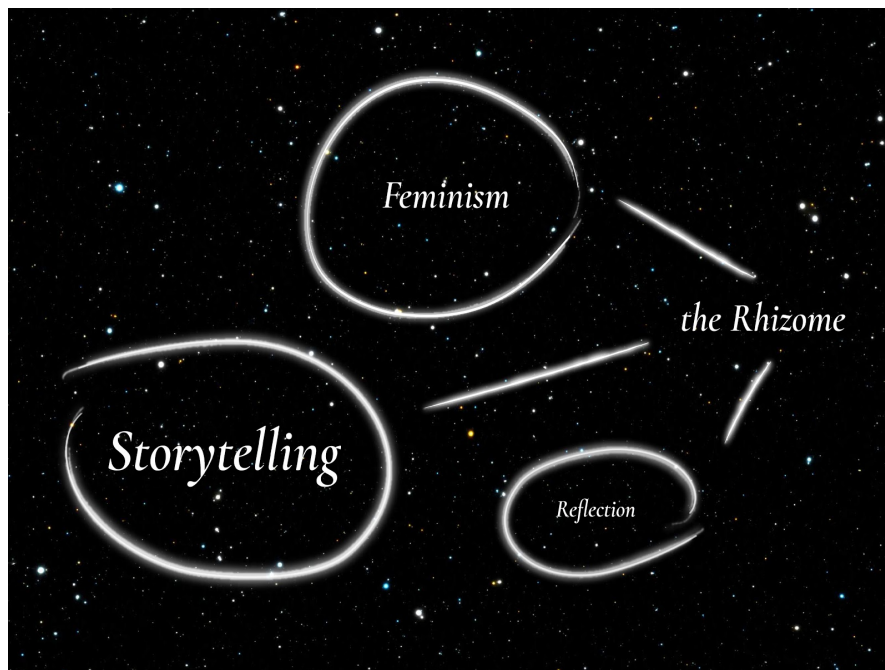

Figure 9. The beginnings of the rhizome design for Glitch.
Source: Lauren Connell-Whitney, 2020

The design of the VR navigation space followed suit. The whole process creating this work followed my ideas as they grew and connected to other ideas; the mind map

became a good way to visualize the complexity and connectivity of the rhizome. I began to find that I was sorting through my notes and mind maps placing one card next to another, shuffling around this mass of ideas and themes that had emerged over the course of the work.

The image of a dark New York City with the thousands of lights as a web of knowledge had been percolating in my mind. In many of those images, I created years ago, I had been up high in buildings, looking down to capture these works. So, I thought, maybe I should start from the ground and look up... revealing a night sky with stars of ideas emerging out of the dark. This became the visual starting point of the VR space.

I had been using Unity initially to create the VR world I had imagined. However, as with new technology there is always a glitch in the system. I suffered from several glitches; new unstable versions of Unity, and my own lack of technical knowledge to fix these bugs. I didn't know the scripting language to make these more complex visuals I had been imagining in my head. The ease of mastery was not easy. It made me wonder, if I as a capable digital technician with a high propensity for adaptability couldn't move forward on this thing. Was VR a good medium to talk about the commons or generativity?

Late one night, I was yet again struggling through another broken sketch and I found a website called Glitch.com that had tutorials for something called WebVR. As I mentioned in the 4.4 Generative Technologies, ease of use and adaptability are key components of allowing a technology to proliferate. WebVR uses a framework called AFrame to allow for creators to make VR experiences using fairly simple HTML and Javascript, languages that are now quite common and utilized widely. Glitch had created a platform for makers and coders to write, share, and remix their code online. There were thousands of small snippets of code that you could add to a project, unlimited tiny tutorials of how to build a world for VR. A crowdsourced learning tool that was enacting this idea of shared knowledge and the digital commons. This place found on the internet was the space to generate and share with for this project. Bringing VR back to the internet browser takes the system away from a closed space and brings the technology back into the common space of the web for all to use and make with.

I will note that while Glitch uses remixing and open sharing, it is not an open-source tool. While doing more research into Glitch, I found that their company principles were aligned with these ideas of business for good and value seeking through creating spaces of inclusion and diversity. Something I found important about their approach to creating a workspace that is inclusive and open, was an acknowledgement of the evolution of their company culture from a more

homogenous space to one that has made intentional and focused changes for inclusion and diversity in their staff and workplace practices. (Glitch) Business spaces should be always in progress and should be seeking change and growth as a normal part of the daily practice.

5.6 Telling Stories in the Dark (with Multiplicity)

The original intention of the work was to use a variety of media and approaches to tell stories. It felt important to the idea of the rhizome to include many ways for the users to experience the content. I imagined a virtual world where writing, videos and audio clips could be accessed and experienced together. I had been creating all of the media concurrently all while writing. I filmed myself with a 360 camera, telling the stories found in this paper in a darkened presentation stage and in my room (of one's own).

