Art Behind the Screen: Understanding Digital Art Encounters

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A Thesis

In the Department of

Art Education

Presented in Partial Fulfillment of the Requirements

For the Degree of

Master of Art (Art Education)

At Concordia University

Montreal, Quebec, Canada

CONCORDIA UNIVERSITY
School of Graduate Studies

This is to certify that the thesis prepared

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Entitled: Art Behind the Screen: Understanding Digital Art Encounters

and submitted in partial fulfillment of the requirements for the degree of

Master of Arts (Art Education)

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Abstract

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This master's thesis investigates contemporary art encounters in digital spaces, framing them as "hyperreal territories." Through an autoethnographic study of a virtual exhibition Earth Tones Museum, this research uses Actor-Network Theory (ANT) to analyze the lively relationships between human and non-human "actants", everything from the visitors of platform to the invisible code to interface glitches and to animated frogs.

Findings reveal that virtual encounters are co-created performances where users act as "bricoleurs," inventively navigating technical failures and repurposing digital tools. The study concludes that these encounters are contingent, distributed networks and proposes a "pedagogy of the glitch," urging artists and educators to shift from replication to invention, embracing friction and empowering visitors as co-creators of their own experience within the digital space.

Land Acknowledgement and Connection to Place

This thesis was crafted on the traditional, ancestral, and unceded territories of the Kanien’kehá꞉ka, Omàmìwininìwag, and Anishinabewaki Peoples, and the Syilx (Okanagan) Nation. These lands have held and nurtured the research, writing, and reflection that shape this work, reminding me that even virtual world-building springs from our deepest connections to place and the living earth that sustains us.

I write with gratitude for the privilege of teaching at Kahnawake Survival School on Kanien’kehá꞉ka lands, where I am welcomed daily into a community that honors knowledge, language, and cultural continuity. The students and community members are my teachers, offering lessons in resilience, connection, and what it means to tend to one's roots while growing toward the future. Their generosity in sharing space, wisdom, and welcome has transformed my understanding of education, community, and reciprocity.

Much of this thesis took shape beside the beaches of Okanagan Lake on Syilx territory, where my parents' home became a sanctuary for my writing. Here, typing under th pastel sunsets, I found myself held by the sweet honey scent of ponderosa pines and the tart, earthy embrace of sage brush. These sensory memories are woven into every page, the way evening light sat on water, the gentle lapping of waves against shore, the way this land seemed to breathe with ancient stories of the mountains

Though this thesis explores virtual worlds and digital spaces, I am constantly reminded that all world-building is rooted in our relationship to land. The imagination that creates new realities springs from the soil beneath our feet, the waters that sustain us, and the medicines that grow from earth's generous abundance. Virtual worlds may exist in digital space, but they are

dreamed into being by people whose bodies and spirits are shaped by place, by the particular qualities of light and wind and growing things that make us who we are.

As a white, settler academic with access to multiple territories, resources, and educational opportunities, I acknowledge the profound responsibility that comes with this mobility and privilege. I am grateful for the teachings that emerge from being in relationship with these lands and the Indigenous communities who have stewarded them since time immemorial. I commit to carrying these teachings forward with care, ensuring that my work honors the gifts I have received and contributes to the collective flourishing of all beings.

I offer gratitude to all the relations (human and more-than-human) who have supported this work: the waters that flow through these territories, the medicines that grow here, the educators and knowledge keepers who share their wisdom, and the students who remind me daily what learning in community can look like. May this work serve the ongoing relationships between people and place that make all meaningful creation possible.

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Chapter One: Introduction

1.1 : Foggy Territory

As I reflect on the many hats I wear — artist, teacher, researcher, and student — I find myself enchanted by the way emerging technologies and digital platforms are redefining contemporary art. It feels as if we are all standing at the edge of a vast, foggy, uncharted territory. Within this fog, the old landmarks of the art world such as the gallery, the object, the encounter are becoming obscured, and new pathways are forming. The possibilities are as exhilarating as they are overwhelming.

Contemporary art has always been fluid, evolving alongside the society and culture that produce it. Today, the one of the defining conditions of our society is our digital footprint. The quiet, flickering glow of the screen, the invisible logic of the algorithm, and the language of the network are no longer just tools for artists but rather an extended limb. This concept was explored by Marshall McLuhan, who argued in Understanding Media that all technologies are "extensions of man." (1964) This change in the way we interact with technology has impacted aspects of life beyond the art realm, reshaping everything from our modes of communication to our constructions of culture and identity. To speak of "contemporary art" today without speaking of the digital is to tell an incomplete story.

The intersection of these digital upgrades with artistic practices has opened doors to new forms of expression and engagement, challenging us to rethink what art can be, how it can be made, and how it can be consumed. This research is a journey into that fog. This is not an exercise to seek one path; rather, it is to create a system for traversing the terrain. This personal project is driven by a curiosity to understand the shifting movement of contemporary art and by a

desire to contribute to it. This thesis seeks to deep dive into what digital art encounters are, and what they do, especially for artists, audiences and educators.

1.2 : Earth Tones Museum

The foundation and driving force for my research is Earth Tones Museum (ETM), a digital museum designed for viewing art in a virtual space. As the creator of this project, the online exhibition has allowed me to reflect on how digital environments offer possibilities for presenting art, inviting audiences to interact with it in ways that transcend geographic and physical barriers. Earth Tones showcases the work of 36 emerging artists, each presented in virtual "rooms" curated around six themes: Pilgrimage, Amphibious, Magic Items, First Encounters, Vortex, and Relics. Earth Tones is more than an exhibition platform. It is also an investigation of the ways in which emergent digital technologies can change how we produce, share, and experience contemporary art. Crucially, it is hoped that this project can influence a new pedagogical dimension, one that is explored how ETM (see Figure 1), as a digital space can facilitate new forms of learning, engagement, and teaching through viewing art.

Figure 1. Screenshot from the homepage of earthtones.art 2025

The project is, in every sense, a "pandemic baby," born out of the strange stillness and the challenges presented by the global shutdown during the COVID-19 pandemic. As the doors of physical galleries closed and the familiar hum of a crowded opening silenced, the virtual world became the primary stage for cultural life. When access to physical galleries was restricted, a friend and I received funding to collaborate on developing a virtual space that could bridge that gap. The vision, as outlined in the original grant proposal, was to create an inclusive, accessible, and "living" platform, a space that could evolve and create a connection for artists and audiences who suddenly found themselves isolated. However, as with many creative projects, the path from concept to reality was riddled with unforeseen challenges. What began as a collaborative project quickly transitioned into a personal, and at times isolating, one. The two web developers I initially hired failed to deliver on their commitments, leaving me to go from "art curator" to "self-taught web developer" overnight.

While this setback was frustrating, it became a gift. It pushed me to take full ownership of the project, forcing me to learn the code and create the infrastructure that would bring the museum to life. Earth Tones became my labor of love, and I poured countless hours into its realization, troubleshooting hours of broken lines of code and making design compromises based on my limited skillset. It is this lived experience of being the curator who initially conceived of the space, the developer who built the platform, and the researcher who is now analyzing its effects to form the autoethnographic core of this study. The website's history, with all its struggles, is not a flaw in the research but a central part of this data, offering an intimate view into the messy realities of creating art behind the screen.

1.3 : Research Questions

My hands-on experience building Earth Tones led me to the evolving relationship of contemporary art and virtual spaces. The rise of digital tools has opened up new opportunities for both engagement and research, creating what some scholars see as an "emerging new context for aesthetic experiences" (Rodriguez-Bowerwinkle & Siliva, 2023, p.5). There is a generous amount of scholarship in this area, however lots of the reading I've done focused on quantifiable visitor behaviors. For instance, studies examine how personality traits predict metrics like visit time, distances and viewing patterns within virtual galleries (Rodriguez-Bowerwinkle & Siliva, 2023). However, this could open up a gap in the understanding of the qualitative nature of these digital art encounters. The discussion often gravitates towards the digital form or the novelty of the technology, which are also explored within this research, these examples pay less attention to how emotional connections formed in digital spaces create encounters and modes of interpretation. Thus, my research goes from asking what we see online to asking how we will see it, and rather than asking for true and fixed forms of knowledge, it will reflect on the experience of it. Additionally, it will inquire how the materiality and "technological affordances" (Sundar et al., 2015) off the online space influence the ways we understand what we are seeing.

This leads me to my main research question: How can existing frameworks, combined with data, be used to analyze and understand encounters with contemporary art in digital environments? This central question leads to other thematic questions that this thesis will address:

- What are the key human and non-human elements that must be considered when analyzing an art encounter in a digital space?

- How can such a framework be used not only for analysis but also as a practical tool to help artists, curators, and educators facilitate more meaningful encounters with contemporary art online?

1.4: Significance of the Research

These concerns have also been underpinned by the paradox of accessibility. A digital museum such as Earth Tones can possibly promise a democratic challenge to physical, geographic, and financial limits; a space where someone living in a remote town can view an exhibition without needing to get to and pay for that space. However, this promising potentiality of increased access must contend with the barriers of the digital divide. The digital world presents its own challenges of digital literacies, consistent internet access, and working technology. It's a bit like inviting everyone to a party only to realize some people don't know the address.

One of the core themes explored while writing the grant for Earth Tones was selective anonymity. As lovers of tangibility in its multiple dimensions (from the physicality of in-person interactions to the material reality of what digital can be) we found the internet to be an exciting space where these forms of presence intersect. When one thinks of tangibility, it generally involves direct physical contact and face-to-face engagement, and digital spaces offer their own form of tangible experience. In these digital realms, certain aspects of identity, such as race, sexual orientation, gender, religion, and disability, become tangible only through conscious choice rather than physical presence.

A crucial role in making Earth Tones is for the project to exist at the intersection of physical and digital tangibility, recognizing that both realms offer valid and meaningful ways of touching, connecting, and being present within the artwork.

For many, remaining anonymous while sharing their work is not just a creative choice but a matter of personal safety and protection. Earth Tones allows artists to engage with the art world on their own terms, providing them with the opportunity to promote their work without the need to be openly identified by markers that could marginalize them. This approach enables an inclusive environment, ensuring that those who might otherwise be excluded from traditional gallery spaces still have access to platforms that can help them grow creatively and professionally.

Through this lens, accessibility goes beyond access to technology or digital interfaces. It becomes about creating a space where individuals can choose how to present themselves, empowering artists to engage with audiences without the pressure of being defined by societal expectations or stereotypes. This aligns with my broader research focus, which examines how digital platforms shape contemporary art encounters while also addressing questions of identity, safety, and inclusivity in the online art world.

I feel a weighty duty to my students at Kahnawake Survival School and to the artists for whom I am creating this digital space. My students inspire me to consider how we can empower and educate, while the artists I work with challenge me to provide a platform that honours their creativity and vision. This research is particularly timely given the accelerated shift towards digital platforms during the COVID-19 pandemic and the ongoing evolution of web-based technologies. As we grapple with the implications of an increasingly digital world, work like this will be crucial in shaping the understanding of the future of contemporary art and its role in society.

With hope, the findings from this study will have the potential to contribute significantly to our understanding of how digital spaces are reshaping contemporary art practices, audience

engagement, and the nature of creation. By looking to themes such as accessibility, selective anonymity, and the democratization of art spaces, this research may offer insights for artists, curators, and educators seeking to navigate the amalgamation of the digital landscape and contemporary art, with hopes of informing strategies for digital curation, online art education, and the development of more inclusive and engaging virtual art experiences.

1.5: Outline

This thesis will unfold over the following five chapters. Chapter 2, "Theoretical Framework", will establish the conceptual framework for the study by integrating five interconnected ideas: contemporary art in the digital age, the nature of digital galleries, the characteristics of an art encounter, the relationship between real and digital art encounters, and accessibility behind the screen. Chapter 3, "Methodology," will detail the qualitative research design, outlining the multifaceted approach which combines phenomenological investigation with Actor-Network Theory, and justifying the use of Earth Tones Museum as the case study. Chapter 4, "Findings," presents the data gathered from screen recordings and post-recording questionnaires with a focus group of five artists. This chapter traces the complex network that formed as participants interacted with the platform. Following this, Chapter 5, "Discussion," analyzes these findings in conversation with the theoretical framework, outlining the development of a proposed framework for understanding virtual art encounters. Finishing it off with Chapter 6, "Conclusion," summarizes the research, acknowledging its limitations, and reflects on the paper's contributions and limitations while pointing toward future research.

Chapter Two: Theoretical Framework

To navigate the “vast, foggy, uncharted territory” of how contemporary art is encountered today, more than just curiosity is needed; what is required is a compass. This navigation tool is not one made of metal and magnets, but one built from the ideas of thinkers who have already walked parts of this terrain. This chapter offers that compass: a theoretical framework drawn from overlapping fields and sometimes divergent thinkers. It is a kind of intellectual mapping that helps find footing in the often-shifting world of digital art encounters.

The discussion of theory begins by grounding in what is meant by contemporary art in the digital age. Drawing on thinkers like Lev Manovich and Hito Steyerl, this section argues that the digital is not only a tool for art but the fundamental condition of its creation, circulation, and meaning. It explores how the "post-internet" condition has dissolved the boundaries between the physical and the virtual, and how concepts like Walter Benjamin's "aura" are transformed in an era of the endlessly copied and remixed "poor images…"

To further understand this blur, I explore the thinking of philosophers who, long before the internet had the ubiquitous influence it has now, predicted a world characterized by simulation. Here, I explore the work of Jean Baudrillard and Umberto Eco, two thinkers who catalogued the shift in culture toward what they referred to as "hyperreality." Hyperreality is the state wherein the simulation of a thing no longer refers to an existing reality but precedes and is generating our understanding of that reality (Zhang, 2024).

For Baudrillard, hyperreality begins with the "simulacrum," where what has resulted is a copy with no original. He contends that society is reproducing signs and symbols in an interconnected network, which have detached from their referent, and presents as a world that, as Gerry Coulter (2007) notes, is more like a game paralleled by virtuality than reality. This is a reality created by codes and symbols.

