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## Virtual Touch: Embodied Experiences of (dis)Embodied Intimacy in Mediatized Performance

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# VIRTUAL TOUCH: EMBODIED EXPERIENCES OF (DIS)EMBODIED INTIMACY IN MEDIATIZED PERFORMANCE

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The Department of Communication Studies

by

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## ABSTRACT

In this dissertation, I explore a phenomenon I call *virtual touch*, in which embodied sensations of touch are felt through non-tactile senses. In the digital age, online interactivity has expanded the ways in which individuals experience connection, intimacy, and touch. Digital media, which have traditionally been thought of as disembodied, nevertheless have the ability to elicit intense feelings of touch. Through analysis of digital and virtual installation art, I examine the ways that non-tactile touch remains rooted in the embodied experience. The works I include in this study create a feeling of virtual touch through a co-functioning of the senses, and through what Brian Massumi terms “the superiority of the analog,” in which all experience is inherently rooted in the body.

Grounded in Merleau-Ponty’s theory of the embodied subject, I focus on three broad categories of installation art, each of which creates an affective response of virtual touch through senses of sight and proprioception: telematic performance using video-conferencing technology, digitally reactive animations, and immersive sculptures of light designed to decenter the perceptual and visual senses. Along with works by artists Paul Sermon, Adrien M & Claire B, teamLab, and James Turrell, I include analyses of two research performances I created, *Being Present* (2016) and *(dis)embodied in space* (2019), both of which entangled live and mediatized bodies through telematic video technology. Each of the artworks that I include place an emphasis on the embodied experience, engaging bodies in interactions of virtual touch with other bodies, with digitally reactive artworks, and with light and space. Throughout this dissertation, I argue for a rethinking of concepts of touch, intimacy, and connection in the digital age.

## CHAPTER 1. SPACE, CYBERSPACE, AND THE ‘REAL’: AN INTRODUCTION

*Reaching out to touch a hand only present as projected light; growing vines and flowers blooming at my feet; abstract shapes that move, react, and recoil in response to my physical presence; all-encompassing light tangible enough to penetrate my skin, lifting up my body.*

(Personal experiences of virtual touch in *aisthēsis*, *XYZT: A Journey in 4 Dimensions*, and *Perfectly Clear*, all described further in this dissertation, January-May 2018).

The performances that I am interested in for this dissertation engage the audience-participant in connections of touch through visual and proprioceptive senses, creating moments of intimacy that can be physically felt as a tactile experience. In describing this co-functioning of the senses, I am interested in the ways in which virtual presence is an inherently embodied experience, challenging pre-conceived conceptions of touch, intimacy, and connection. The above descriptions are culled from personal experiences that I had interacting with the different artworks as part of the development of this dissertation, interactions that I describe as *virtual touch*.

For this study, I focus my analysis on contemporary, interactive installation art that engages the bodies of audience-participants<sup>1</sup> in acts of virtual touch and elicits an affective response through non-tactile stimuli. I include artworks such as Paul Sermon’s *Telematic Dreaming* and my own performance research using video conferencing technology to engage the audience-participant in acts of virtual touch between two living bodies; French artist duo Adrien M and Claire B’s and international art collective teamLab’s interactive digitally animated

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1. I specifically use the term audience-participant because of the integral role that the audience, or viewer, has in the co-creation of the artworks that I examine. As I will explain, each of the artworks in this dissertation is incomplete without the presence, but more importantly the interaction, of the audience-participant.



installations, which react to the presence and touch of the audience-participants; and James Turrell's sculptures of light and dark that are designed to decenter the sensory experience of the audience-participant, bringing attention to the unreliability of the senses through visual and perceptual deprivation. Each of the artists that I include emphasizes the embodied experience, engaging audience-participants in interactions of virtual touch with other bodies, with digitally reactive artworks, and with light and space.

I am interested in how these acts of virtual touch and intimacy challenge -- or expand -- conventional understandings of sensations of touch by actively engaging the audience-participants. Stressing the connection between the visual and the tactile, Jay David Bolter and Diane Gromala emphasize that even for digital artists, "the experiences of seeing [are] not disembodied; [they are] visceral. Seeing is feeling. What fascinates digital artists are the ways in which their embodied existence is redefined in cyberspace" (123). With a focus on aesthetic performances, I examine the ways that digital technology has become entangled with contemporary culture, expanding the possibilities for embodied virtual connections. In order to gain a broader contextual understanding of virtual touch and our cultural entanglements with technology, I will briefly summarize the history of virtual presence. This summary offers a sense of both our fascination with, and anxieties about, what happens to our bodies in an age of digital connectivity.