Then the world shut down. A worldwide pandemic of Covid-19 began. This event meant that everyone was encouraged or forced to stay inside, a new thing called social distancing. It also meant that the phrase "unprecedented times" became a very satisfying drinking game of our time while watching any form of news media. With

all of this staying inside, I did what most people did, I turned to social media and began watching the influx of daily diaries people were posting on their accounts. In watching all of these accounts, I became acutely aware of the performance in these personal accounts. I found the everydayness of the performance distracting, I wanted to feel taken away to some other fantasy world, not to some other person's messy bedroom. Seeing the faces of these regular people wasn't actually adding to the feeling of immersion or presence in their story. I began to wonder if my 360 videos might reflect some of this everydayness, if being forced to watch a person perform a story in a black backdrop might not be as engaging as one might hope.

I have been an avid listener of podcasts since (probably) 2006. I have found joy in the silences that happen in radio, the pauses and breaks in oration, which are, in a way, a form of auditory darkness. The singular audio causes a focus that video rarely can provide. One late night, in the dark, I read myself a story into my iPhone, the stillness of the house causing a quiet inflection in my reading. The idea that no one could see my face also felt liberating. (Despite filming myself many times, it is no surprise to announce my utter amateur status as a performer) I found myself worrying less about my awkward limbs and focusing more on the performance in the telling of the story. In finding my own voice in the dark,[44] the decision was made

---

[44] I would like to make mention of the precursor to these recordings. Much like the evolution from the city into the night sky I make mention of in 5.3 Stitching Together Nodes, these audio recordings are almost a progression of my practice over my time at OCAD. Femtech Toolbox, was a class crafted from the FemTechNet network (FemTechNet, 2020), where I learned to critically speak about these feminisms I had been collecting and reflecting on over my life. For this class, I wrote a story of becoming and recorded myself late one night.

to eliminate the distraction of video in the VR piece. I also began to think about the accessibility and ease of mastery involved in recording a story on your phone. It is significantly easier for more people to record and process an audio file, than it is for them to record, stitch, edit and compress a 360 video file. While some people don't have access to a smartphone, many more people have a phone than a VR headset.

In the wake of the coronavirus spreading around the world, our schools went online and our graduate exhibition was cancelled.[45] In lieu of the show, we were asked to create a website showcasing our work. This website (https://tellingstoriesinthedark.format.com/) became another extension of the rhizome, another arm of the project. Circuitously connecting the content together, and providing another way for the audience to access the work.

5.7 Getting Lost

"Stories go in circles. They don't go in straight lines. So, it helps if you listen in circles, because there are stories inside stories and stories between stories and finding your way through them is as easy and as hard as finding your

---

[45] I will also add that I graduated from my undergraduate degree in 2008, in New York City, at the heart of the financial crisis that led to the Great Recession. Through this process of education I seem to be weaving connections and building on my previous understandings of the world as the decades go by.

way home. And part of the finding is the getting lost. Because when you are

lost, you start to look around and to listen. So, I invite you now, to become

a little lost with me. Out of being lost comes the need to locate oneself. And

telling the story is a way to do that." (Don, 1991)

Figure 10. A screenshot of the final VR space, Aspasias.
Source: Lauren Connell-Whitney, 2020

The final VR piece is a space of darkness, where ideas appear out of the emptiness

when you explore. I wanted to reveal new ideas and connections as the user explores.

It is a space of vast darkness and it might be easy to get lost, but there is a path that

can be found. The audio pieces are revealed as you move deeper into the space.

Telling my stories of becoming as you move within the darkness. If the user waits to

listen to the whole recording and moves on, you experience one story at a time, but

if you so chose to explore and move forward to a new idea or recording, a multiple

audio can be heard, with the echoes of a past story humming in the distance. One might run into the darkness or one might follow the illuminations, however, it is up to the user to explore and find a way forward in the dark.

Chapter Six: The Next Chapter

6.1 Findings in the Dark

This work has been a process of learning the entire way through. It began with me wanting to talk to others about feminism and business, and grew into wanting to talk to myself about these things. Reflection has been a core method of understanding the themes and content that emerged in this work. Memory and its evolution when paired with reflection enables our story to grow.

A key finding that emerged in the creation process was how the rhizome promotes adaptability and generativity. By using the concept of the rhizome, the possibilities for the path of this project became open for change. This concept was at the core of impelling this journey of growth.

There are many attributes that VR is capable of, and I do not attempt to examine or explain them all. Though another finding in this process was that VR might not be an accessible space for a long time, the solution to this piece is to explore web technologies, to make a bridge between the closed system and the generative. I found that the VR headset still stands as a space of reflection through its ability to

concentrate one's focus. This quality surfaced by using the headset to create, to watch myself perform, and to simply explore the dark space I created. I learned through making with this tool of its properties of seclusion and quiet that allowed me to think and reflect on the stories I created.