Drawing on the work of Baudrillard, I then explore understanding the conditions from which contemporary digital art emerges. From there the focus narrows to the digital gallery where the art encounter takes place. This section traces its lineage from the institutional authority of the "white cube" to the personal space of the browser tab. Here, the work of critics like Claire Bishop and educators like George Hein helps gather information on the gallery not as a neutral container, but as a technological and pedagogical apparatus that actively shapes the viewer's experience.

With the landscape and stage set the attention turns the encounter itself. The third section, the nature of the art encounter, builds on John Dewey's concept of "art as experience." The argument is made that the digital encounter is not a passive act of looking, but an active, embodied process of interaction, problem-solving, and, crucially, play.

Finally, this chapter situates the entire discussion within the context of education. By framing the virtual space as a pedagogical one, it seeks to understand how these encounters function as sites of informal learning. This final section conjoins these threads to argue that understanding the virtual art encounter is essential not just for academic analysis but for the practical work of artists, curators, and educators seeking to create more meaningful, accessible, and transformative experiences in an increasingly digital world. This framework, once assembled, will serve as the compass for analyzing the rich data presented in the chapters that follow.

2.1 : Hyperreality and Digital Simulacrum

I began this research by questioning the nature of the digital encounter. My first direction was to attempt to compare one of those to physical galleries; however, the answer lies beyond that comparison. While I was grappling with this, I thought of the work of Jean

Baudrillard and Umberto Eco, as my mind always wanders back to them after my studies in my undergraduate. Both thinkers outline a cultural shift towards a “hyperreality”, a world where the simulation no longer refers to an original reality, but precedes and generates it. This framework allows the research to push beyond comparing digital galleries to physical ones and instead analyze them as their own categorized space.

Building on this foundation, I recognize that virtual museums and digital art galleries function not as failed copies of physical museums, but rather as hyperreal territories. They are not “absolute fakes” in Eco’s (1986) sense, but rather, they function as Baudrillardian simulacra, or realities generated by models and code that have no physical original, though they remain profoundly material, distributed across servers, screens, bodies, and bandwidth.

Unlike the spectacles that Baudrillard and Eco critiqued in their work, such as theme parks and wax museums that announce their simulation, the virtual museum's hyperreality is more subtle. It aligns with what Hito Steyerl (2014) describes as the "post-internet condition," where the digital has become so mundane and pervasive that it no longer feels like an artificial environment to be visited, but as an extension of reality itself. This unconscious hyperreality changes the fundamental nature of the art encounter, creating spaces where visitors engage with new authentic forms of cultural reality.

To mention the educational implications of this hyperreal condition are significant. If we see virtual museums not as substitutes but hyperreal territories with their own opportunities, then the pedagogical question shifts from "how do we make online art education feel more like the real thing" to "how do we help students develop literacy in these new forms of cultural reality?" This reframing is crucial for how we teach, curate, and support learning in digital spaces, where

glitches, interactive elements, and moments of user innovation are not obstacles to overcome but the backbone of contemporary art encounters.

2.2 : Contemporary Art in Digital Age

It is increasingly difficult to talk about contemporary art today without speaking of the digital. Digital technology is not a new tool for artists; it has become the pervasive condition of our time, the invisible architecture structuring how art is made, circulated, and understood. We can see this in how art is created, the advancement of online viewing, and artworks that use the internet as their primary medium. To understand the art of our time, or contemporary art, we first must attempt to understand its language.

Lev Manovich's *The Language of New Media (2001),* provies the conceptual vocabulary to begin this inquiry. He moves beyond surface-level descriptions to define principles that make "new media" different from previous forms of digital representation. In it, he identifies five key principles: numerical representation (all digital objects can be described mathematically), modularity (objects are assembled from separate parts), automation (use of technology with reduced human assistance), variability (a digital object is not a single, fixed thing but can exist in multiple versions), and most crucially, transcoding (p.20) For Manovich, this meant the consequence of computerization on culture, which he further defines as the translation of cultural forms and concepts into new computer-based formats.

This transcoding, the translation from a cultural layer to a computer layer, is precisely where the concept of the simulacrum becomes so potent. The digital object can be viewed as a Baudrillardian object. A set of data that generates a cultural experience, often without a stable physical original. It exists in a state where, as Baudrillard argued, the distinction between the real and its representation has imploded (Coulter, 2007). Furthering this thought, Manovich's concept

of transcoding provides a technical description for the cultural process that Baudrillard points out. The ‘cultural layer’ is translated into a ‘computer layer’, creating an object that refers to the logic of the code.

Digital objects (a photograph, a film, a text, and a “computer image”) exist on two interconnected layers. A “cultural layer” that we interpret composed of the underlying data structures, file formats, and algorithms and a “computer layer” (p.46). A digital artwork is therefore a juxtaposition of two forms, but Hito Steyerl reveals this is not a passive relationship. In what she references “computational photography,” similar to Manovich’s “computer layer” that actively constructs the “cultural layer” before we even see it (2014). It is a process that is extremely confusing, almost absurd. How can an algorithm create an image of something it has never seen before? The key, Steyerl explains, is that the algorithm works with patterns, not specific object. For instance, that beautiful image of the sunset you took on your vacation on your Iphone is not just a direct representation; the camera’s algorithm has already cleaned out the noise from its low-quality lens by cross-referencing a user’s entire digital footprint to guess what picture they wanted to take. Steyerl writes, “The result might be a picture of something that never even existed, but that the algorithm thinks you might like to see.” (2014) Yet another example of where human logic and machine logic are negotiating one another.

This fusing between culture and code has nudged artist practice into what has been termed the “post-internet” condition (Quaranta, 2013). It may sound like a time after the internet, but rather it’s a state of consciousness where the internet is no longer an obvious “cyberspace” to be visited, but a mundane and inescapable fabric of reality as we know it. Artists working in this condition no longer treat the internet as a medium, but as a tidal wave whose waters has washed over on communication and identity. Claire Bishop, in her essay “Digital Divide” (2012),

critiques that the art realm's initial reaction was reluctant to seriously engage with this reality. She argues that for years institutions created an artificial divide ghettoizing "digital art" as a technical role while mainstream contemporary art pretended to be unaffected. Bishop continues that this distinction is no longer sustainable and this institutional hesitancy had consequences of delaying the development of a critical conversation of internet-inflected art with the mainstream. In turn, leaving it under theorized. My research seeks to contribute to the ongoing nature of bringing back the conversation, specifically around the nature of the encounter.

This post-internet condition has brought its own distinct aesthetics to the table, often centred on the material realities of the digital file itself. Art critique and artist, Hito Steyerl writes an essay, "In Defence of the Poor Image" (2009) for this new aesthetic turn. She tracks the lifecycle of the low-resolution, endlessly copied, and widely circulated digital images. Using examples such as JPEGs ripped from a DVD or blurry videos on YouTube, she describes the poor image as "a rag or a rip; an AVI or a JPEG, a lumpen proletarian in the class society of appearances, ranked and valued according to its resolution." It is an object defined by its journey, "a ghost of an image… squeezed through slow digital connections, compressed, reproduced, ripped, remixed, as well as copied and pasted into other channels of distribution."

For Steyerl, the value of the poor image she says; "transforms quality into accessibility, exhibition value into cult value, films into clips, contemplation into distraction." This embrace of imperfection and how an image that wears its history of travel on its pixeled surface, allows Steyerl to redefine the value of these images. She argues that the poor image generates a "new aura," one that is "no longer based on the permanence of the 'original,' but on the transience of the copy." By finding meaning in the blur of digital decay, Steyerl challenges the admiration of the original that has long ruled the art world.

This concept of a "new aura" brings my mind to Walter Benjamin's 1936 writing, "The Work of Art in the Age of Mechanical Reproduction." For Benjamin, the aura of an artwork was tied to its physical existence or "presence in time and space" (p.298) and its history. He argued that mechanical reproduction, the ability to create endless copies, destroys this aura and detaches the object from its tradition. Steyerl inverts this idea for the post-internet era. Instead of being destroyed by reproduction, the poor image gains its aura through it. Its value is not generated from its originality, but from the very process of being copied, shared, and degraded. The more it travels and the faster it circulates; the more diverse its social and political life becomes. In this way, Steyerl updates Benjamin's theory, suggesting that in a digital world, the aura has migrated from the original to the layered, transient, and networked copy.

During the COVID-19 pandemic, as the physical world was locking down, the virtual world became the stage for artistic and cultural life. A shift that was already happening accelerated even more. This engagement of contemporary art with digital technology from its fundamental structure as code, to its circulation as a "poor image", and its makeover during the pandemic challenges how we must understand the art encounter itself. If the artwork is a file type and the gallery is an open browser tab, the very idea of the encounter. Once rooted in physical presence and the unmediated gaze must itself be revaluated.

Artists like Trevor Paglen help us confront this shift. His practice presents the normally invisible infrastructures of our digital lives or the underbelly. From fiber-optic cables at the bottom of the ocean to facial recognition. In doing so, Paglen's work drags Manovich's idea of the "computer layer" the algorithms and data components, out from behind the screen and presents it as a primary subject of the "cultural layer". Paglen insists on making the invisible visible. As he writes, "The overwhelming majority of images are now made by machines for

other machines, with humans rarely in the loop." (Paglen, 2016). His work brings visibility to the mechanisms of surveillance, control, and what he calls "machine vision", as he thinks on the way's machines see and classify the world. Which now shape how we encounter art and how we encounter the world itself (Paglen & Crawford, 2019). His work challenges the many layers of digital art; not just the aesthetic surface or screen-based viewing, but the embedded systems of power, code, and ideology behind it. In a time where our photos are automated and algorithmically driven, Paglen's interventions remind us that to encounter art today is an experience where perception and computation collide.

2.3 : The Digital Gallery – From White Cube to Browser Tab

To talk about the virtual gallery, we have to first talk about the original gallery: the physical one. Most people picture the classic "white cube", one that is gutted out, slightly intimidating space with perfect white walls, designed to make you feel like you are connecting solely with the art. But of course, the white cube is itself a piece of technology, an apparatus designed to produce a feeling of awe and contemplation. However, this notion that this interaction is unmediated is problematic, as the white cube represents a constructed space aimed at producing specific emotional and psychological engagements with art (Parker & Saker, 2020). Scholars talk about the "gallery effect," the phenomenon where the simple context of the space can enhance or alter the aesthetic experience of an artwork (Brieber et al., as cited in Kim & Kim, 2023).

To frame it in the eyes of George Hein (1995), through his educational philosophy, he created a model called the "Systematic Museum". This model states that there is a single, correct way to understand art, and the museum's job is to present it logically and linearly. However, there is a danger in this model; Hein reasons that visitors not as active thinkers but as passive

containers. Risking turning the museum into a classroom, which, as Dickens wrote and Hein quotes in his work, visitors are more than "little vessels then and there arranged in order, ready to have imperial gallons of facts poured into them until they were full to the brim" (Hein, 1995, p. 22). The gallery has always been a stage, set to shape our encounter. This is not a new idea, and the virtual gallery did not invent this.

Then, the world stopped. The COVID-19 is not the driving factor for the migration of art to be presented online, but it put it into hyperdrive, forcing it as the only way to view art for a while. As scholars like Giannini et al. (2022) have noted, this forced migration from "reality to digitaly" was a moment of frantic adaptation. In this transition, the old magic of the object, or Benjamin's aura, feels different.

This new set of problems begins with the very idea of the screen itself. Unlike the singular focus of the white cube, viewing art online is rarely a focused experience. It is one fractured by the environment it occupies, if your device is anything like mine; a browser with a thousand tabs open, constant pings of notifications, combined with the physical reality of the visitor's space; their messy desk, comfortable couch, barking dog. When moving digitally, the encounter is no longer just with the art. This is the new reality of multi-screen viewing, attention is the scarcest resource there is no contemplation demand by the still white walls of a gallery. Thus, I look to the virtual gallery as something more complex than just a website with pictures on it.

This new reality of the screen-based encounter brings with it a new kind of event: the moment of technological failure. When the seamless interface of a virtual gallery breaks it is more than a simple error. It is what glitch theorist Rosa Menkman (2011) defines as a "'(actual and/or simulated) break from an expected or conventional flow of information or meaning'" that

results in a perceived error (as cited in Kemper, 2023, p. 49). This break is a productive and revealing moment. Jakko Kemper, building on the work of Manon and Temkin, writes that " Whether its cause is intentional or accidental, a glitch flamboyantly undoes the communications platforms that we, as subjects of digital culture, both rely on and take for granted" (2023, p. 49). In that moment of flamboyant failure, the user is removed from their immersion. The technology, which is designed to be an "invisible 'appliance'" (Lialina & Espenschied, 2009, as cited in Kemper, 2023, p. 49), suddenly becomes insanely visible. Perhaps then, a glitch can be seen as a key function, it "draws attention to the process of mediation" (Kemper, 2023, p. 49) reminding the viewer that they are not just looking at art, but are engaging with a fragile technological system. This concept becomes central to understanding how breakdowns and failures in digital spaces are not obstacles but revelatory moments that open up the underlying network, making visible the material conditions of digital art encounters.

Ultimately, this study works to understand the virtual gallery as a new kind of technological stage, complete with its own logic, its own potential for failure, and its own effects on the visitor. As Polina Nikolaou (2024) situates this challenge within the "post-digital" condition of museums, the digital is no longer a separate "thing" but a fundamental, often invisible, layer of reality. The post-digital museum's entire operation and philosophical core are being reconfigured by this new reality. Having now defined the landscape of contemporary digital art and the nature of the virtual gallery as its stage, the focus must turn to the performance that is art encounter.

2.4 The Nature of the Art Encounter: Experience, Interaction, and Play

The previous sections have established the contemporary artwork as entangled with complex digital actors and networks and the virtual gallery as a fractured, glitch-prone stage.