## **A (Brief) History of Virtual Presence**

The year is 1966. Joseph Weizenbaum creates ELIZA, an early text-based chatterbot designed to converse by reflecting statements in the manner of a Rogerian psychotherapist.<sup>2</sup> The

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2. Also known as person-centered therapy, Rogerian psychotherapy was developed by Carl Rogers and seeks to facilitate a client's self-actualizing through affirming messages that encourage the patient to discover the answer for themselves.

first program of its kind to pass the Turing test,<sup>3</sup> ELIZA's appearance of human empathy turned out to be uncannily convincing, even to individuals who were fully aware that they were talking to a computer program. In *Hamlet on the Holodeck*, Janet H. Murray recounts how Weizenbaum's own secretary would ask to talk privately with ELIZA, afterward insisting that 'she' really understood her. Murray writes, "... Eliza's simple textual utterances were experienced as coming from a being who was present at the moment" making her persuasive and capable of inspiring feelings of closeness or intimacy with the individuals with whom she interacted (71).

From the early days of pre-Web 2.0 social media platforms like America Online (AOL) chat rooms, LiveJournal, MySpace, and Friendster, to the now ubiquitous Web 2.0 platforms of Facebook, Instagram, and Twitter, social media has entrenched itself into the fabric of our social networks. Expanding the meaning of the word 'friend,' virtual interaction has changed the rules of social engagement, not just online, but in everyday, face-to-face encounters. Presence is no longer requires corporeality. Communities can span continents and conversations can unfold over vast distances of time and space. Digital technology has altered not only how we interact, but also how we experience connection, intimacy, presence, and, as I argue in this dissertation, touch.

Along with this new digital landscape comes new artistic media, echoing the evolving nature of social connections and allowing for new modes of artistic expression and audience engagement. Just as early filmmakers experimented with the unique properties of film to develop a medium that has become distinct from other arts such as the theatrical performance, Murray points to the properties of digital technology and the importance of "identify[ing] the essential

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3. Developed by Alan Turing in 1950, the Turing test measures a machine's ability to exhibit behavior that makes it indistinguishable from a human.

properties of digital environments” (68). Outlining four unique properties of digital environments, Murray describes them as:

1) Procedural, in that they follow a set of predetermined rules or scripts (71-74).

Although appearing empathetic, ELIZA’s responses were limited to her initial programming. Her ability to process complex variables gave the impression that she could listen and respond, and even learn to comprehend more than Weizenbaum allowed for in his initial coding.

2) Participatory (74-79). The transactional relationship between audience and digital environment is distinct to digital technology and has changed both the shape of art-making and art spectatorship. Encouraging selfies, hashtags, and audience posted photographs of exhibits, museums are using social media technology to engage younger visitors in more interactive ways than ever before.

3) Spatial (79-83), existing in textual, visual, or even physical manifestations of cyberspace through mixed reality. Of Murray’s characteristics of digital environments, this is one of the more crucial ones for my study. This dissertation is most interested in mixed reality as a blending of physical and virtual worlds.

4) Encyclopedic (83-90): Their ability to maintain vast amounts of data allows them to account for (nearly) every possibility, giving the illusion of an environment that organically responds to every impulse to create an alternate reality that we call *virtuality*. However, as Brian Massumi writes, “[t]he medium of the digital is possibility, not virtuality, and not even potential. It doesn’t bother approximating potential, as does probability. Digital coding per se is possibilistic [sic] to the limit.” (137). No matter how complex, the digital follows the rules of its programming, and can never be more than it already is. It is only through embodied subjects (analog bodies), the preceptors of their own realities, that the virtual can be experienced.

## **The Rise of the Machine: Digital Humanism and the Embodiment of Technology**

The year is 1999. Napster becomes the first peer-to-peer online file-sharing system, primarily for music (Zimmerman). The concept of “Web 2.0” is uttered for the first time by information architecture consultant Darcy DiNucci in an article titled “Fragmented Future,” in which she describes cyberspace “not as screenfuls of text and graphics but as a transport mechanism, the ether through which interactivity happens” (32). The Wachowskis release their popular science-fiction film *The Matrix*, featuring a virtual world created by intelligent machines to control humanity.