6.2 Telling Stories to Each Other

A story is meant to be shared. The VR space, Aspasias, is a product of much research and exploration, but is something entirely of my creation that is filled with work I have thought about, learned through and found connections within. It acts as a pilot project that might be released into the world and evolve so that others can contribute, share their own stories and find their own path through the rhizome.

The next step of this project is to implement a system of contribution and conversation into the VR space, so that others can use this space for their own generative reflection and storytelling. I imagine a future version that would be chattering with ideas of intersectional feminism, sharing recollections of the personal as a way to understand the present, new ways to see business as a method of flourishing, and learning to tell your own story in a way that showcases your voice

and your eye. The more people, voices and ideas that are included, make the execution of this future project exponentially more complex. This part of the project will take more time and more thought. If there is one thing I have learned, it is that you never end up where you think you will and the progress is all the better for it. In using a remixable coding system like Glitch, it is not much of a step to invite others to see the code and add their own stories. I can imagine a future iteration of this project, as producing a step-by-step guide for creating and sharing within the Aspasias space. This piece would not only teach storytelling, it would teach simple code, simple graphics and methods of oration.

Something else I have learned through this process, is that the force of living is research and act of thinking is also research. It is the action of putting deeper thought and inquiry into the world that enables the evolution of our ideas. Practicing research is the act of deeper thinking. It is something everyone needs to learn how to do, whether or not it happens under the guise of structural academic learning or within the close circles of your friends and family. I have found that the pursuit of knowledge is authentically rhizomatic and that learning is truly a becoming.

Epilogue

We are in a time of possible divergence of thought, climate, evolution. The year is still 2020, but I am now writing from a time that will forever be understood by all who live through it as the Great Isolation. This work has taken on new meaning in the past few weeks in light (and dark) of a natural disaster that has taken hold of the whole world. We are now in a global pandemic state from a corona virus called Covid-19. Everyone is encouraged, and sometimes made by law, to stay inside. Everyone is encouraged, if leaving the house for supplies, to stay 6 feet away from other people. Toilet paper is in great shortage and citizens are panic buying supplies to stock up their houses with no abandon or regard for their neighbors. It has made some understand the meaning of crisis. However, using the internet to communicate is becoming the new normal and the prospect of virtual presence is evermore desired. Our virtual selves are finding a place in the world. A large portion of many populations have lost their jobs and are staying at home trying to find a new way to live in physical isolation from one another. Telling stories may be a tactic of survival right now, and telling stories virtually is the tool we are using to do it.

Glossary of Terms

This work is heavily influenced by a framework of feminist critical theory (Rosi Braidotti, Donna Haraway, Silvia Federici, Elizabeth Grosz, Katherine Hayles, bell hooks, Audre Lourde, Virginia Woolf, Aspasia of Miletus), all of which have a confluent history of influence from the ideas and writings of several male philosophers (Gilles Deleuze, Félix Guattari, Henri Bergson, Jacques Derrida, Michel Foucault, Socrates). I find it interesting to chart the path of ideas and how they mutate to evolve into a new thing, into new meanings for new groups of beings. Below is a glossary of terms as related to this work; the definitions may not be all encompassing, but can be understood as context for this writing.

1+1=3

This faulty math is the embodiment of the idea that when searching for a solution, seek to do more than just fix the problem, try to find a multiplicity of benefit as the result. If we implement this math into business and entrepreneurship, think of the possibilities for change.

"As if" Practice

An idea introduced by Rosi Braidotti in *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory* (1994, p. 5) to make sense of the interconnectedness of different experiences or states of being. Rather than talk about one experience as a reproduction or imitation, it gives light to the idea that some ways of being may have a sameness because of similar characteristics or qualities.

Becoming

A term originally introduced by Gilles Deleuze, a French philosopher and Félix Guattari, a French psychoanalyst. Heavily used in feminist theory as a way to understand the confluence and divergence of two (or more) things coming together to form a new thing within a system. Becoming is the idea of generative growth through the connection of entities.

The Commons

Siliva Federici is an Italian scholar, theorist and activist whose work ruminates on the idea that capitalism at its core relies on the unpaid labor and reproductive powers of women to thrive. The Commons is a place that all beings are a part of and need for basic communal survival. There is the commons of our land, the commons of our mind. The commons is a collective space of needs. However, what Federici has

identified is that all of these commons have been, or are quickly being, privatized by

corporate and capital powers. Protecting this shared resource calls for a collective

fight against being divided by the individual for the sake of equality and the land.

Decalcomania

Decalcomania is the process of tracing a picture or engraving onto a piece of pottery.