This section works to claim that the art encounter, whether physical or virtual, is not a simple act of submissive viewing. Instead, it is a lively performance assembled in real-time by a diverse network of human and non-human actors a perspective that aligns deeply with the core tenets of Actor-Network Theory. To build this claim, I look first to the foundational work of John Dewey, an educational thinker who framed the art encounter as an experience. I then connect their ideas to the conditions of the digital. I think of these ideas as providing a kind of "starter dough" for this study. They offer the living culture of ideas, such as the concepts of experience and background, that give the argument its body and life. My work, thus, is to knead into this dough the extra ingredients of our digital age, such as interaction, play, and co-creation.

My thinking on this subject begins with John Dewey. In his influential text *Art as Experience* (1934), he reframes the conversation away from the static "art product" on the wall and toward the process of engagement between a living creature and its environment. For Dewey, this is not just any passing moment. He distinguishes a true "experience" as a holistic event with purpose and closure, explaining, "we have an experience when the material experienced runs its course to fulfillment. Then and then only is it integrated within and demarcated in the general stream of experience from other experiences" (p. 35).

Dewey's definition is vital, as it allows me to argue that an encounter with digital art is not a lesser version of a physical one, but simply a different kind of experience. But how does this "active engagement" manifest in a digital space? The primary mode suggests interaction. Unlike the largely contemplative gaze demanded by the white cube, the digital environment is built upon an invitation to participate. While many contemporary art centers also underscore the importance of active encounters, the distinction in digital environments often lies in the structure of the engagement. It is mediated through perceptible interactions with the interface such as

clicking, scrolling, typing and zooming, that have no direct physical equivalent. Here, the language of Human-Computer Interaction (HCI) becomes useful. The concept of “affordances,” articulated by James J. Gibson (1977) and adapted for design by Don Norman, refers to the possibilities for action that an object or environment offers a visitor to a website. In other terms; a button affords clicking, a hyperlink affords travel, and a scrollbar affords movement. When designing a virtual gallery, therefore, it not just an aesthetic platform but a landscape of affordances. These "special technological affordances" are what allow virtual galleries to create "participatory" experiences not possible in physical spaces (Rodriguez-Boerwinkle & Silvia, 2023, p. 18).

This invitation to act often takes the form of play. My findings, which I will detail in Chapter 4, are filled with moments of playful, seemingly non-linear exploration that defy the solemnity of a traditional gallery visit. This behavior is best understood through theories of play. The historian Johan Huizinga, in Homo Ludens (1938), describes play as a voluntary activity that creates a temporary “magic circle,” a separate world with its own rules and logic where creative exploration can occur. When a user in Earth Tones Museum repeatedly clicks an animated frog to see it jump and hear it "ribbit," they are not distracted from the "real" art; they are engaging with the world, entering its own type of magic circle to learn its rules through silly experimentation. Suggesting that this mode of discovery is a fundamental aspect of the virtual art encounter, transforming the visitor from a passive spectator into an active participant.

This active role can escalate even further, perhaps from player to inventor. When the affordances of a system are lacking or when the user’s goals diverge from the designer’s intent, patterns of bricolage start to emerge. The term, introduced by anthropologist Claude LéviStrauss in The Savage Mind (1966), describes the work of a "bricoleur,” described by those who are

resourceful tinkerers who, unlike an engineer, doesn't design from scratch but improvises solutions using the limited set of tools and materials at hand. I noticed the technological user is often a masterful bricoleur. When faced with an unreadable design choice or a broken feature, participants creatively repurpose the browser's native functions to invent their own solutions on the fly. This act of user-driven innovation is perhaps the ultimate expression of an active encounter, positioning the visitor not only as a consumer of the experience, but as a co-creator of it. This act of co-creation echoes the work of Francis Halsall (2017), whose concept of "Actor-Network Aesthetics" notes the similarity between how contemporary art assembles meaning and how ANT describes the formation of networks. The bricoleur-user is performing their own aesthetic act, assembling a new network of tools and goals from the parts provided.

Putting all the parts together including, a holistic experience (Dewey), one shaped by interaction (affordances), navigated through play (Huizinga), and at times co-opted through invention (bricolage) I can see it firsthand in my own teaching experience.

In my first year of teaching, I brought a group of students to the Montreal Museum of Fine Arts. There, among the contemporary art collection, was The Holy Canadian Martyrs (Renard, 2002) (see Figure, 2), a painting that initially upset the students. It depicted Indigenous men in traditional clothing burning priests at the stake. The students were angry, feeling it portrayed a negative and false image of Indigenous people. However, as they read the description and reflected on the artist's intent, they began to think more deeply about the painting's message. This memory fuels my curiosity to understand how such transformative encounters are assembled in the unique landscape of a virtual space. A space where the viewer is not only invited to look, but empowered to click, to play, and to build.

Figure 2: The Holy Canadian Martyrs by Renard (2002)

I include this classroom memory because it acts as an illustration of the very theoretical framework I have outlined. My student's engagement was a quintessential holistic experience in an Deweyan sense seen as it was a complete event that moved from the shared anger to the fulfillment of a new understanding. The accompanying text label *affored* reading and the space shared *afforded* discussion, thus these transformations were enabled by the interaction with affordances of the physical gallery space. I also see their intellectual process as a form of play, a voluntary activity within the "magic circle" of the museum where they can test and challenge their belief systems. And most apparent, they acted as bricoleurs. The group of students used the materials they had at hand (the painting, the artist statement, their emotions, their discussion) to tinker a more nuanced perspective and understanding for themselves. While this example took place within a traditional art museum, I do believe it is important to note the importance of it. It demonstrates the art encounter as an action construction leading my investigation into how these

dynamics are reconfigured when the tools for interaction, invention and play are built into a digital platform.

2.5: The Virtual Encounter as a Pedagogical Space

With a map of the digital art world and a theory of the encounter in hand, I now turn to the reason this journey began: education, As I mentioned in my introduction, I wear the hats of both an artist and a teacher, and this research is driven by a weighty duty to my students and the artists with whom I work. A virtual gallery, is for me never just a website. It can be a classroom, a conversation, and a site of learning. This final section reframes the virtual encounter as a pedagogical space, exploring how the act of digital curation is a form of teaching, and how different educational ideas can either lock our students into familiar habits.

For too long, the museum has been seen through the lens of what George Hein (1995) critiques as the “Systematic Museum.” A place where visitors are treated as empty vessels to be filled with facts. But he offers a more hopeful alternative: the "Constructivist Museum." In this vision, based on the learning theory of constructivism where learners actively build knowledge rather than receiving it, learning is not about absorbing a singular interpretation. As an alternative, it is an dynamic and distributed process where visitors build their own understanding from the raw materials of their own knowledge and their direct interactions with the space. To me this constructivist idea seems tailor-made for the digital realm, where everything from a viewer's navigational path to their individual pace, and to their moments of creative problem-solving are not anomalies but are central to the experience.

While I do believe the constructivist model to give a substantial framework of understanding, I do want to point out the limits that become apparent when put into conversation with the other theories at play with my research. Constructivism suggests assumptions of a

learners who “builds” understanding from a friction with theories that complicate the notion of subject. While Actor-Network Theory, does not begin with the learning who then engages with the network, but rather it sees the learner as an effect that is part of the network of relations. This tension is not a contradiction to be resolved, but can been seen as a refinement. It reframes the conversations from how are learners building meaning to how are the learners themselves being assembled and dehabituation within the network of the virtual art encounter? I look to the framework of constructivism as a base layer while leaning to more nuanced understanding of more transformative learning.

But this potential for active learning can be brittle. Often, the conversation around art in schools gets flattened into buzzwords like "digital literacy" or "visual literacy" (Cho & Lee, 2019). These are framed as essential skills for the modern world, but in practice, they can turn the vibrant art encounter into a sterile exercise in decoding images, asking students to find the "right" answer. In relation, jessie beier (2014) warns of this type of trap in her work. She argues that so much of education reinforces "habitual responses," creating a "politics of containment" that keeps students walking along pre-drawn paths (p. 4, p. 15). What we need, she writes, is a "politics of dehabituation", a way for the art encounter to become a "dehabituating force" that can break the routine of our comfortable ways of seeing (p. 9, p. 17).

beier’s call to break open the art encounter from its predictable routines provides a purpose for my research. What might this dehabituation look like in a virtual space? A moment of technological breakdown, for instance, forces a user out of their passive consumption and into a mode of active negotiation with the interface. Likewise, a playful element can pull a viewer away from a task-oriented 'reading' of art and into a more joyful mode of exploration. This is where I see my research finding it’s place, by investigating how the conditions of the

virtual gallery (its glitches, its interactive invitations, its potential for user creativity) might function as tools for this dehabituation. For a digital curator or an online art teacher, the job is not just to hang pictures on a virtual wall. It is to build a world that has cracks in it or build a world that invites exploration, rewards curiosity, and makes space for the beautiful and messy process of learning.

This chapter has established the theoretical framework necessary to analyze the virtual art encounter. It began by defining the fundamental conditions of contemporary art in the post internet age, before examining the virtual gallery as a composite technological and social stage, distinct from its physical predecessors. Building on this, it proposed a definition of the encounter itself not just as a submissive act of looking, but as an active, experiential, and playful experience by the viewer. Finally, it situated it all in a framework within a pedagogical context, searching for an approach that values active learning and seeks to disrupt the viewer's habitual modes of consumption. With this conceptual toolkit now assembled the task ahead is to outline the specific methods that will put these ideas into practice. The following chapter will detail the methodology designed to follow the actors, trace the networks, and interpret the data performances of art behind the screen.

Chapter 3: Methodology

3.1 : Research Paradigm

Let’s consider the fog which was introduced in Chapter 1, as the lived reality of encountering contemporary art behind the screen. To navigate this uncharted territory, we can use the guiding principles and frameworks of Actor-Network Theory. This chapter is a breakdown of how this compass is built. It outlines the methodological paradigm that structures this study and takes up the question: *How can Actor-Network Theory be used to develop a framework for analyzing and understanding art encounters within virtual exhibitions?* requires an approach that can situate the human experience. The how is just as important as the what. For this reason, I rejected using a purely quantitative approach. While data metrics like the number of clicks or the time spent on a page can provide a good outline of a user's path, they are also limited to the experience itself. They cannot capture what caused a participant's pause in a screen recording. The researcher can only ask; was it a moment of confusion, contemplation, or even just a response to a distraction in their physical space? To get closer to the lived experiences of the participants' encounter, I chose a qualitative approach, one that honors the participants' complexity, subjectivity and the realities of how we experience art today.

This research began with a commitment to valuing the first-person, lived experiences of my participants. I wanted to understand the phenomenon of viewing art online from the inside out. Within this paradigm, the approach is multifaceted, and it is informed by an autoethnographic sensibility. As the artist, curator, developer, and now researcher of Earth Tones Museum, my position is very interwoven into the research. My knowledge of the project's development from its initial conception of the grant proposal to all the compromises that had to be made due to my coding limitations should not treated as a bias. Instead, I see it as a crucial

analytical lens. This insider perspective enables a connection between the visible front- end experience of my participants and the often-invisible back-end assembly of decisions, accidents, and repairs that created the platform.

Secondly, the approach draws from a sensitivity to phenomenology, which is concerned with the lived experience of the art encounter. This study seeks to understand the phenomenon of viewing art online, illustrated as the screen as the lived world and the cursor as the extension of the participant themselves. The screen recordings from the five participants are the primary source of data for this, in hopes of providing a tracing of their lived experience in real time. However, an approach that focuses entirely on the human experience could only paint half the picture, risking casting technology as a passive stage controlled by human action. A broken line of code is not only something that causes human frustration, but it is also a participant that blocks, redirects, and reconfigures the entire experience.

Therefore, to create a more complex analysis that tells more of the story of all the participants in the art encounter, I chose to work with Actor-Network Theory (ANT). ANT provides the theoretical and methodological tools needed to hold both the human experience and the technological one in focus. While ANT attends to both human and non-human actors, it should not be confused that they have equal influence; instead, it emphasizes that there are always asymmetries and shifting dynamics in the networks at work. It is through these relational negotiations that an experience is assembled. The analysis holds importance to the lived experience of the participants, it is ultimately held together by the glue of the framework of ANT, which I will go into further detail about in the following section. This framework helps to map out an entire network of relationships (human and non-human) that together assemble the reality

of what it means to see art behind a screen, showing that the human experience is not a pre-given entity but something assembled through these shifting relations.

3.2 : Actor-Network Theory

It might seem that we are at the centre of the technological world, with devices and interfaces responding seamlessly to our commands–but behind the screens and scenes, a more complex network is at play. What if we adopted a humbler perspective? This shift in perspective is one of the foundations of my methodology. To understand the art encounter behind the screen, I had to look past the human-centered view and find a framework that could capture all of the participants involved. This is why my research is methodologically and analytically guided by a framework that focuses mostly on Actor-Network Theory (ANT) as well as braiding in media theory of Marshall McLuhan.

ANT, developed by sociologists of science like Bruno Latour, Michel Callon, and John Law in the 1980s, is a set of principles. It is a "material-semiotic" approach that focuses on tracing the relationships between entities to understand how an effect, like an encounter, is produced (Law, 2009). Whereas McLuhan's media theory helps situate the broader conditions of mediation, ANT allows me to trace the specific and relational entraglements that shape the art encounter. My goal is to develop a loose framework for understanding digital art encounters, and ANT provides the foundational toolkit for this to work. By offering a way to examine the relationships between participants in the encounter and allowing me to describe the user's experience and the network that encompasses it. To enrich ANT's network analysis with an additional layer of sensory and embodied analysis, I will draw from Marshall McLuhan's work Understanding Media (1964). McLuhan's central proposition states that technologies are 'extensions of man', adapt to our own bodies and senses. A wheel is an extension of the feet, a

book is an extension of the eye, and particular to this study electric technology is an “extension of the central nervous system” (McLuhan, 1964, p.380).