In the face of growing digital and technological entanglement with contemporary Western culture, philosopher and virtual reality (VR) pioneer Jaron Lanier has attempted to turn the focus back to the human beings behind the machine, arguing for a re-centering on personhood in the face of the cyber-technology through which we live our everyday lives. Taking the stage at the South by Southwest festival (SXSW) in Austin, TX in 2010, Lanier prefaced his talk by asking the crowd to engage in an unlikely experiment: to “not tweet or blog while [he] was talking” (ix). His reasoning, and the main argument of his book, *You are not a gadget*, was to turn the focus back to people, and not computers. He argues that “[t]he deep meaning of personhood is being reduced by illusions of bits. Since people will be inexorably connecting to one another through computers from here on out, we must find an alternative” (20). Lanier’s request to his audience at SXSW, though it seemed unusual, was not to refrain from social media, but to think before posting, for the audience to process what he was saying first, rather than just repeating his words without critical thought.

Lanier does not argue against using computer technology, but rather for what he calls a “new digital humanism” (23). Much the same as Frederick Brooks’s concept of intelligence

amplification (IA),<sup>4</sup> in which he argues that “a machine *and* a mind can beat a mind-imitating machine working by itself” (64), Lanier’s plea is for a focus on the human, not the machine. After all, Lanier states, “the whole point [of virtual reality] was to make this world more creative, expressive, empathic, and interesting. It was not to escape it” (33). Without the physical body, there is no reference point for the experience of the virtual. Digital artists Monika Fleishmann and Wolfgang Strauss point out that in digital environments, we are not losing our bodies, but that digital technology is “extending man’s space for play and action” (qtd. in Hansen 2-3). In other words, our experiences can only be intelligible through our senses, which are inherently embodied.

Similarly, N. Katherine Hayles argues for the importance of the body in the posthuman subject. “Information,” Hayles’ writes, “like humanity, cannot exist apart from the embodiment that brings it into being as a material entity in the world” (49). Defining the posthuman as a “point of view,” rather than a literal melding of machine and human, Hayles posits a posthuman subject and provides a way to examine how embodied experiences develop within virtual spaces, while still rooted in the body. Referring to cultural theorist and media scholar Scott Bukatman’s term, “terminal identity” in reference to the “cybernetic loop that generates a new kind of subjectivity” (115), Hayles calls on Donna Haraway’s metaphoric cyborgs, those individuals who are not literal cyborgs in their reliance on technological devices such as hearing aids, pace-makers, or walking sticks, but rather the systems that enhance our abilities in which digital, cyber, and robotic technologies are used to increase our physical, biological, and mental abilities.

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4. There is a longstanding debate between artificial intelligence (AI), or disembodiment in favor of computer technology, and intelligence amplification (IA), or enhancement of embodied abilities using computer technology. Unlike AI, which aims to create an intelligent machine that can pass, or replace humans, the goal of IA is to amplify human intelligence through the use of technology and digital processes. For more on this distinction see Howard Rheingold’s discussion of Frederick Brooks in his book *Virtual Reality* (25-26).

Inhabiting a body that is on the border of human and machine, “our sense of connection to our tools is heightened” (Haraway 36). Describing an ontology, but also a way to escape the Western dualism of the labels constantly put onto bodies, Haraway argues that “...bodies are maps to power and identity...The machine is not an *it* to be animated, worshiped and dominated. The machine is us, our processes, an aspect of our embodiment” (37-38).

Addressing our cyborg entanglement with technology, specifically through our affective responses via visual stimuli, Massumi argues that “[d]igital technologies have a connection to the potential and the virtual *only through the analog*” (138). In other words, it is only through the embodied experience (the analog) in relation to the digital that the virtual can be achieved. Highlighting the body’s natural ability to *move* and *feel* simultaneously, Massumi is further interested in the “intrinsic connection between movement and sensation” (1), and how these connect and resonate unpredictably. Rejecting the concept of the body as a collection of fixed points of “positionality” on a culturally constructed grid, Massumi instead argues for a fluid approach that recognizes the experience of the body as always in transition (4-5).