The etymology comes from the "French décalcomanie, from décalquer to copy by

tracing (from dé- de- + calquer to trace, from Italian calcare, literally, to tread, from

Latin) + manie mania, from Late Latin mania" (Merriam Webster, "Decalcomania",

2020). Decalcomania is in opposition to the rhizome. The context of decalcomania in

it's form here is from *A Thousand Plateaus: Capitalism and Schizophrenia* from Deleuze

and Guattari in (1987, p. 12). The idea of tracing relates to a more structured path of

growth, relating to the arborescent tree model rather than the rhizome. "The

rhizome is altogether different, a map and not a tracing." (p.12). Importantly to think

of "What distinguishes the map from the tracing is that it is entirely oriented toward

an experimentation in contact with the real." (p. 12) The rhizome in a way, is an idea

to create anew and to stop following assigned and predetermined paths.

Feminist Entrepreneurship

This is the term that birthed this work. Though it may not be visually present in the

final iteration of writing, it stands as the kindle for the fire in its creation. Feminist

entrepreneurship is about approaching business with a new set of values and methods. In a way, it is connected to the commons and to enacting personal power for the benefit of the community. Though business is the core of much of our Neoliberal struggle, I truly believe business is the answer to the multitude of capitalist pains. We just need to start understanding business practice from a different angle. Feminist Entrepreneurship is a term coined by Barbara J. Orser and Catherine J. Elliott through their intensive (and pioneering) work focused on truly understanding the pain points and successes of women entrepreneurs. They have found a new set of values to imbue into business practice: co-operation, equity for all, and an intersectional look at benefit. I wholeheartedly believe that enacting this value set into entrepreneurship can make widespread change for the benefit of many.

Generativity

Generativity is the nurture and care provided and shared among generations. It is a type of constructive feminism; wisdom that helps us construct new ways of being, new interactions, and new ideas of what our world could be (Harquail, 2020, p. 24). It is important to the growth of our communities and future kin to share knowledge generationally. To generate – to create, as humans we seek to care for and create growth for ourselves and our communities. This work seeks to form bonds of generative knowledge sharing among women in a digital space. The internet is a unique place of generativity that has the structure to share and create with

communities all over the world, for people that are isolated, the digital space is access to learning and growth.

Nomadic Thought

"Central to the nomadic subject is the emphasis on the intimate connection between critique and creation. Critique is consequently not only a sterile opposition but also an active engagement of the conceptual imagination in the task of producing sustainable alternatives" (Braidotti 2011, p. 6)

Making Kin

Donna Haraway is a biologist and feminist theorist who has made massive, evocative, and wholly unique contributions to feminist theory. Her early work, *A Cyborg Manifesto* (1991 p. 149-181) first published in 1985 talks of a blurring of boundaries between human and machine. She speaks about fusions of being and a space for women to break free from the rigid forms of gender through a new multiplicitous cyborg existence; "the utopian dream of the hope for a monstrous world without gender" (p. 181). This work is incredibly important for feminist theory, but also in posthumanist and digital theory. This important work, full of fire and vehemence, led Haraway to a full evolution of thinking to focus on the importance of interspecies and intergenerational care, completely abandoning techo-thinking. Making kin literally means to find family, with no particular

association or possession to an importance on blood relations. We must make kin

with our communities, with our enemies, with the biota around us. It is the

exhilarating idea that we must learn to live with (and nourish) each other.

Multiplicity

The ability to hold many ways of being. The combination of forces to create a new

force with unique attributes through that particular combination. One person can

hold many multiplicities within themselves or with other people, beings, ideas, and

knowledges. This idea is a central concept in Deleuze and Guattari's work, and is

used throughout Erin Manning's *Politics of Touch: Sense, Movement, Sovereignty* (2009):

> *"Mutation refers as much to the way systems are organized, composed, and*
> *articulated as to divergences in those systems.*
>
> *Mutants are bodies by another name. Mutants connote multiplicity. There*
> *is more than one way for a body to become. Multiplicity entails an*
> *undermining of the order of the system. Multiplicity is not 1+1. It is 1+ too*
> *many to count. The multiple does not simply refer to individuals en masse.*
> *The multiple is a rethinking of collective individuation…. Collective*
> *individuation is about more than community."* (Manning 2009, p. xx)

We are all mutants with many forms and ways of being. A beautiful way to think of

our ability to adapt and grow. Multiplicity is such an important concept for

feminism, to understand that one is not only what they are labelled, or what they

show to the world. It allows one to go through life with many understandings, knowledges and recombinations of being.