This lens allows me to analyze the digital art encounter not just as a network of actors, but as a process of sensory extensions and re-embodiment. As McLuhan states “Any extension, whether of skin, hand, or foot, affects the whole psychic and social complex” (1964, p.6) The user is not only looking at a screen but they are extending their sensorium through it. This McLuhan-informed ANT framework allows for a analysis of how the medium of the virtual museum is a force that reshapes the very experience of the encounter by what McLuhan calls the “sense ratios” (1964, p.19) To grasp the nature of how these networks work, early ANT scholars used metaphors, which I found very helpful. Michel Serres spoke of Hermes (the swift messenger god who represents transmission in Greek Mythology) and the Parasite, a more complex idea which interrupts and transforms a message (as cited in Callon, 1984). As I thought about what could be fitting in the 21st century, I propose the algorithm as a contemporary metaphor that captures the essence of ANT. Algorithms transform, learn from, and reshape the data they process, ANT helps us to understand how different actors (artists, viewers, artworks, digital interfaces, technical infrastructure) translate and transform each other's roles and meanings through their interactions (Michael, 2017; Latour, 2005). With this metaphor in mind, the core of my ANT-driven framework can be broken down into three principles to ponder.

1. **Actants & Generalized Symmetry:**

The first demand of ANT is to broaden our understanding of who or what can be an actor. It replaces the classic notions of human subjects and passive objects with the more inclusive term 'actant'. According to Bruno Latour, an actant is "…something that acts or to which activity is granted by others. It implies no motivation of human individual actors nor of humans in general.

An actant can literally be anything provided it is granted to be the source of an action" (as cited in Jackson, 2015, p.31). My analysis must account for both human actors (the five artists as viewers) and a wide array of non-human actors. In ETM, this may mean the loading bar, the animated elements, or a line of broken code are all actants shaping the experience just as much as the human user.

One of ANT's methodological commitments, is which Michel Callon (1986) termed the principle of generalized symmetry**.** This principle demands that I do not grant more power to human intentions than I do to non-human intentions. Not to claim that the user and a loading bar have equal authority, it requires me to trace their relationship without assumptions in advance that the human is always in control. My analysis will grant as much potential agency to a loading bar as it does to a user's responses. This symmetrical stance is important for creating a holistic picture of the digital experience.

2. The Network, Translation, and Assemblage:

Secondly, ANT declares that actants are defined by their relations within a network, or what is actually described as an assemblage. Which is conditional and temporary alignment of heterogeneous parts (Müller & Schurr, 2016). This term, assemblage*,* holds lots of theoretical history that deepens its meaning in my work. John Law (2007), in tracing ANT's origins, mentions the connection to the work of Gilles Deleuze and Félix Guattari, arguing that there is little difference between their concept of 'agencement' and the term 'actor-network'. Agencement describes a contingent arrangement of heterogeneous elements, which resists being seen as a fixed structure. I see this insight as vital for my use of the repeated understanding of "assemblage," as it demonstrates the provisional and shifting nature of the networks being traced in ETM. This insight from this connection is that an assemblage is not a structure but what Law

(2007) describes as a "provisional assembly of productive, heterogeneous and... quite limited forms of ordering located in no larger overall order." (p.6)

What is then formed through these assemblages is called translation. A core part of my method is translation analysis (Callon, 1984). This is the process where one actor reinterprets others to pursue a goal, revolving in constant negotiation. For example, when I put an animated mushroom on the screen, I am attempting to translate my desire for viewers to explore this artwork, which then the viewer then will translate. That user might accept this translation or reject it. The outcome is never exact.

3. The Multiple Museum

Finally, the work of Annemarie Mol (2002) in *The Body Multiple* influenced my understanding of the concept on how to understand virtual museum. Her approach, rooted in Actor-Network Theory, focuses on how reality is actively 'enacted' through various practices rather than simply observed from different perspectives. While her context is medicine, my thinking about the virtual museum really shifted when I encountered her core argument. What really struck me was when she articulated the difference between perspective and reality itself, arguing for:

> If practices are foregrounded, there is no longer a single passive object in the middle, waiting to be seen from the point of view of a seemingly endless series of perspectives. Instead, objects come into being with the practices in which they are manipulated, then leave the same way. And since the object of manipulation tends to differ from one practice to another, reality multiplies (Mol, 2002, p. 5).

It gave me the theoretical grounding to argue that Earth Tones Museum must be seen in the same way. As a multiple object, performed into being differently by each participant's network. My goal, therefore, is to describe the performances through which the museum was brought into being, taking account of the reality of each enactment (Bajpai, 2024).

This ANT-driven framework, thought through with the metaphor of the algorithm, is a direct connection to the nature of my thesis. As Kéfi and Pallud (2011) have argued, understanding cultural mediation today requires a method that can account for the active role that devices and software play. Additionally, ANT provides a lens for understanding art itself. Francis Halsall (2017) proposes the concept of "Actor-Network Aesthetics," noting the similarities between the way contemporary art assembles meaning and the way ANT describes networks. Finally, ANT's focus on process makes it ideal for my case study with Earth Tones Museum. Its ability to "follow the actors" through network mapping (Latour, 2005) is designed for tracing dynamic systems (Birkbak, 2021). As a method this involves tracing the specific data and observations of my case study with Earth Tones Museum in form of the screen recordings of user actions accompanied by their questionnaire responses. The pairing of these map how the network of ETM are enacted in practice.

3.3 Case Study: Earth Tones Museum

Earth Tones Museum serves as both the subject and primary research instrument of this study. While an obvious choice as I am the creator, it can also be seen as a strategic one for several methodological reasons. Earth Tones Museum functions as a network-revealer through all of its imperfections. In ANT terms, a pristine technology often becomes a "black-box", meaning it works so well that the network of relations that allows it to function becomes invisible (Latour, 2005). When something becomes black boxed, the internal complexities are no

longer visible and what's left is just a working thing. Earth Tones is the opposite of that, not a black box. As a result of my journey from idea maker to self-taught developer, the platform is rife with flaws; glitches, loading errors, and moments of navigational confusion. Although I believe for the methodologically these are not flaws they are gifts. A broken hyperlink is definitely an error, but it is also an event that exposes the relationship between the user's expectation and the server's response.

While the site was not intentionally designed as an experimental site for tracing translation, the varied navigational logics of the six exhibit rooms offer exemplary sites for varying analytic possibilities. Originally, a curatorial choice meant to differentiate each themed room, and I will look at them as different experimental conditions.

Figure 3: Screenshot from *earthtones.art* First Encounters room

The design of the First Encounters room (Figure 3), for instance, provides a strong example. While my artistic intent was simply to create a fun sense of discovery, my research lens allows me to frame this as a test of non-human agency. The design forces the user to engage with

non-human actants (rocks that flip over when hovered over) to mediate their experience and reveal the art hiding underneath. This structure functions as a built-in experiment on the influence of non-human actors to guide and shape the user's path. This ability to re-examine my own creative choices as methodological affordances is a central strength of the case study.

As I sat with the concept of the "Multiple Museum," my goal is to describe how different realities of ETM are enacted. This concept of the viewer's session as a performance finds a strong parallel in Actor-Network Theory analyses of the performing arts. Vibhoo Bajpai (2024) argues that a theatrical event is a dynamic network co-created by the stage, the lighting, the audience, and the text itself. In the same way, I can see Earth Tones as a performance in one way, where the "script" of the website is enacted in an unpredictable way.

Any other polished website would produce very similar user pathways through the site. However, with ETM's sometimes confusing layout, it does the opposite. While the pathways may be similar enough, through their interactions, they can encounter different versions of the museum.

3.4: Data Collection

To follow the actors and map the multiple realities of encountering art in Earth Tones Museum, this thesis works on a two-part data collection strategy. The dual approach is essential because, as mentioned earlier in this chapter, an encounter is assembled by both material actions and human interpretations. I tied this strategy to the ANT framework: the screen recordings allow me to “follow the actors” (Latour, 2005) in real-time, tracing their material interactions, while the questionnaires supports the analysis of “translation” (Callon, 1984) and the enactment of multiple realities (Mol, 2002). By connecting these two data streams together, the analysis can

build a more robust and nuanced idea of the art encounter. In this section, I will detail the participants who were recruited and the specifics of the two different data collection tools.

Participants

The five participants who contributed to the study were recruited from the pool of 36 artists whose work was featured in Earth Tones. An email inviting everyone to participate was sent out to all artists, and the five individuals who chose to respond are the focus group for this study. I chose to work with the artists from ETM directly because their dual role as both creators for the website and now being active viewers provides a snapshot and multi-layered perspective. They are invested stakeholders; each one can bring a level of context and understanding to their encounter. A brief overview of the five participants is as follows:

- Kitty: Female Artist, mid 20s
- Bryce: Male Artist, early 30s
- Claire: Female Artist and Student, mid-20s
- Ethan: Male Artist and Student, mid-20s
- Dina: Female Artist, late 20s

To avoid any confusion, I should clarify that the participant 'Kitty' is not me; we are two different individuals who happen to share the same first name.

I acknowledge that a focus group made up of artists who are not only featured on the platform but are also all friends of mine, moves away from the ideal of an unbiased sample. I believe there is no such thing as a clean encounter free from prior associations. A participant's pre-existing knowledge, their relationship with me as the creator, and their history with ETM are not factors to be controlled. Instead, they are actants from the pre- existing assemblage each person brings to their encounter and to the study.

This concept of the pre-existing assemblage is further explored through the Deleuzian concept of the 'rhizome,' a connection that John Law (2007) makes while tracing the lineage of ANT. Unlike a tree with a base trunk and stacked branches, a rhizome is a non-hierarchical network with many connections from any point to another point. Therefore, I look at each participant as a unique rhizome of prior experiences, relationships, skills, and emotional responses. This is key, it frames their interactions with ETM as a meeting point, or as a temporary connection between the rhizome of the participant and the network of the museum.

Therefore, I chose to work within this participant group because of their embedded position. It is also important to note that there is no additional demographic information about each participant other than the information stated. This is a methodological choice aligned with a tenet of Actor-Network Theory, which challenges the use of pre-defined sociological categories as explanatory variables. John Law, in his essay "Actor Network Theory and Material Semiotics" writes that "class, nation state, patriarchy become effects rather than explanatory foundations"
(Law, 2007, p.8).

Data Stream One:

The first data stream I mentioned is screen recordings. Participants were not given any specific tasks. But rather, I asked them to record the session in their own time, in a place of their comfort, using whatever device they would normally use. The physical environment and the material technology are not external variables to be controlled; they themselves are actors within the network of the encounter. A slow laptop, a distracting notification, the ambient light of a bedroom, or someone knocking on the door are not pollutants of the data but are part of the data.

Each of the five participants was asked to conduct a screen recording of their visit with a suggested duration of 20-30 minutes. It allows for a second-by-second behaviour trace of the network from their point of view. It is the most direct way to capture the actions of the non-human actors, for example: the website's response, the loading delays, animated objects, and the website's layout. There were lots of variations in the screen recordings, each acting as a data reflection of the contingency of real-world digital encounters. For instance, Bryce's session being cut short after five minutes due to his computer crashing is not a total loss; it is a record of a network breakdown. Similarly, Kitty's choice to record for only 15 minutes holds meaning in itself. These recordings are tracings of how the experience actually happened.

Data Stream Two:

The second way I generated data was through a structured questionnaire completed by each participant after their visit (see Appendix A). This works in harmony with the screen recordings to gather opinions and to prompt participants to articulate the networks they just journeyed through. The questions were crafted to create an inquiry into three phases of the encounter, aligning with ANT of course, understanding of these experiences is assembled over time. They are as follows:

Mapping the Pre-Encounter (Questions 1 and 2)

The first two questions are about the participants' motivations ("What made you interested in participating?") and expectations ("What did you imagine it might be like?"), asking them about what intentions each participant brought with them into the study. This section investigates how external actors, such as personal relationships, prior knowledge, or online art, shaped their perception before they even opened the browser. These questions work to reveal the

associations that are already in place before they even type www.*earthtones.art* into the search bar, providing a baseline for the analysis.

Grounding the Encounter (Questions 3-6)

This block of questions focuses on making the non-human actors of their environment visible. By asking about the device used, the physical surroundings ("Describe your environment..."), material conditions, and any technical issues encountered, I prompted participants to reflect on how these material and embodied conditions helped to shape their experience. The questions reveal the parts that come into play in the first few moments of the visit. In hopes of the participants' answers to help distinguish the motives of the user ("I wanted to see…"), the motives of the interface ("The animated tree caught my eye…"), and the motives of the technical elements ("the page didn't load…"). These questions offer a reflection on how the human actor negotiates with the non-human actors.

Articulating the Network (Questions 7-16)

The final stretch of questions asked the participants to describe their journey, identify standout moments, and reflect on any meaning they made. This section is organized to capture the process of translation in the experience. Questions like "describe how the digital features seemed to guide or direct your exploration" and "describe a specific moment where... something clicked in a new way" prompt the participants to translate the actions of their visit into a memory. The final question of the questionnaire is "Imagine you were telling a friend about your experience visiting Earth Tones museum. What would you emphasize, and what might you leave out? Why?" This is my most important question. It asks the focus group to choose the most standout actors in the network they constructed in their memory. In hopes of tracing how the doing of the visit becomes the telling of the experience.

3.5 Analytical Framework

With the screen recordings and questionnaires in hand, my next challenge was to create a systematic and digestible way to make sense of them. A process was required that would stay true to the principles of ANT while allowing the stories of each participant to shine through. Through this brainstorming came a development of a four-step framework that served as the engine of my data analysis, the method I used to move from hours of screen-recorded footage and pages of text to the key findings of the thesis. The process is as follows:

Step One: The Grunt Work

My first job was to get everything down on paper. For each of the five screen recordings, I created a 4-column chart (time, cursor action, on-screen event, and memos). This was the most laborious part, but essential to creating a detailed second-by-second account of each participant's encounter. The key here was to treat every event with equal measure, following the ANT principle of symmetry. A participant's click was recorded with the same attention as a loading error or a button's animation. The memos section became a space for my initial reactions and questions, in other words a messy layer of thoughts that would guide me to formalized analysis writing.