## **Virtual Touch**

Defined as the sensation response associated with skin-on-skin contact, the verb “to touch” is “[t]o make contact with, and *related senses* [emphasis added] in which physical contact is the dominant idea” (“Touch,” def. V.1). Working in conjunction with the other bodily senses, touch is not restricted to its usual association with tactile, skin-on-skin contact, and is often experienced as an empathetic response via a co-functioning of the senses. In *The Object Stares Back*, James Elkins points to the role of empathy in proprioceptive awareness as “an involuntary sharing of sensation between our bodies and something or someone we see” (137). Crediting Robert Vischer as originating this theory of empathy, Elkins writes that “pictures of the body

elicit thoughts about the body, and they can also provoke physical reactions *in* [the] body” (138). This dissertation expands that notion of empathy to analyze artworks that connect not only bodies to bodies, but also bodies to artworks, nature, and a sense of universal connectivity.

In the realm of the virtual, which Massumi defines as an action or event that precedes the actual -- or more commonly defined as an experience, object, or body that is “not physically present as such but made by software to appear to be so from the point of view of a program or user” (“Virtual,” def. A.9) -- I define *virtual touch* in terms of three aspects: (1) an embodied experience that can transcend the presence of physical contact; (2) a feeling of touch that precedes the actuality of touch; (3) the potential for touch experienced and made possible through digital technology. Connecting to another body through the digital medium, this sensation of touch creates a feeling of *disembodied-embodiment*,<sup>5</sup> in which embodied sensations are felt through media that seem to be disembodied. Defined by Mark B. N. Hansen in terms of a division of interiority and exteriority, in which “embodied agency becomes conditioned [. . .] by a certain (technical) disembodiment”, disembodied-embodiment is coproduced by the “integration of virtuality into the ‘real’” (93). Hansen argues for “rethinking embodied agency in the age of digital immateriality” (94) and in turn, I argue for a rethinking of our conception of touch in the age of virtual connectivity. As Merleau-Ponty writes, “perception does not come to birth just anywhere, that it emerges in the recess of a body” (*Visible* 9). Therefore, even though seemingly disembodied through the distance of digital technology, the experience of virtual touch is grounded in the body, or disembodied-embodiment.

Rooting my investigations in the embodied experience, I approach the artworks in this study from the standpoint of Merleau-Ponty’s theory of being-in-the-world, examining virtual

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5. Hansen uses the term embodied disembodiment to describe how digital technologies have infiltrated our daily lives, changing the nature of embodied agency (93).

interactions from the perspective of the perceiving subject, one who does not “exist apart from the world we experience, but [is] part of it” (Matthews 12). Eric Matthews describes Merleau-Ponty’s theory of the body as a constant reference point, “something which we ‘live,’ something which is part of ourselves, and essential to our engagement with the world” (42). Just as one’s body is the reference point in the physical world, it is also a reference in the digital -- and virtual -- world.

Combining the virtual and material worlds, I utilize Fleischmann and Strauss’s mixed reality paradigm, described by Hansen as the “fluid interpenetration of realms” (2). Each of the artworks I have chosen for this study specifically highlights embodied experiences that bridge the gap between virtual and material, creating an affective feeling of intimacy and touch -- despite a lack of tactile contact. Rather than reinforcing the binary between real and not real, which places anything created by VR, video projections, or otherwise tactilely intangible media in the realm of the virtual, and therefore the unreal, “the mixed reality paradigm treats [the virtual] as simply one more realm among others that can be accessed through embodied perception or enaction” (Hansen 5). Citing Fleischmann and Strauss as well as VR pioneer Myron Krueger, Hansen argues that virtual technologies “expand the scope they accord embodied human agency” (3). Focusing on the means of access, I use the mixed reality paradigm as a way to recognize different experiences of reality that are enacted through the perception of the embodied subject, recognizing the ‘real’ as more than just the tangible.

By examining the artworks in this study through the mixed reality paradigm and Massumi’s superiority of the analog, I argue that acts of virtual touch create an affective response that extends “beyond the boundar[ies] of the skin” (Hansen 79). Building on Merleau-Ponty’s embodied subject as the “vehicle for being in the world” (qtd. in Hansen 5), Hansen



positions the physical body in the mixed reality paradigm as “the ultimate background . . . in relation to which all perceptual experience must be oriented” (5). Without the physical body, there would be no reference for the audience-participant, and no way to experience the virtual. Further, Hansen points out that “motor activity – not representationalist verisimilitude – holds the key to fluid and functional crossings between virtual and physical realms” (2). For Hansen, the physical body is “the ultimate interface” through which all experience, virtual or analog, must be mediated. Through this lens, the artworks I am interested in use digital media as a way to refocus the centrality of the body and embodied experience of the individual. The implications of focusing on the embodied experience through technology, rather than technology as the experience divorced from the body, reach far beyond aesthetic performance and into our everyday life interactions. As a reflection of contemporary entanglements with virtual connections and Hayles’s posthuman “point of view,” these artworks provide an opportunity to examine not only our relationship with technology but our relationship with each other through technology.