Rhizome/Rhizomatic/Rhizomic

A rhizome is a plant root system, though rather than a root, it is a complex system of connections, where life can sprout off of any node, growing in all directions, and is non-hierarchical in its structure. The rhizome was first written about by Deleuze and Guattari in *A Thousand Plateaus: Capitalism and Schizophrenia* (1987, p. 7) to describe a concept of a structural change in how we might view information and knowledge. It recognizes the multitude of understandings and connections that knowledge can hold.

Proprioception

The sensation and orientation of where one's limbs are in space. The etymology of the word comes from the Latin "proprius" that means "one's own", and "reception" which is the effect of two things on each other. Proprioception is what enables us to type on a computer without looking at the keys. It enables me to ride my bicycle and to control my acceleration and braking entirely with my legs while my eyes stay attentively to the road. It is also what contributes to the embodied experiences we have in the virtual world. Our bodies have this ability to know where our limbs are

situated to each other, even in the dark. An awareness of where you physically are in the world.

Propriospect

Propriospect is the individual's view of the world from their own personal experience. Each individual's outlook forms the collective culture we all share; therefore, we should place value on the knowledge we as individuals hold. Propriospect is an important idea for many reasons, but for one, it places value on and gives power to an individual's knowledge and experience. Harry Wolcott writes, "By viewing humans in terms of competencies rather than deficiencies, propriospect directs attention not only to individual potential but also to human accomplishment." (Wolcott 1991, p. 255).

Staying with the Trouble

Donna Haraway's 2016 work, *Staying with the Trouble: Making Kin in the Chthulucene* urges us to continue to engage with the current state of trouble, to keep unraveling the present for a better future.

> *"Staying with the trouble does not require such a relationship to times called the future. In fact, staying with the trouble requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad*

unfinished configurations of places, times, matters, meanings." (Haraway 2016, p. 1)

Bibliography

Agatucci, C. (2010, January 1). African Storytelling An Introduction, with Works Cited & Sources for Further Study. Retrieved from http://web.cocc.edu/cagatucci/classes/hum211/afrstory.htm

Barrett, E., & Bolt, B. (2019). *Practice as research: approaches to creative arts enquiry*. London: Bloomsbury Visual Arts.

Barrett, M., & McIntosh, M. (2005). Ethnocentrism and Socialist-Feminist Theory. Feminist Review, (80), 64-86. Retrieved April 9, 2020, from www.jstor.org/stable/3874365

B Corporation. (2020). Retrieved from https://bcorporation.net/

Berger, A. A. (1997). *Narratives in popular culture, media, and everyday life*. Thousand Oaks, CA: SAGE Publications, Inc. doi: 10.4135/9781452243344.n1

Bertrand, P., Guegan, J., Robieux, L., Mccall, C. A., & Zenasni, F. (2018). Learning Empathy Through Virtual Reality: Multiple Strategies for Training Empathy-Related Abilities Using Body Ownership Illusions in Embodied Virtual Reality. Frontiers in Robotics and AI, 5. doi:10.3389/frobt.2018.00026

Blay, Z. (2016, July 19). When Representation Mattered: On Truly 'Seeing' Yourself In Pop Culture. Retrieved from https://www.huffingtonpost.ca/entry/when-representation-mattered-on-truly-seeing-yourself-in-pop-culture_n_55c5140ce4b0f1cbf1e51bc7?ri18n=true

Bozorgzadeh, A. (2018, February 3). WebVR is becoming WebXR to make a simple, unified framework for all devices. Retrieved from https://venturebeat.com/2018/02/01/webvr-is-becoming-webxr-to-make-a-simple-unified-framework-for-all-devices/

Braidotti, R. (1994). *Nomadic subjects: embodiment and sexual difference in contemporary feminist theory*. New York, NY: Columbia University Press.

Braidotti, R. (2011). *Nomadic theory: the portable Rosi Braidotti*. New York: Columbia University Press.

Brophy, P. (2009). Narrative-based practice. Retrieved from https://ebookcentral.proquest.com

Cormier, D. (n.d.). Introduction. Retrieved from https://davecormier.pressbooks.com/front-matter/introduction/

Cowan, T. L., & Rault, J. (2018). Onlining queer acts: Digital research ethics and caring for risky archives. Women & Performance: A Journal of Feminist Theory, 28(2), 121-142. doi:10.1080/0740770X.2018.1473985

Dean, H., & Ford, J. (2017). Discourses of entrepreneurial leadership: Exposing myths and exploring new approaches. International Small Business Journal, 35(2), 178–196. https://doi.org/10.1177/0266242616668389

Deleuze, G., & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia.* Minneapolis: University of Minnesota Press.

Didion, J. (2006). *We tell ourselves stories in order to live: collected nonfiction.* New York: Alfred A. Knopf.