Step Two: Connecting Videos to Questionnaires

The next step was bringing the two data streams into a single document. I did this by expanding the chart mentioned above and adding a fifth column, Participant Explanation. Then I read through each participant's questionnaire, linking their responses with the moments in their screen recordings or matching up in both. This is where the network started to reveal itself. I could now line up an action, like Dina hovering her mouse over a button for 10 seconds, with what she said in her interview.

Step 3: Creating the Actant List

With a narrative starting to form for each participant, the third step was to take data into a more structured summary of key players. As I worked, I realized my process was becoming almost like casting a play. While creating the ‘Actant List’, which functions very similar to a cast list, identifying the dramatis personae that made each encounter. This way of thinking and seeing the encounter as a performance with a cast echoes the thinking of Vibhoo Bajpai (2024), who uses ANT to argue that a performance is an effect of the entire network, encompassing the obvious and not-so-obvious parts of it. This perspective provided me with an ah-ha moment on my own analytic choices. It affirmed that to understand the performance of the ETM encounter, my 'cast list' must include everything, not just the human participants, but also the technology and design elements that share the stage with them. As Marshall McLuhan (1964) argues, any technological "extension of ourselves" (p. 9) becomes an active player that "affects the whole psychic and social complex" (p. 6). Therefore, to understand this performance, the 'cast list' must account for both the human actor and the technological extensions through which their encounter is performed.

The Human Actors

First, I theorized a holistic character profile for each of the five human participants. This profile has nothing to do with how I know them outside the study but rather a description of the network effect that emerged from their interesting pattern of interactions during data collection. To build these profiles, I looked at how each person consistently related to the non-human actants. For example:

- Dina was characterized as 'The Detective' because of her patient and methodical interaction with actants like the context pages and about page, her determination to get

more information using Google, and her use of the Highlighting tool to solve the problem of text being unreadable.

- Kitty was characterized as 'The Fast Surveyor' because of her rapid and playful engagement with the actants like the 3D rooms and the Zoom/Pan tools, and her impatient approach to dealing with broken links.

These profiles provide an evidence-backed summary of each of the five performances of the museum. The use of these descriptive monikers, like 'The Detective' or 'The Fast Surveyor,' is a choice. I wanted to adopt a more playful and narrative approach to the analysis as well, one that I feel better captures the character of each encounter more than a technical label ever could.

Non-Human Actors

Second, I a list of the most standout non-human actors that appeared across all five encounters. This process of itemizing all the different website parts, computer tools and environmental belongings was my practical way of doing what Sarah Byrne (2019) calls "unpacking the collection." It required me to lay out all the material components to see how they worked together to create a final experience. As I sorted through the data, three categories of non-human actors emerged:

1. Important Website Parts: These are the actants that I, as the developer, provided to act as the stage and scenery. This list included actors like the animated art (which consistently acted as a powerful magnet for attention), the unreadable text (a rebellious actor that refused to cooperate), and broken Links/arrows (actors that created moments of network breakdown).
2. Important Computer Tools: These are the actants that the participants brought with them to the performance, like props they had in their own toolkit. This list included standard

tools that were repurposed in ways, such as Dina's use of highlighting as an accessibility device, Bryce's reliance on the browser address bar as his personal home button, and Kitty's action of closing all the tabs as a tool for managing cognitive load.

3. The Embodied and Material Environment: This third category accounts for the actants that exist beyond the screen but are part of the experience.This category includes the participant's physical surroundings, social context, and even their state of mind. Claire's experience, for instance, was enjoyed by the "nice breeze coming from my open terrace door" and the luxury of having the "day off," which she stated allowed her to be "not rushing." Similarly, Dina's network was briefly reconfigured by her mother, showing her a TikTok, and Bryce's was accompanied by "jazz playing" and "Lenny screaming". (his cat) These environmental actors are just as powerful as any button or link in shaping the final performance.

By creating this cast list, I could encompass human characters, digital props and stages, and the surrounding world they inhabited. Now with the necessary components to move to the final step of the analysis is to look across all five performances to find the bigger stories.

In conclusion, my approach in using the “cast list,” advances my studies purpose by moving beyond a human-centered analysis. It allows me to see what a strictly phenomenological approach may miss by putting the role of technology, environment, and design in co-creating under the umbrella of the art encounter. My dual role as designer and research makes this method possible by bringing forward its own affordances and limitations, but I believe it’s real strength lies in its ability to make the distributed network of the digital art encounter visible and analyzable.

Chapter 4: The Performances of Earth Tones Museum

Chapter 3 outlined my methodological compass, grounded in Actor-Network Theory. In this chapter, I apply that framework—shifting from designer to observer—as five participants navigate Earth Tones Museum, each producing a distinct performance. What I found was not a uniform set of user experiences, but five distinct performances.

The findings of the data were multifaceted and varied. Containing instances of slow, methodical reading, where a user's cursor would trace lines of text for several minutes, as well as sessions by other participants that involved rapid, survey-oriented clicking, where they would quickly enter and exit many of the exhibit webpages. Whereas some participants focused on spatial assessment, others focused on deep content engagement. These more sustained modes were mixed in with moments of playful discovery, such as repeated interaction with elements from the digital environment. This diversity in the findings underscores the inadequacy of simple metrics and thus the need to analyze these encounters via a framework capable of interpreting such assorted behaviors.

To make sense of this complexity, I turned to the theoretical framework introduced in Chapter 3. The principle of generalized symmetry, for instance, afforeded a systematic approach to understanding technological failures not as mistakes, but as active 'actants' that reconfigured the participants' trajectory and elicited certain responses. Likewise, Annemarie Mol's (2002) concept of the 'multiple' offered a lens, allowing me to frame the different engagement styles as the enactment of ontologically distinct versions of the museum. Thus, the purpose of these findings is not to distill a single, or "average," Earth Tones Museum experience, but to outline the precise practices through which these multiple realities were produced.

As I applied these lenses to the tangle of observations, distinct patterns began to emerge from the information. Four recurring themes–crisis, speed, actants, innovation–illuminated, forming the backbone of this chapter. The first pattern emerged from moments of crisis. I repeatedly witnessed the network break down, and in those moments, I saw participants enact a range of problem-solving behaviors. This led to the first theme: *The Repair Script*, an exploration of the diverse way's users negotiates with non-cooperative website.

One of the standout contradictions in the data was the use of time. The difference between a six-minute deep read and a fifteen-second scan of a page was too significant to ignore. This gave rise to the second theme, *Speeds of Engagement*, which differs the slow, deep dive with the fast-paced visual snacking.

I also observed that participants were consistently drawn to certain non-essential interface elements. Their attention was often by a small animation or an interactive timbit. This pattern of non-human persuasion evolved into the third theme called *Charismatic Actants*.

Finally, I there were moments of pure invention, where users would manipulate the interface in ways I had never intended. They repurposed standard browser functions and created their own impromptu tools to solve problems. This is what I called *User-Driven Innovation*. This chapter, therefore, traces the dynamic networks of these encounters.

4.1 : The Repair Script

In a seamlessly functioning technological system, the intertwined networks of relations that enables it (the code, the servers, the infrastructure, the processing) remains invisible. It becomes, in Bruno Latour's (2005) terms, a Black Box. It is only when the system breaks down that the box is forces open, and when this happens then the web of negotiations between actants becomes visible. During the five ETM art encounters, these moments of network failure could be

seen what theorists of glitch aesthetics would identify as significant events. A glitch is a rupture that "flamboyantly undoes the communications platforms that we, as subjects of digital culture, both rely on and take for granted" (Manon and Temkin, 2011, as cited in Kemper, 2022, p. 49). Recognized as a visual aesthetic of failure, for the purpose of this study, a glitch is understood more as an event. It is a productive failure that makes the hidden technological network visible and demands a response from the user.

The concept of the glitch is analytically helpful because it reframes failure not as a negative thing but as a moment of revelation. The notion of glitch is useful from an analytic standpoint, as it repositions failure of a system into a productive consequence of the system's operation. As described by Kemper (2022), a glitch serves three primary functions that resonate with my ANT approach. First, it captures the process of mediation. By hampering a technology's conventional function, a glitch rips the user from their immersion and reminds them that they are engaging with a fallible technology. The window to the content becomes a cracked pane of glass, making the glass itself the object of attention. Second, a glitch reveals just how fragile the network really is. It serves as a "palpable reminder that the technologies we rely on are always at risk of breakdown" (Kemper, 2022, p. 50). Finally, a glitch reveals intricacy within technology which is often invisible. It points to the "subterranean powers eluding one's grasp" (Kemper, 2022, p. 50), the invisible operations occurring beyond the participant's direct control or even perception.

Each breakdown, or glitch, within the ETM experience thus functioned as an analytical gift. It altered the participants' forward momentum, forced them to confront the rawness of the network and forced them to act. In response, they each enacted what I am calling a *repair script*. Described as sequence of actions and decisions aimed at either fixing the glitch or finding a way around it. These repair scripts are live-data performances that reveal what Marshall McLuhan (1964) calls our technological "extensions of ourselves" (p. 9). When an extension, such like a

hyperlink or a loading page fails, the user is forced to renegotiate their relationship with their own extended sensorium. This moment of breakdown makes the medium visible, shaking the user out of what McLuhan calls the "numbness that each extension brings about in the individual and society" (p. 8). Each repair script is a trace of the user's embodied negotiation with the digital environment. A *repair script* is one of the participant's attempts to resolve the glitch and smooth the experience's flow and trying to restore the intended experience. The analysis of the five participants revealed four distinct repair scripts, each demonstrating a mode of negotiating with an unruly network.

Dina the Detective

The first example of this is that of the most patient participant, Dina, (The Detective.) This name emerged from her methodical and patient approach to network failures. When asked about technical issues, she recalled, "When I first started my screen recording, I noticed everything was working quite slow. It leveled out shortly after." Her framing of the issue as a temporary, initial problem that resolved shortly suggests her underlying expectation of stability, positioning the breakdown not as a fundamental flaw but as a hiccup. This patient outlook is visible in all of her repair scripts shown in the screen recordings.

This script is most evidently illustrated during her attempt to enter the "Pilgrimage" exhibit. The data reveals a nearly minute-long negotiation with a non-cooperative loading screen. Her first action was to use the most obvious tool, the browser's refresh button (5:39). When this failed, she did not give up but returned to the previous page to re-press the "enter" button, showing persistence. The network, however, failed again. At this moment, a new actant intervened. On the "How To" page, my own words ("Be patient...") mediated her behavior. As I noted in my memos, "The 'How To' page successfully enrolled her in a new script: 'wait' instead of 'click'" (5:53).

This influence by the text shifted her actions. Instead of abandoning the path or repeating the failed clicks, she enacted a repair script based on multitasking. She left the "Pilgrimage" tab open to load in the background and opened the "Amphibious" exhibit in a new tab (6:02). This parallel processing was an innovative way to handle the technical failure, refusing to be stopped by the slow network while simultaneously respecting its request for patience. When she later returned to the "Pilgrimage" tab (6:21), her strategy had paid off; the network became repaired, and the page was loaded.

A second example of her detective-like repair script occurred when she come across unreadable black text on a black background (7:25). The text itself was a rebellious actor, refusing to fulfill its primary function of being read. Faced with this communication breakdown, Dina invented her own tool. By clicking and dragging her cursor, she repurposed the browser's standard highlighting function into a highlighter as reading glasses. This was not a pre-existing tool for this purpose; it was a spontaneous invention, an act of co-design where she reconfigured the network on the fly to repair a broken link. As she deployed this tool again later in her session (9:15-13:02), it became clear that this was no longer a one-off trick but a standard, repeatable part of her personal ETM experience.

Dina's repair scripts demonstrate a network relationship built on patience, strategic thinking, and a willingness to both listen to and creatively repurpose the actants around her. Her actions show that repairing a network is not just about fixing a technical glitch but about a process of negotiation and invention.

Kitty the Surveyor

In contrast to Dina’s patient negotiation, the repair script enacted by Kitty, (The Surveyor) can be characterized as one of combative repetition. Her fast-paced, action-oriented

approach to the museum acted as a proxy to her handling of network failures. She framed the technology as an antagonist in her questionnaire, detailing: “My laptop heated like crazy... So maybe the M chip is a scam. But it wouldn't load a few times or was quite slow to load.” This description of information technology as a “scam” is illuminating the meaning and context behind her actions on-screen. “The difficulty navigating the interface did make the experience a bit less enjoyable” is her take, where the network is primarily a bottleneck to get over. In places where Dina paused to plan, Kitty decided to take a more brute force approach, treating the breakdown as a challenge to be defeated through determined effort. Upon clicking "Enter," she was met with an unloaded blue screen in the Pilgrimage exhibit (1:59-2:15). She did not wait, nor did she use the browser's refresh button. Instead, her immediate response was to go back and re-click the "Enter" button, this time opening it in a new browser tab. As I noted in my memos, her strategy was one of " repetition—trying again on a new tab—rather than waiting." This script treats the network as a stubborn door to be kicked open.

A later breakdown revealed another facet of her script where she would use practical bypassing. When a gallery arrow on an artist’s page failed to function, she did not attempt to fix it or repeatedly click it (7:09). Instead, she ignored the broken tool and immediately deployed her backup plan of scrolling past it. She bypassed the faulty non-human actor without hesitation, refusing to let it halt her rapid survey of the page. Kitty’s repair script is thus defined by impatience and efficiency. She will repeat an action if it promises an immediate result but will just as quickly abandon a broken component if a workaround is available. Her goal is not to understand or fix the network, but to move through it as quickly as possible, treating its failures as minor inconveniences to be sidestepped.