### **Embracing [Virtual] Liveness**

Live performance implies the presence of live bodies: both performers and audience members sharing a common space, time, and experience that can never be recreated exactly the same, because the elements that make up the event will never be exactly the same. In his 1935 essay, “The Work of Art in the Age of Mechanical Reproduction,” Walter Benjamin argues that liveness in a work of art is about “presence in time and space, its unique existence at the place where it happens to be” (3). With the advent of Web 2.0, our conceptions of space, connectivity, and presence have necessarily changed to account for the creation of online communities. It is no longer a matter of sharing space -- in the corporeal sense of the word -- but rather what I would

describe as sharing connectivity in cyberspace, a virtual plane that is just as real despite its seeming lack of materiality.

Following Benjamin's characterization of aura as an indication of liveness of the art experience and against the mechanical reproduction of artwork, I posit that contemporary artistic scholarship needs to be clearer in its distinction between technologically entangled art, and the technological reproduction of art. Technologically entangled art, as defined by Chris Salter, consists of "human and technical beings and processes [that] are so intimately bound up in a conglomeration of relations that it makes it difficult, if not impossible to tease out separate essences for each" (xxxii). This includes the vast genres of multimedia, new media, and intermedia art in which the removal of technology renders the artistic product lifeless and moot.

Conversely, technologically reproduced art is more commonly seen in the act of reproduction, such as photographs and videos made for the purpose of documentation. While technological reproduction can be artistic in itself, it is not entangled as defined by Salter, but rather a new piece of art that may be only tangentially related to the thing that it is attempting to reproduce. A current example is the recent trend to televise live performances of musical theater productions. While this kind of performance could be seen as technologically entangled, I argue that it is rather a form of reproduction and replication for the masses, as the performance is still designed for the stage, and would not lose its primary artistic qualities if it were not televised.

As a reflection of current cultural entanglements with technology, the artworks in this dissertation all employ virtual liveness with the purpose of creating a sensory connection between artwork and audience-participant. Although virtual technology tends to displace the body from the physical, it is still "tied to his presence," (Benjamin 10) creating a form of mediated liveness or aura that mirrors our technologically entangled culture. These artworks

engage digital technology not just as a means of access, but as an artistic medium through which the artwork is expressed.

Arguing against the encroachment of digital media in live performance, Peggy Phelan points to the importance of two key elements: live bodies and ephemerality. Like Benjamin, Phelan argues that “[p]erformance’s only life is in the present . . . [performance] becomes itself through disappearance” (146). The “present,” as I have just argued, has become more complicated with the rise of Web 2.0 and social media. Not only is it now common to be mentally and emotionally present while being physically absent, but the vast distance, as well as the mechanics of online communication, allow for asynchronous presence that still exudes an aura of liveness.<sup>6</sup> Digital technologies, particularly those that have led to the emergence of chatterbots like ELIZA -- and most recently manifesting as Apple’s Siri and Amazon’s Alexa -- further complicate our preconceptions of live interaction and material presence. The constant availability brought about by digital communication has necessarily brought up questions of what it means to be virtually present in everyday life. This, I argue, is the intervention that art and performance can make to redefine liveness in the virtual age.