Don, A. (1991, Summer). Stories About Stories. Whole Earth Review, (71), 56+. Retrieved from https://link-gale-com.ocadu.idm.oclc.org/apps/doc/A10988585/AONE?u=tor037158&sid=AONE&xid=ce3ba47a

Ellis, C., Adams, T., & Bochner, A. (2011). Autoethnography: An Overview. Historical Social Research / Historische Sozialforschung, 36(4 (138)), 273-290. Retrieved March 24, 2020, from www.jstor.org/stable/23032294

Federici, S. (2011). The Wealth of the Commons. Retrieved from http://wealthofthecommons.org/essay/feminism-and-politics-commons

Federici, S., & Linebaugh, P. (2019). *Re-enchanting the world: feminism and the politics of the commons.* Oakland, CA: PM Press.

FemTechNet. (2020). Retrieved from https://femtechnet.org/about/the-network/

Fonow, M. M., & Cook, J. A. (1999). Beyond methodology: feminist scholarship as lived research. Boulder, CO: NetLibrary, Inc.

Foucault, M. (1978). *The history of sexuality: An introduction.* Hammonsworth: Penguin.

Fowler, L. (2003). Narrative plains of pedagogy: A curriculum of difficulty. Counterpoints, 193, 159-172.

Freire, P. (2000). *Pedagogy of the oppressed (30th anniversary ed.).* New York: Continuum.

Frisby, D. (2016, May 14). Zimbabwe's trillion-dollar note: from worthless paper to hot investment. Retrieved from https://www.theguardian.com/money/2016/may/14/zimbabwe-trillion-dollar-note-hyerinflation-investment

Gardner, P., & Grose, J. (2015). Mindfulness in the academy – transforming our work and ourselves 'One moment at a time'. Collected Essays on Learning and Teaching, 8, 35. doi:10.22329/celt.v8i0.4252

Glitch. (n.d.). About Glitch. Retrieved from https://glitch.com/about/company

Grady, C. (2018, July 20). The waves of feminism, and why people keep fighting over them, explained. Retrieved from https://www.vox.com/2018/3/20/16955588/feminism-waves-explained-first-second-third-fourth

Granger, C. A. (2011). *Silent moments in education: an autoethnography of learning, teaching, and learning to teach.* University of Toronto Press.

Gros, E. (2001). *Architecture from the Outside: Essays on Virtual and Real Space*. MIT Press.

Grosz, E. (2011). *Volatile bodies toward a corporeal feminism*. Bloomington: Indiana Univ. Press.

Gunatilleke, M. (. (2018). Bodies-cities:exploring embodied knowledge of urban sites through interactive virtual reality experiences (Master's thesis, OCAD, 2018). Toronto: OCAD University Open Research Repository.

Hanisch, C. (2009). The Personal is Political: The Women's LiberationMovement classic with a new explanatory introduction . Retrieved from http://www.carolhanisch.org/CHwritings/PIP.html

Haraway, D. J. (1991). *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge.

Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. Feminist Studies,14(3), 575. doi:10.2307/3178066

Haraway, D. J. (2016). *Staying with the trouble: making kin in the Chthulucene*. Durham: Duke University Press.

Harding, S. (1996). *Feminism and methodology: social science issues*. Bloomington, IN: Indiana Univ. Press.

Harquail, C. V. (2020). *Feminism: a key idea for business and society*. Abingdon, Oxon: Routledge.

Hayles, N. K. (2010). *How we became posthuman: Virtual bodies in cybernetics, literature and informatics*. Chicago: Univ. of Chicago Press.

Hayles, K. (2012). *How we think: digital media and contemporary technogenesis*. Chicago: The University of Chicago Press.

Heldke, L. M., & OConnor, P. (2004). *Oppression, privilege, and resistance: theoretical perspectives on racism, sexism, and heterosexism*. Boston: McGraw-Hill.

Honeyman, R. (2014, October 13). Has the B Corp Movement Made a Difference? (SSIR). Retrieved from https://ssir.org/articles/entry/has_the_b_corp_movement_made_a_difference

Humphreys, C. (2012). Between authenticity and argument: Rhizomatic writing and educational insights

Humphreys, C. (2013). Rhizomatic writing and pedagogy: Deleuze & Guattari and Heidegger. The Journal of Educational Thought (JET) / Revue De La Pensée Éducative, 46(3), 191-205.

Instage. InStage. Retrieved from https://www.instage.ca/

Kolb, A. Y., & Kolb, D. A. (2009). The learning way: Meta-cognitive aspects of experiential learning. Simulation & Gaming, 40(3), 297-327. doi:10.1177/1046878108325713

LaFrance, A. (2019, June 4). How the Bicycle Paved the Way for Women's Rights. Retrieved from https://www.theatlantic.com/technology/archive/2014/06/the-technology-craze-of-the-1890s-that-forever-changed-womens-rights/373535/

Letherby, G. (2003). *Feminist Research in Theory and Practice*. McGraw-Hill Professional Book Group.