Bryce The Explorer

The third story of repair script belongs to Bryce, (The Explorer,) whose approach to network failure was defined by a kind of pragmatic resignation. In fact, the entire premise of his recorded session was a repair. His computer had crashed before the recording began, a major breakdown he addressed directly in his questionnaire: “yes, my imac froze and I had to restart. I think I had way to many of the different worlds tabs open.” The attributes the failure not to a flaw in the website but to his own actions creating an overload. This established the context for his in-session behavior, framing his repair script as a method of managing his own digital environment. He notes the experience was “frustrating so it made me stopping thinking of the art for a sec there,” which explains his desire for a quick solution that would restore his focus. His script was one of minimal engagement with the problem, followed by a full-scale retreat and reboot. When he encountered his first in-session glitch (a broken Instagram hyperlink on an artist’s page) his response was brief and diagnostic (0:22). He tried to click the link, noted its failure, but made no attempt to troubleshoot, refresh, or find the artist’s handle through other means. Instead, he retreated exiting the page and returning to the main exhibit room (0:25).

This pattern of leaving was seen again and again as his primary navigational and repair tool. When faced with a broken image gallery arrow on Daniel’s artist page, which ruined his main goal of viewing images, his script was again one lacking engagement followed by leaving the page and reopening it (4:11-4:56). He tried the arrow a second time, but when it failed again, he did not seek a workaround like scrolling. Rather, he abandoned the faulty page and navigated back to the homepage not with the home button, but by typing the museum’s URL into the address bar. This action is his repair script he uses most seen when a part of the network fails, he does not try to fix the part; he re-initializes his connection to the entire network from the top. His reliance on the address bar as his personal master key or improvised home button.

Claire the Shapeshifter

The final repair script is that of Claire, (The Shapeshifter,) whose approach can be described as a type of methodical re-routing. This strategy became clear when she encountered the same "Pilgrimage" loading error as the other participants (1:51). She did not wait like Dina, repeat aggressively like Kitty, or reboot like Bryce. Instead, she closed the broken tab and returned to the homepage (1:58). As I noted in my memos, her script is one of disengagement where she gives up on the broken path and immediately decides to try a different one.

I did not see this as an frustrated or impatient action, but a calculated one. Faced with a non-responsive part of the network, she makes a swift decision to cut her losses. She calmly prunes the failed actor (the broken exhibit in this case) from her network and proceeds to the next available option in a logical sequence, clicking on the second exhibit, "Amphibious" (2:01). Her script suggests she treated the network failure as a dead-end. It seems as if her negotiation is to accept the breakdown and re-route her exploration, preserving her energy for functional parts of the museum.

The significance of this breakdown for her overall experience is confirmed in her questionnaire, where she recalled the event: "The very first 'room' (I think Pilgrimage?) fully didn't load." Her ability to remember this specific failure backs its impact. For Claire, a non-functional part of the museum was not something to be struggled with, but a simple fact to be noted and worked around, allowing her to continue her otherwise systematic exploration of the site.

4.2 : Speeds of Engagement

Moving past the moments of error, the second divergence in how participants journeyed Earth Tones Museum lay in their use of time. The screen recordings revealed two distinct, almost

opposing, rhythms of engagement. This was not a matter of some users being faster or others being slower, I found it in the differences in the goal of their encounters. These two rhythms can be broken down to different performances of the museum, bringing into account what Annemarie Mol (2002) would describe as multiple, ontologically distinct realities of ETM.

The first rhythm, with could be unofficially described as the *deep dive*, is a slow methodical, and text-focused mode of engagement. It is evidenced by long durations on single pages, careful reading of all the given text indicated by the tracing of sentences with the mouse, and a meticulous approach to the content. This script enacts a version of the museum similar to perusing a library, where the museum acted as a site of information to be absorbed and understood in depth. The second, contrasting rhythm is what I call *visual snacking*, a fast-paced, image focused and covering the most ground as possible. This script is described by its rapid movement between pages, quick scans of the artists pages, and a non-linear, exploratory approach. It performs the museum not like the library, but as a lively playground to be surveyed.

This section will analyze these two speeds as enacted scripts that can be sustained, learned, and even switched between within a single session. The analysis begins by examining the deep dive as performed by Dina and the evolution into this mode shown by Ethan. It then contrasts this with the visual snacking of Kitty, before concluding with Claire, whose shift between both modes reveals their fluidity.

This difference in interaction styles is not just a result of user preference—it also reveals something about how media itself functions in relation to engagement. McLuhan's distinction between "hot" and "cool" media helps frame this. The deep dive approach considers ETM ‘hot’ media (“high definition” (p.30)) product teeming with information, asking less active engagement from the user. The absorption is more of an assimilation of pre-packaged content.

The latter ‘cool’ approach conceptualizes it as ‘cool’ media, requiring high active engagement and user-driven completion. The same interface can be hot and cool, depending on the user’s approach. This illustrates the point that media temperature is not a given quality, but rather an outcome of the interaction.

Deep Dive

The deep dive script is seen in the performance of Dina. Her session was distinct in its pledge to slow and comprehensive reading. This pattern was established immediately in her recording, first click took her to the "About Us" page, where she spent nearly two minutes (0:18-1:54) slowly moving down the page. Her cursor’s movement was revealing, as I noted in my memos, "Her cursor is following the text like a finger tracing words. This long duration...tells me she's actually reading, not just scanning." This action of using the cursor as a reading aid could be a digital equivalent of John Dewey’s (1934) concept of the art encounter as a sustained, durational "experience," one that unfolds over time rather than being apprehended in an instant.

This action of focused reading was one she reflected upon in her questionnaire. Describing her overall visit, she emphasized "the experience of using your computer or phone for a longer amount of engagement online," stating, "It was very satisfying to spend 30 minutes exploring the Earth Tones Museum discovering new things, reading about people's thoughts and looking at interesting art intentionally instead of just doom scrolling." This valuate of "intentional," long-form engagement provides the motive for her on-screen behavior. When she encountered a four-page PDF "Syllabus" from the artist Miss Expanding Universe in the "Community Centre," she dedicated over three full minutes (2:00-5:06) to reading it from start to finish. Significant investment of time in a non-visual document. For Dina, understanding the museum required engaging with all of its parts, not just the artworks.

Her initial motivation, as she explained it, was also a key factor. "Since I had already been to the museum previously," she wrote, "during this visit I decided to click the icons that I hadn't explored before." Seemingly her goal was to complete her knowledge of the ETM network, filling in the gaps from a previous visit.

The most concrete example of this deep dive happened on a single artist's page (Flor's), where Dina spent over six minutes (5:15-11:50). During this time, she clicked through all 15 images in the gallery and scrolled slowly through the entire text. This investment of time and focus on a single node in the network is the ultimate performance of the deep dive. It displays a version of the museum where each artwork and its accompanying text is a dense realm worthy of contemplation.

Visual Snacking

We saw evidence of why deep diving enacts the museum as a library to be read, visual snacking however, performs it as an area to be explored. I think of the term snacking to evoke the experience of navigating a social function with a buffet or charcuterie board. A guest in this situation does not consume a whole meal from start to finish. Instead, they move through the space, sampling a bit of this and a taste of that, assessing the overall spread. Their goal is not linear consumption, but far-reaching, exploratory tasting. This script, most clearly demonstrated by Kitty, is characterized by speed, constant motion, and a primary focus on the spatial and visual properties of the interface.

From the beginning, Kitty's visit was defined by speed. Unlike Dina who began by reading, one of Kitty’s first actions was to test the physical properties of the 3D exhibit room, panning her view from side to side (0:20). My memo on this action reads: "This is some sort of spatial reconnaissance... Before engaging with any specific artwork, she's testing the physical

properties of the virtual exhibit. How does it move? How big is it?" This idea of spatial reconnaissance notices boundaries of the exhibition space through kinetic movement that continues throughout her session.

Her interaction with artist pages further proves this action. When she lands on an artist's page, her engagement is brief and image-focused. On one page, she spends a quick 25 seconds, a duration which includes a "brief moment of focused reading, followed by a quick scan and exit" (0:41-1:06). This behavior is the essence of visual snacking by taking a small bite of the textual content but quickly reverts to her dominant mode of rapid visual assessment. This is further evidenced when she encounters a video artwork (3:30-3:36). Despite the video being the main artwork of the page, she scrolls past it without clicking play. My memo highlights the significance of this choice: "Her quick scan is so central that she bypasses the main event... The goal seems to be visiting the page and marking it as seen, rather than experiencing the artwork on it."

This preference for action over passive feasting is also reflected in her questionnaire. When asked what stood out, she emphasized the interactive "easter eggs": "I love the little easter eggs like the frog that would jump up and ribbit. So cute!" Her focus is on the playful, responsive actants, not the static text or even the artworks themselves. For Kitty, the museum is not a text to be read slowly but a responsive environment to be tested and navigated quickly.

The Shapeshifters: Moving between the Speeds

While the deep dive and visual snacking are what stood out most, they are not necessarily fixed identities. The data from two participants, Claire and Ethan, reveals that they are better understood as scripts that a single user can adopt and discard depending on context. These shapeshifters are analytically useful because they demonstrate the fluidity of engagement,

performing both modes with equal commitment. Their shifts from one speed to another reveal the contingent nature of these encounters.

Claire’s screen recording session provides the best example of this fluidity. For the first fifteen minutes of her visit, her performance was almost on par with Dina’s deep dive attitude. Her engagement with "Amphibious" exhibit was very text-focused. On one artist's page (Syd's), she enacted deep engagement that lasted nearly three minutes (8:44-11:12), which included looking at images, checking social media, and then scrolling down to read the text. Later, when encountering a video piece, she fully committed, entering fullscreen mode to immerse herself in the work (13:44). During this phase, she enacted the museum as a site of fixated consumption.

However, at the sixteen-minute mark, a stark transition happened. As she entered a new exhibit, "Magic Items," her pace accelerated and her script completely changed to one of visual snacking. Her visits, which had previously lasted for a few minutes, were now reduced seconds as she began "prioritizing the image galleries and scrolling fast through text" (16:04-17:47). What prompted this shift? Her questionnaire suggests a possible trigger in the change in the exhibit's layout. She notes that the functions "felt different for each room," meaning "you kind of have to 're-learn' how to navigate each time." This external change in the network may have broken her immersive style, causing a shift to a more survey-oriented script.

Ethan’s shapeshifting, while less abrupt than Claire's, is perhaps even more revealing of a different kind of trigger in the change the spark of personal interest. He began his session with a visuals-first direction, systematically moving through the exhibit and engaging only with image galleries, not text (1:05). Yet, as his visit progressed is when a change began to occur. One might speculate that as he became more comfortable in the space, his script evolved. The transition is

most visible on Sydney's and Claire’s pages, where he slows down dramatically, engaging in "long, slow scrolls, pausing on descriptions and bios" (6:32-11:38).

This where my curiosity kicks in. While it remains in the realm of interpretation, his behavior strongly suggests a correlation between his aesthetic appreciation and textual curiosity. It seems plausible that the more an artwork captured his attention, the more he was willing to invest in a deep dive to understand its context. This would explain the complete reversal of his priorities by the end of his session, where his focus was "now clearly on the written content, even more so than the primary image" (25:14). It is as if the initial visual snacking was a surveying method, a way to identify which artworks were worthy of the time and energy required for a true deep dive.

4.3 : Charismatic Actants

While participants navigated Earth Tones Museum with diverse rhythms and repair strategies, a unifying pattern emerged which is their attention was consistently captured by a specific class of non-human actants. These were not the primary artworks or informational texts, but the small, often peripheral, interactive and animated elements of the exhibit designs. This finding connects with a growing body of research on virtual museums, which examines how XR technologies are used actively to "enhance visitors' experience" through new interactive affordances (Sylaiou et al., 2023, p. 87). I choose to call these elements charismatic actants to highlight their mode of influence. Drawing off common sociological concepts of charisma, their power does not stem from providing information or instruction, but from an almost magnetic appeal that persuades the viewer. It can be seen otherwise as what my students would call a digital “rizz”, an ability to effortlessly attract interaction. In Actor- Network Theory, an actant's influence is measured by its ability to make other actors do things (Latour, 2005). By this

measure, the animated and interactive elements of ETM were among the most potent actors in the network, shaping the exploratory paths of all five participants.

In the visually saturated environments of the exhibit rooms, this non-human persuasion was most obvious. Animated artworks often won the first engagement, acting as standouts that distinguished them from their static neighbors. This phenomenon presents a fascinating update to traditional theories of the art encounter. While Walter Benjamin (1936) argued that mechanical reproduction diminishes an artwork's "aura," the digital "apparatus," as Amorim & Teixeira (2020) describe it, appears to do something different. It does not simply diminish the aura of the static object; it relocates that quality of the aura concentrating it in the moving one. This spectacle was seen across the whole focus group. Dina's first click in “Pilgrimage” exhibit was on the "only animated object on screen" (6:48), a pattern she later seemed to turn into a personal rule to "click on whatever moves first" (13:45). Ethan was similarly pulled from his systematic path by a compelling animation (0:54). This behavior was explicitly confirmed in the questionnaires, with Bryce stating plainly, "Things that moved brought my attention towards them."

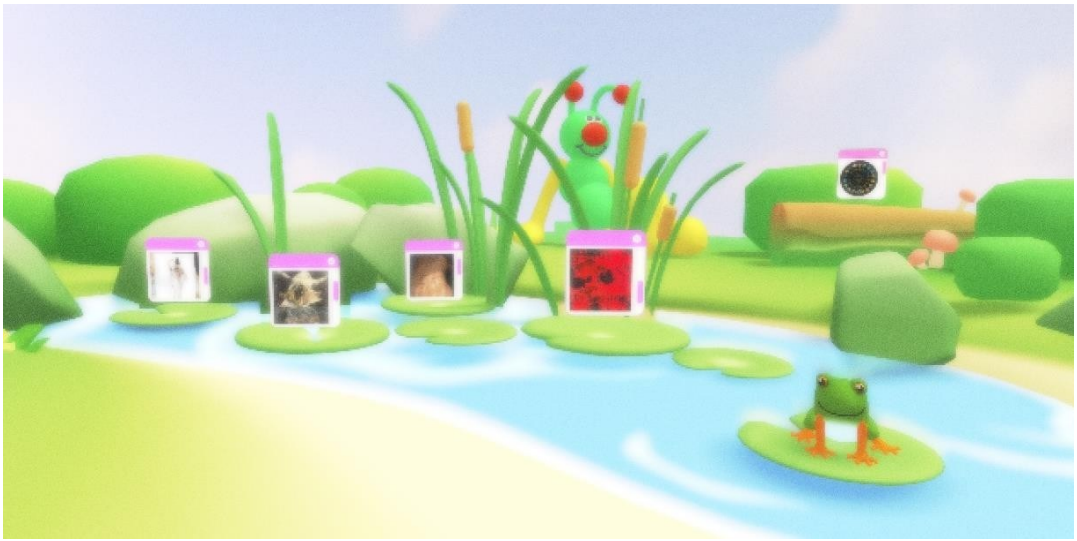

Figure 4. Sceeenshot from Amphibious exhibit on earthtones.art 2025

This pull was amplified when motion was combined with direct interaction, a mode of engagement that stands in stark contrast to the quiet contemplation encouraged by the traditional "white cube" gallery (Hein, 1995). This was most evident in the "Amphibious" exhibit. Instead of neutral walls, the user is placed in a lush, hazy pond where artworks are displayed on lily pads floating in a stream (see Figure 4). The most memorable charismatic actant in this vibrant environment was a non-art "easter egg": a small frog that would jump and "ribbit" when clicked. This playful actor is a prime example of the "special technological affordances" that virtual galleries can offer, creating "participatory" experiences not possible in physical museum spaces (Rodriguez-Boerwinkle & Silvia, 2023, p. 18). It was a highlight for multiple participants. Kitty, in her questionnaire, celebrated these elements: "I love the little easter eggs like the frog that would jump up and ribbit. So cute!" Her screen recording shows her clicking the frog multiple times (3:04), a behavior mirrored by Dina, who shifted from her deep dive script to one of playful interaction (14:15-14:18). These playful encounters were distractions but also, they were a fundamental part of the learning process. They formed a hidden curriculum that taught users the rules of the world through play, moving the encounter towards what John Dewey (1934) would call "an experience" an active engagement with one's environment. This process enrolled them in a new script to test things by clicking, which the participants then applied elsewhere in the museum.

4.4 : User-Driven Innovation

The final theme that surfaced in the data offers the clearest glimpse into how participants actively shaped their encounters. This is especially important for thinking about pedagogy, as it underscores how learners are not just passive recipients of content, but active negotiators who adapt, resist, and reconfigure learning environments—including digital ones.

Beyond repairing the network when it failed, participants often went a step further, proactively adapting and reinventing the tools at their disposal to suit their own needs and desires. This behavior is a form of co-design, where the user reconfigures the intended function of the interface. In the terms of Actor-Network Theory, this is an act of translation, where the participant takes an actant (a tool) provided by the designer and enrolls it in a new network of their own making. These moments of improvisation show the participant not only as a visitor, but as a resourceful innovator or "bricoleur," as Claude Lévi-Strauss would term it. One who constructs their own experience from the materials at hand.

The most powerful instance of this user-driven innovation perhaps came from Dina. While her action was a direct response to a design flaw of black text on a black background (7:25), the nature of her solution seems to take it from simple repair and into the realm of invention. Her approach is arguably best understood through the lens of Claude Lévi-Strauss's (1966) idea of 'bricoleur'. A thinker who creatively repurposes the limited materials at hand. Faced with an unreadable text, she assessed the tools already built in the computer. In that moment of insight, she recognized the potential within the standard highlighting function and repurposed it to create an type of a reading lens that made the unreadable readable.

What makes this moment significant is its immediate integration into her practice. When she encountered the same problem later in a lengthy interview, she deployed her new tool

without hesitation (9:15-13:02). The highlighter as reading glasses had transitioned from a spontaneous discovery into a stable, repeatable part of her personal ETM toolkit. This suggests that the participant capable of permanently augmenting a digital space's functionality to fit their own needs.

Another form of innovation aesthetic and playful, as demonstrated by Kitty. She took the browser's zoom function, a tool intended for close inspection and readability repurposed it into a tool for deliberate disorientation and engagement with the medium's materiality. At one point, she zoomed in so far that the entire exhibit disappeared into a single field of color, before zooming back out to reorient herself (2:33). Later, she did the same with a block of text, zooming in until it became "huge and pixelated, then returns to normal" (3:22). She was playing with its material form discovering its pixels and digital texture, rather than its semantic content. In this

moment, she collapsed what Lev Manovich (2001) calls the "cultural layer" (the readable text) to expose the underlying "computer layer" (the pixels). This repurposing of the zoom function represents a shift from viewing the art through the interface to playing with the interface itself, treating the digital environment as a material to be manipulated.

While Kitty's innovations were focused on the material plane of the interface, another set of user-driven behaviors focused on managing the meta-structure of the browsing experience itself. Both Dina and Claire performed a type of network cleanup, seen as an act of closing multiple browser tabs to manage their own cognitive load before starting a new task. After a long period of deep reading, Dina closed her old tabs before clicking on the "Vortex" exhibit, an action I noted as "simplifying her digital workspace to manage her own cognitive load" (13:41). Claire performed a nearly identical script, manually closing multiple tabs after finishing with the "Amphibious" exhibit to "get back home" (15:04). The default state of tabbed browsing is accumulation of the user's decision to curate their digital workspace is a proactive strategy to create focus and control their own attention, co-designing a more streamlined environment for their next encounter.

The final form of innovation was not the invention of a single tool, but the creation of an entirely new navigational system. Throughout his session, Bryce consistently ignored the on-site tools for returning to the homepage. Instead, whenever he wanted to re-orient himself, he moved his cursor to the top of the screen and typed the URL *earthtones.art* directly into the address bar (1:43, 2:56, 4:56). It is an assertion of user autonomy by rejecting the curated navigational pathways I had designed and implemented his own, more reliable system that was entirely independent of the site's internal logic. This act of system-building demonstrates a participant who, when faced with a complex or potentially unreliable network, chooses to trust his own methods over those provided by the designer, effectively creating a more personalized version of the museum for himself.

4.5: Conclusion

The findings presented in this chapter have traced the multiple ways in which Earth Tones Museum was performed into being. Through the lens of Actor-Network Theory, this analysis has moved past a basic demonstration of participant behavior to map the various dialogs between human and non-human actors. The investigation revealed four key dynamics that shaped these encounters. The analysis of The Repair Script demonstrated that network failures are not errors, but productive moments that reveal a user's underlying relationship with technology. The theme of The Speeds of Engagement showed how different temporal rhythms enacted ontologically distinct versions of the museum, one of deep diving and another of visual snacking. The influence of Charismatic Actants illustrated how non-human elements like animations and interactions can guide user attention more effectively than static content. Finally, the theme of User-Driven Innovation highlighted the user's role as a creative "bricoleur," actively repurposing and inventing tools to co-design their own experience.

Together, these findings paint a picture of the virtual art encounter as a contingent, co-created, and messy reality. The neat lines of the designer's intent are constantly being redrawn by the unpredictable actions of both human users and non-human interface elements. These empirical observations now set the stage for a broader discussion of their implications. In the following chapter, I will move from presenting these findings to interpreting their significance. I will discuss what these observed behaviors mean for Actor-Network Theory's application in digital spaces, what challenges and opportunities they present for artists and educators seeking to understand more meaningful and accessible art experiences online, and what they ultimately tell us about the nature of the art encounter in the digital age.

Chapter 5: Discussion

The findings from Chapter 4 revealed five distinct realities being enacted through four themes: *Repair Scripts, Speeds of Engagement, Charismatic Actants, and User-Driven Innovation.* This chapter moves from presenting these findings to interpreting how they can be rooted in a bigger picture. It places them in dialogue with the theoretical framework and driving questions of this thesis. I work to ask not just what happened during their visit to Earth Tones Museum, but what this new form of encounter really is and the implications it might have for art education pedagogies.

5.1 : Empirical Findings in Context

The empirical findings from my research provide compelling evidence for the theoretical framework that has been established in Chapter 2. Through the investigation of Earth Tones Museum, the data reveals how virtual galleries operate as hyperreal territories rather than failed copies of physical museums. The jumping frog, the interactive stones flipping to reveal art, and the themed layout of each room are surely not representations of a gallery, but they make up a new kind of gallery that has no physical original, though it is still profoundly material—distributed across servers, screens, bodies, and bandwidth. For instance, when Ethan hovered over the flipping stones in the First Encounters room, I wouldn't think he was thinking about how this digital action compares to flipping an object in a tangible gallery space. The act itself became the reality, that there was his encounter. Additionally, when Kitty abandoned a broken exhibit page, she wasn't entirely missing out on the exhibition; the glitch itself became the experience. These moments reveal that ETM is not trying to be a shadow of the commonly known gallery but rather a site where art, technology, and human curiosity meet to produce something that can only exist online.

Looking at the motives of the *Charismatic Actants* is a testament to this. The frog that jumps was designed to be just a secondary element of the gallery room. When framing in the hyperreal environment of ETM, it is a primary source of dependable experience for every single participant. The museum's authenticity lies in its inveracity by the way it responds to visitors and invokes a moment of play and discovery. This variation of experience is something a traditional white cube gallery cannot offer. In this space, the aura does not belong to a distant artwork but is generated in a moment of connection between the user and the elements of the platform.

Yet, the sense of hyperreality of Earth Tones Museum functions differently from the obvious spectacles that Baudrillard and Eco critiqued, such as theme parks, wax museums, and artificial constructions that announce their simulation. The virtual museum's hyperreality is subtler, more adjacent to what Hito Steyerl (2014) describes as the "post-internet condition," where the digital has become so mundane and common that it no longer feels like an artificial environment to be visited, but as an extension of reality. When Dina spends six minutes reading an artist's page on her laptop screen, she isn't consciously entering a simulation but rather engaging with what feels like the natural habitat of contemporary art. The screen then becomes, as I argued in Chapter 2, an extension of her embodied experience rather than looking into a window to an artificial world.

Thus, the flushing integration of the hyperreal into everyday life changes the nature of the art encounter. A visitor in Earth Tones Museum might participate in something more aligned with an unconscious hyperreality. When Kitty repeatedly clicks the frog to make it jump and ribbit. She is not playing with a representation of nature but rather engaging with what the digital environment has twisted into its own authentic form of entertaining. Making the frog's virtual "ribbit" become as real within its network as any sound may make in the physical world. Perhaps

even more important than the croaking of an actual frog outside her window, because it responds to her intended action in ways that confirm her agency within the space she is inhabiting.

Digging deeper into this idea of unconscious hyperreality, it connects to the need for new frameworks to understand how contemporary art encounters are assembled in virtual spaces. If we accept that the participants like those featured in this study are not visiting a simulation of a museum but venturing into a new kind of cultural space, their *Repair Scripts* and *User-Driven Innovations* take on important implications. They were not troubleshooting a flawed copy of a physical experience but, instead, they were pioneering a new form of navigation within an emergent reality. Dina's use of the highlighting tool as reading glasses was an act of co-creation within a hyperreal space that invited such invention.

The educational implications of this hyperreal condition are telling as they return us to the "weighty duty" I mentioned towards my students and the artists whose work I platform. If the virtual museum is not a substitute but a hyperreal territory with its own opportunities, then the pedagogical question might shift from "how do we make online art education feel more like the real thing" to something like "how do we help students develop literacy in these new forms of cultural reality?" This reframing is pinpoints how we teach, curate, and support learning in digital spaces. The juxtaposition of the glitches, the interactive elements, and the moments of user innovation is not an obstacle to overcome but the backbone of art encounters that students must learn to navigate and engage with as members of an increasingly digital lifestyle.

5.2 : Actor-Network Theory in Digital Spaces

When I first set out to build Earth Tones, the goal was obvious. I envisioned a seamless, working, smooth virtual world showcasing emerging artists. However, as described earlier, through many frustrations and learning curves as a developer, the actualization of this reality

became more of a fiction. It was only when I stepped back, accepting the role of observer rather than developer, that I began to see my baby, Earth Tones Museum, more clearly. The glitches and errors I have seen as failures began to appear as inquisitive actants within a larger network of the digital encounter, each one shaping the five participants' actions.

The shift in my vision aligns with Actor-Network Theory, which Bruno Latour (2005) reminds us is less a theory than a method of following the actors. It encourages the researchers to flatten hierarchies and grant equal agency to human and non-human actors. On *earthtones.art*, the website is a collaborator, working with its counterparts, nudging visitors to adapt, view, listen, or even repair the network.

The idea of a glitch is an example of this distributed agency. A glitch is like a double-edged sword; it is, as I came to realize, a puncture in the skin of the simulation that can both disrupt and generate meaning. On one edge, the glitches derail the encounter, distracting participants from the artwork. Kitty's laptop "heated like crazy," and several rooms refused to load, leaving her annoyed, writing that "the difficulty navigating did make the experience a bit less enjoyable." Although, on the other side, as Kemper (2023) suggests, a glitch also "draws attention to the process of mediation" (p. 49), forcing participants to engage critically with the technology rather than just moving through it.

This is where the earlier-mentioned theme of The Repair Script gains its worth. Through the eyes of ANT, each participant's navigation becomes a story of restoration or an attempt to reassemble the fragile cracks of the hyperreal museum. Bryce's reliance on using the address bar to bypass slow-loading pages exemplifies Lévi-Strauss’s idea of bricolage.