Linabary, J. R., & Hamel, S. A. (2017). Feminist online interviewing: Engaging issues of power, resistance and reflexivity in practice. Feminist Review,115(1), 97-113. doi:10.1057/s41305-017-0041-3

Lionnet, F., & Shih, S.-mei. (2005). *Minor Transnationalism*. Durham: Duke University Press.

Lorde, A. (1996). *Sister outsider: essays and speeches*. Trumansburg, NY: Crossing Press.

Loveless, N. (2015). Towards a Manifesto on Research-Creation. RACAR: Revue D'art Canadienne / Canadian Art Review, 40(1), 52-54. Retrieved April 8, 2020, from www.jstor.org/stable/24327427

Kee, J. sm. (2017, November 10). Making a feminist internet: Movement building in a digital age. Retrieved from https://www.genderit.org/node/5035/

Kerby, P. (1991). *Narrative and the self.* Bloomington: Indiana University Press.

Kimmey, S. (2013, June 27). Rebecca Solnit: The self as story. Retrieved from https://www.ptreyeslight.com/article/rebecca-solnit-self-story

Mark, J. J. (2012, January 18). Aspasia of Miletus: The Art of Eloquence. Ancient History Encyclopedia. Retrieved from https://www.ancient.eu/article/80/

Manning, E. (2009). *Politics of touch: sense, movement, sovereignty*. Brantford, Ont.: W. Ross MacDonald School Resource Services Library.

McKeon, L. (2018). *F-bomb: Dispatches from the war on feminism.* Dallas, TX: BenBella Books.

Merriam Webster. (2020). Decalcomania. Retrieved from https://www.merriam-webster.com/dictionary/decalcomania#h1

Miniwatts Marketing Group. (2019, May 9). Internet Users and 2019 Population in North America. Retrieved from https://internetworldstats.com/stats14.htm

Naik, M. (2016). Beyond the Economic: The Influence of Women Entrepreneurs in Canada.

Nash, K. (1994). The feminist production of knowledge: Is deconstruction a practice for women? Feminist Review, 47, 65. Retrieved from http://ocadu.idm.oclc.org/login?url=https://search-proquest-com.ocadu.idm.oclc.org/docview/1300475533?accountid=12991

NeuroSpeculative AfroFeminism. (n.d.). Retrieved from https://docubase.mit.edu/project/neurospeculativeafrofeminism/

Outlaw, J. (2018, November 13). Close Conversation is the Future of Social VR - Jessica Outlaw. Retrieved from https://medium.com/jessica.outlaw/close-conversation-is-the-future-of-social-vr-93a0eobedd94

Outlaw, J., & Bye, K. (2019, July 6). #784: Elements of Culture & Cultivating Community with Jessica Outlaw [Audio blog post]. Retrieved July 16, 2019, from http://voicesofvr.com/784-elements-of-culture-cultivating-community-with-jessica-outlaw/

Orser, B. (2015). *Feminine Capital: Unlocking the Power of Women Entrepreneurs.* Stanford University Press.

Orser, B., Elliott, C., & Leek, J. (2013). Entrepreneurial Feminists: Perspectives About Opportunity Recognition and Governance. Journal of Business Ethics, 115(2), 241-257. Retrieved from http://www.jstor.org.ocadu.idm.oclc.org/stable/42001981

Paulson, S., & Haraway, D. (2019, December 6). Making Kin: An Interview with Donna Haraway. Retrieved from https://lareviewofbooks.org/article/making-kin-an-interview-with-donna-haraway/

Phillips. (2019, June 13). In the Studio with Rachel Rossin. Retrieved from https://www.youtube.com/watch?v=mJrjZI7Dlhk

Pinch, T. J., & Bijker, W. E. (1984). The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other. Social Studies of Science,14(3), 399-441. doi:10.1177/030631284014003004

Polanyi, M. (2012). Personal knowledge. London: Taylor and Francis. doi:10.4324/9780203442159

Polanyi, M. (1967). The Tacit Dimension. New York, NY: Doubleday and Co.

Reardon, M., Sanzogni, L., & Poropat, A. (2006). Towards a Rhizomatic Method for Knowledge Management. The International Journal of Knowledge, Culture, and

Change Management: Annual Review, 5(5), 159–168. doi:
10.18848/1447-9524/cgp/v05i05/49583

Richardson, L. (1990). Narrative and sociology. Journal of Contemporary
Ethnography, 19, 116–135.
http://dx.doi.org.ocadu.idm.oclc.org/10.1177/089124190019001006

Sanders, E. B., & Stappers, P. J. (2016). *Convivial toolbox: Generative research for the
front end of design*. Amsterdam: BIS.

Schmidt, J., Lu, T., Boyle, T., & Vedantam, S. (2018, June 5). When Everything
Clicks: The Power Of Judgment-Free Learning. Retrieved from
https://www.npr.org/2018/06/04/616127481/when-everything-clicks-the-power-of-ju
dgment-free-learning

Schwendener, M. (2015, November 05). In Rachel Rossin's 'Lossy,' the Virtual Reality
of Living in a Painting. Retrieved from
https://www.nytimes.com/2015/11/06/arts/design/in-rachel-rossins-lossy-the-virtual-
reality-of-living-in-a-painting.html

Silverstone, R. (1999). Memory. In *Why study the media?* (pp. 125-133). London: SAGE
Publications Ltd doi: 10.4135/9781446219461.n14

Simpson, A. (2017). *The innovation-friendly organization: how to cultivate new ideas and
embrace the change they bring*. London: Palgrave Macmillan.

Slater, M. (2009). Place illusion and plausibility can lead to realistic behaviour in
immersive virtual environments. Philosophical Transactions of the Royal Society B:
Biological Sciences, 364(1535), 3549–3557. doi: 10.1098/rstb.2009.0138

Slater, M. (2014). Grand challenges in virtual environments. Frontiers in Robotics
and AI, doi:10.3389/frobt.2014.00003

Slater, M. (2018). Immersion and the illusion of presence in virtual reality. British
Journal of Psychology, 109(3), 431-433. doi:10.1111/bjop.12305

Smith, D. (1975). What It Might Mean to Do a Canadian Sociology: The Everyday World as Problematic. The Canadian Journal of Sociology / Cahiers Canadiens De Sociologie, 1(3), 363-376. doi:10.2307/3340418

Smith, H., & Dean, R. (2009). Practice-led Research, Research-led Practice in the Creative Arts. Edinburgh: Edinburgh University Press. Retrieved April 8, 2020, from www.jstor.org/stable/10.3366/j.ctt1g0b594

Solnit, R. (2020). *Reflections of my nonexistence*. Penguin Random House

South African History Online. (2016, May 6). A history of Apartheid in South Africa. Retrieved from https://www.sahistory.org.za/article/history-apartheid-south-africa

Špiljak, K. (2014). Non-Formal Educational Methodology as a Tool for Emancipatory and Feminist Thought. A Feminist Critique to Knowledge Production.

Stanley, L. (2013). *Feminist praxis: research, theory and epistemology in feminist sociology.* London: Routledge.

Stavro-Beauchamp, L., & OCAD University. Graduate Studies Programs. (2015). Create and grow strong: Using creative exploration, expression and celebration to foster resilience in youth. Toronto: OCAD University.

Stinson, L. (2017, November 21). These trippy paintings depict reality as seen through VR. Retrieved from https://www.wired.com/2015/11/rachel-rossins-trippy-paintings-of-reality-as-seen-through-vr/

Stone, A. (n.d.). On Being Trans, and Under the Radar: Tales from the Actlab. Retrieved from https://actlab.us/radar.shtml

Sylvan, E. A. (2017). The Sharing of Wonderful Ideas: Influence and Interaction in Online Communities of Creators (Unpublished master's thesis). MIT. Retrieved from

https://www.media.mit.edu/publications/the-sharing-of-wonderful-ideas-influence-and-interaction-in-online-communities-of-creators/

Tessier, M. (2016, October 27). Speaking While Female, and at a Disadvantage. Retrieved from https://www.nytimes.com/2016/10/27/upshot/speaking-while-female-and-at-a-disadvantage.html

Tickell, O. (1993, November 13). Technology: Kodak snubs green 'fixer'. Retrieved from https://www.newscientist.com/article/mg14018993-000-technology-kodak-snubs-green-fixer/

Tomm, W., Benston, M. L., & Calgary Institute for the Humanities. (1989). *The effects of feminist approaches on research methodologies.* Published by Wilfrid Laurier University Press for the Calgary Institute for the Humanities.

Turkle, S. (2011). Alone together: *Why we expect more from technology and less from each other.* New York: Basic Books.

Veltman, K. H. (2006). *Understanding new media.* University of Calgary Press.

Wolcott, H. F. (1991). Propriospect and the acquisition of culture. Anthropology & Education Quarterly, 22(3), 251-273. doi:10.1525/aeq.1991.22.3.05x1052l

Woolf, V. (2004). *A Room of One's Own.* London: Penguin Books.

Zittrain, J. (2006). The Generative Internet. Retrieved from http://nrs.harvard.edu/urn-3:HUL.InstRepos:9385626

Appendix

Appendix A: A video walkthrough of the VR space

Title: Aspasias Walkthrough

Description: A virtual video walkthrough of the Aspasias space, that can be located in the OCAD University Open Research Repository

Date: April 29, 2020.

File name: Walkthrough-Aspasias.mp4

File type: Mp4