Let's connect this thinking to the popular game of Pokémon GO, which acts as a useful parallel. Assunção (2018) argues that the game creates "obligatory points of passage" (Latour,

1983), such as Pokestops and gyms, that compel players to move within a hybrid network of streets, smartphones, and data servers. Earth Tones Museum functions quite similarly for instance, the interactive stones, the zoom and pan functions, and the playful actants (like the legendary frog) serve as network gateways. One cannot navigate through the museum without negotiating with these non-human actants. In doing so, they perform what ANT calls translation by aligning their interactions with the constraints and possibilities of the website.

What fascinates me most in these virtual spaces is that every user becomes a kind of maintenance worker. The boundary between viewing the artwork and technical troubleshooting blurs, creating a juxtaposition of engagement. George Hein's (1995) concept of the "constructivist museum" is particularly relevant in ETM, as construction is not just metaphorical but literal where participants must actively construct their path through the technological ecosystem. Imagine a physical gallery where a projector dies mid-opening and visitors climb ladders to fix it themselves, unthinkable! Yet seemingly ordinary in a virtual setting, where glitches welcome users to improvise their own debugging.

Thus, Actor-Network Theory helps us to see that these improvisations are not only quirks of the interface but systemic outcomes of a flattened network where each actor (humans, lines of code, artworks, bugs, frogs, rocks) possesses a type of agency. Like the Pokémon GO players who discovered new gestures by watching others swipe virtual creatures, Earth Tones participants invent new ways of discovering in the museum. What emerges from this is a recognition that ETM is not a static platform but is living with an assemblage of performances.

5.3 : Accessibility, Inclusivity, and Play

One of the underlying ambitions of Earth Tones Museum was to create a space of living innovation that could be entered without intimidation; it was destined to be a platform that does

not require the social codes that occupy the walls of the white cube. Accessibility, for me, is not just ensuring that the interface functions technically sound, but also about creating a digital environment that invites curiosity over exclusion. In a physical gallery, the rules of behaviour are often unspoken but rigid, for example, hushed voices, stillness, and the reverence that can feel alienating to those unfamiliar with art spaces. In contrast, ETM was built with the hopes that any visitor could arrive, click around and feel comfortable.

The screen recordings from my focus group showed that this freedom to explore was both empowering and overwhelming. Both feelings felt valid because in this virtual museum, there is no right way to look. The multiplicity in the art encounter is a form of accessibility in itself. ETM encouraged a playful exploration, seen either by a deep dive or visual snacking, where each visitor's pace and style of navigation became part of the encounter. In the classroom, this approach echoes what I think of as a "pedagogy of the glitch", or a way of embracing breakdowns, missteps, and moments of uncertainty as generative opportunities for improvisation and adaptive thinking. It shifts learning away from seamless consumption towards an active engagement where learnings discover through the unexpected.

I began to imagine each participant as if they were moving through the Montreal Museum of Fine Arts. Picturing Kitty and Bryce zooming with excitement, sprinting from one room to the next, while Dina and Claire read each place card, pausing and soaking in every detail. Their digital walks resembled the narratives of stories told through clicks and scrolls. Such variety of engagement shows how virtual spaces can be designed for self-directed inquiry where students and visitors construct their own encounters rather than follow a predetermined path,

Such an approach could be understood through a McLuhanist perspective. With McLuhan's theory in place, the participant attempts to test the boundaries of the newly acquired

environment. The clicking of the frog to make it ribbit is not a distraction from the art, rather, it is an integral part of mastering the new ‘patterns of perception’ (McLuhan, 1964, p. 19) that this form of self-extension offers. It constitutes a user’s exploration of the logic of the self which has been extended through new technologies.

Naturally, there is a balance to everything, however. When webpages lagged or there was buffering, the attempt at inclusivity turned to frustration. Yet, these moments also welcomed space for the kind of adaptive and improvisational learning that ETM works to facilitate. The inclusivity features programmed into ETM are bound to how many different rhythms of engagement brought around by the platform, not only technically but also pedagogically.

5.4: Educational Implications

Last academic year, a fascinating and at the same time, frustrating opportunity arose for my students involving virtual world making. The school was invited to partner with a local museum in Montreal, this museum had cultural artifacts from my students' community in its storage, objects that remain unseen by the public. The project was pitched with the idea for the students to 3D scan these artifacts and work as junior curators with a developer to build a virtual world to house these artifacts, with the idea to bring forgotten stories and ancestral memories back to light. The idea of the project was rooted in co-creation and the promise of a museum entirely of their own making. The students did the hard work of 3D scanning these artifacts at the museum and spent a few weeks in the classroom learning how to clean and refine the meshes of those scans. The next step was meant to involve the developer who would transform these scans into the planned virtual gallery. However, that part of the project was never brought to fruition as the developer never provided the files or produced the promised gallery.

Despite the disappointment of an unfinished project, the failure of the project highlights the power of the idea. On the trip to the museum, my students were met with complicated emotions. As they stood in front of their community's cultural artifacts, many of which were tucked away in storage or displayed behind glass vitrines, they felt something wasn't right. There was a shared discomfort in how these objects that hold significant meaning to them were labelled as "gifts" to the institution. It didn't feel right; they described the feeling as though their culture had been taken, frozen in time and reinterpreted through a narrative that wasn't their own. In our discussions after the trip, they spoke passionately about the desire to reclaim these narratives, about wanting to build a space where they could decide their culture would be seen and described. When we brainstormed how they could curate their virtual gallery, what they imagined was not just aesthetic choices but a quiet act of revolt. They wanted to demonstrate their 3D scans in a way that refuses the detached reverence of the traditional museum and instead creates something rooted in their own voices and stories.

Looking back on this experience, I wondered what it means to construct a museum when it is built out of lines of code. If we treat these virtual realities as substitutes for the gallery spaces we are used to, are we endangering the possibility of what they could become? Perhaps the real pedagogical influence is released the moment we change our focus from replication to invention.

To further explore this, I find it helpful to distinguish between the two most common types of virtual exhibitions. One can be seen as a replicative model, which uses 3D technology to mimic the architecture of a physical gallery. While these spaces can be immersive, they often seem to prioritize realism over the affordances that the digital offers; in turn, they risk reinforcing the same viewing habits we seek to disrupt. Additionally, there is a generative type of

model of virtual galleries. This approach embraces the freedom of the digital medium in its own right. Platforms like *New Art City,* a website offering a toolkit for making real-time exhibitions, and like my own Earth Tones Museum, are not trying to be galleries, but rather by creating a totally platform for new types of social and cultural spaces that can only occur online.

According to Hsiao-Cheng Han (2015), students can "actively construct the virtual world" (p. 23) together with their instructors. The social nature of New Art City emerges through participant co-presence because viewers can observe each other's movements, thus transforming individual viewing into a shared social encounter that opposes the typical isolating nature of white cube spaces. The educational objective shifts toward dehabituation, which means using virtual elements to create fresh behaviours instead of duplicating existing ones. The new educational philosophy for digital design requires educators and curators to accept the digital medium as their foundation, rather than its architectural simulation capabilities. The most compelling experiences in ETM occurred when users encountered digital elements that combined interactive features with animated content and non-Euclidean spatial arrangements. The philosophy applies to all inevitable breakdowns that occur. The points of friction which appeared during the *Repair Scripts* served as valuable learning opportunities. The design approach could focus on creating purposeful obstacles that drive users toward critical thinking and transform them into active problem solvers. The recognition of friction through design leads to the celebration of users as creative builders. My study achieved its most significant educational impact when users evolved into creators.

Chapter 6: Conclusion

The virtual art encounter, as this study has shown, is made up of assembled networks of code, memory, and touch. Such encounters thus demand a new gesture of viewing, such as clicking, scrolling, and refreshing, which in turn creates new ways of seeing, thinking and learning. I began this research asking how we might understand encounters with contemporary art in virtual spaces. I came to realize that such encounters involve a dynamic connection between the visitor, the network, and the web of potential actions.

These digital encounters are opening up new spaces for co-creation, critical engagement, and agency, virtual spaces can cultivate skills that are as much about navigating uncertainty and invention as they are about discovering and interpreting artworks. In this way, the virtual art encounter can be viewed as a classroom without walls.

To answer my research questions emerges not from the pristine galleries I once imagined when envisioning an online gallery way back when, but from the glitched beauty of what actually happens within the browser tab. The five performances I have witnessed from my participants have revealed that the framework for understanding virtual art encounters is not a fixed structure but a lived practice.

This practice is one of continuous negotiation between human curiosity and technological advancements, it is found in-between intention and accident and in-between what can be designed and what emerges outside of that. The art encounter behind the screen is assembled moment by moment by acts of repair, speeds of engagement that reshape time itself, charismatic actants that lure attention towards the unexpected, and is found in the innovations born from the friction between each click. The online visitor plays the multiple role of both witness and maker, preserving the artwork through their choices and their attentions.

The virtual art encounter, I now understand, is not diminished by the copy of the gallery experience but through a hyperreal territory where new forms of cultural life can be born. Positioned in this way, digital spaces make assemblages through an ever-changing network of human and non-human actors, and a space where the user is a technician, a player, and a co-creator of their own art viewing experience. As I have come to understand, the virtual museum is a new kind of cultural space with its own rules, its own magic, bringing its own pedagogical potential.

So, what does this mean for the artists, curators, and educators tasked with creating or encountering art in virtual spaces? The central lesson is to call for a to shift from replication to invention, seeing that the path toward more meaningful encounters lies in embracing the realities of the digital medium. This approach transforms the role of the creator from developer into a facilitator of experience.

From this perspective, the conclusion of this thesis can be condensed into a practical ethos for digital creation. Starting by moving away from the "black-boxed" experience, we can design for productive friction, acknowledging moments of errors not as negative accounts but as opportunities that empower the visitor to become a problem solver. Secondly, I suggest accommodating multiple rhythms of engagement into the interface, realizing that a successful space provides many exploratory pathways for the 'visual snacker' and the 'deep diver'. Third, we should encourage opportunities for play through charismatic actors. Taking shape as small, interactive elements that are not only decorations to the exhibits, but perhaps a hidden curriculum that teaches the visitors how to navigate the virtual space. Finally, this thesis teaches us that we must empower the bricoleur. By accepting that visitors will co-opt and repurpose the tools provided, welcoming them into co-creator positions of their own experience.

My method was that of an autoethnographic voice and qualitative research, conditional on my own immersion in the platform as both its creator and its researcher. This dual role, while enabling an intimate analysis of the affiliation between development and experience, also holds problematics. The use of a small focus group of artists who are also my friends, while enabling a trusting dialogue, also means these findings are partial and could be considered incomplete.

By embracing the principles mentioned above, we can begin to construct virtual spaces that are not only displaying art but are generating a whole new experience of appreciating it. My research opens the door for broader inquiries such as, studies with more diverse audiences, and longitudinal research tracking how these new habits of engagement develop over time, especially as the conditions that shaped them during COVID-19 began to shift.

And so, the work of rethinking the virtual art encounter remains unfinished. I see like silhouettes emerging through the fog, its future contours are still forming to our eyes, waiting for the next click to bring them into full focus.

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Appendix A

Questionnaire for Participants

1) Thinking back to when you first heard about the Earth Tones Museum project, what made you interested in participating?
2) Before visiting Earth Tones, what did you imagine it might be like? Did you have any particular expectations?
3) What device did you use to visit the museum (smartphone, tablet, laptop, desktop computer)?
4) Describe your environment while visiting the museum (where you were sitting/standing, lighting conditions, whether you were alone or with others, any interruptions).
5) How do you think these materials conditions and surrounding affect your experience with the artworks?
6) Did you experience any technical issues during your visit (slow loading, broken links, display problems)? If so, how did these technical moments affect your engagement with the art?
7) When you first entered Earth Tones museum, what was your initial reaction? What did you look at or click on first, and why?
8) As you navigated through the museum, describe how the digital features (zoom function, navigation buttons, layout) seemed to "guide" or "direct" your exploration. Were there moments when the interface led you somewhere unexpected or revealed something you wouldn't have noticed otherwise?
9) Which aspects of the online format of the museum influence how you experienced or appreciated the artworks? (Consider features like zoom functionality, navigation, accompanying text, pacing, or the environment in which you viewed the art).
10) Were there any specific artworks, sections, or features that particularly stood out to you (positively or negatively)? Please describe one example and why it caught your attention?
11) After exploring the museum, what was your overall impression of the artworks presented? What stood out or stayed with you the most?
12) Did any part of your visit change how you understood or appreciated the art or its themes? Describe a specific moment where your perspective shifted or something clicked in a new way.
13) Were there any artworks, ideas, or themes that you found particularly meaningful, challenging, or surprising? Please describe why one example and why it caught your attention?
14) After exploring the museum, what was your overall impression of the artworks presented? What stood out or stayed with you the most?
15) Did any part of your visit change how you understood or appreciated the art or its themes? Describe a specific moment where your perspective shifted or something clicked in a new way.

16) Were there any artworks, ideas, or themes that you found particularly meaningful, challenging, or surprising? Please describe why one specific instance stood out to you.
17) Do you think you'll remember specific artworks of experiences from this visit in the future? What aspects do you think will stick with you, and why?
18) Imagine you were telling a friend about your experience visiting Earth Tones museum. What would you emphasize, and what might you leave out? Why?

Appendix B

CERTIFICATION OF ETHICAL ACCEPTABILITY
FOR RESEARCH INVOLVING HUMAN SUBJECTS

Name of Applicant:	Kathryn Walker
Department:	Faculty of Fine Arts\Art Education
Agency:	N/A
Title of Project:	Art Behind the Screen: A Framework for Digital Art Encounters
Certification Number:	30021552

Valid From: March 14, 2025 To: March 13, 2026

The members of the University Human Research Ethics Committee have examined the application for a grant to support the above-named project, and consider the experimental procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

Richard DeMont

Dr. Richard DeMont, Chair, University Human Research Ethics Committee