As part of this ongoing scholarly debate regarding the nature of liveness, Philip Auslander points out that “[l]ive performance now often incorporates mediatization such that the live event itself is a product of reproductive technologies.” (“Liveness” 197). Specifically addressing chatterbots and the nature of liveness and digital technology in his later essay, “Live From Cyberspace: or, I was sitting at my computer this guy appeared he thought I was a bot,” Auslander writes that “chatterbots are not playback devices. . . chatterbots are themselves

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6. While letters and emails also work through asynchronous communication, the expected delay in response is much longer than that of text-based messaging. Additionally, many text-based messaging applications show the sender when their message has been read, as well as moving ellipses when the other person is typing, creating a presence of liveness regardless of the time it takes the receiver to respond.

performing entities that construct their performances at the same time as we witness them . . . They perform live, but they are not a-live” (20). Although chatterbots adhere to a finite set of parameters allowed by their programming, their responses are not predetermined, but rather “they perform in the moment.” (21). Combining the complexity of programming with the unpredictability of the individual with whom they interact, chatterbots illustrate Massumi’s theory of the superiority of the analog: ELIZA alone does not perform liveness, but through interaction with a human counterpart the experience becomes one of intimate connection, presence, and virtual liveness. As I argue in this dissertation, liveness is not solely an activity between two human beings in a shared time and space, but rather an act of connection that can involve various combinations of human and digital. Likewise, Auslander argues that liveness can no longer be reserved as a specific human trait: “[the chatterbot] subverts the centrality of the live, organic presence of human beings to the experience of live performance; and it casts into doubt the existential significance attributed to live performance” (“Live from Cyberspace” 21). Liveness, in the current cultural context, is bound up in digital technology.

With the advent of Web 2.0 the possibilities for connection have expanded exponentially, necessitating a redefinition of intimacy, touch, and the ephemerality of liveness that goes far beyond F2F interactions. As I show through the artworks in this study, liveness, as Auslander notes, can no longer be reserved as the sole domain of living beings. This is not to say that digital technology has gained sentience, but that human participants have the ability not only to perform liveness through digital media with one another, but to extend the unpredictability of liveness to their interactions with specific types of digital technologies.

## **Implications: Reconciling the Archived Nature of Digital Liveness**

On Thursday, November 7, 2019, between the approximate the hours of 2 a.m. and 8 a.m., an estimated 168,149 delayed text messages -- originally sent on Valentine's day of the same year -- arrived on cell phones across the United States. Because this system-wide glitch occurred at Syniverse, a company that provides data servers to cellular carriers nationwide, it was not localized to any one provider. While some texts were confusing yet benign, others reported receiving texts from now ex-boyfriends and ex-girlfriends, and more disturbingly from friends and relatives who had since passed away (Garcia). As an anomalous event, this instance brings attention to the archived nature of digital communication and the asynchronous liveness that has become normalized by our entanglement with digital culture.

Although enacted by live beings on either end, online interactions fail to meet one of Phelan's major criterial for live performance: ephemerality. While the interaction might be fleeting, the nature of text-based communication leaves behind a visible trace that can be revisited again and again. Some platforms like Snapchat have attempted to compensate for this lack of ephemerality by putting a 24-hour time limit before erasing interactions, but even this seems to have come too late as many users learned they could screenshot photos or text conversations in order to maintain the archive to revisit later. However, this archived interaction is still only a memory, and as our present has become entwined with technology, it seems fitting that our memories have as well.

## **Virtual Touch and Aesthetic Performance: Methods, Scope, and Inquiry**

While virtual touch is entwined in our everyday lives, this dissertation will focus on interactions with aesthetic performance -- specifically, interactive installation art that engages the audience-participant in embodied sensations of virtual touch elicited through non-tactile stimuli.

I preface this introduction with examples of digital interaction in everyday life to show the multitude of ways in which digital technology has seeped into our society, our culture, and our bodies. Art, as an expression of all three, is a reflection of the technologically entangled lives which we are living.

Using the phenomenology of Maurice Merleau-Ponty as my grounding theory, my primary method of inquiry is personal experience. With one exception,<sup>7</sup> I have been able to visit each of the artworks described, as well as gather both scholarly and personal accounts of the artists, performers, observers, and audience-participants. Additionally, I utilize my own practice-based research, exploring telematic connections through two performances developed in the HopKins Black Box Performance Laboratory at Louisiana State University. Using these methods, I examine how the artworks in this study engage the virtual body as an extension of the physical body, challenging how we conceive of connection, intimacy, and touch.

As a practitioner and artist-scholar I draw on my training in Contact Improvisation (CI), physical theater, and my work as a video projection designer to gain further insight into my analysis of the works in this study. I utilize my own embodied knowledge throughout this dissertation in the form of thick description, adding accounts of personal experience of each of the artworks as an additional entry point into both understanding and analysis. Developed by anthropologist Clifford Geertz as a way to contextualize the significance of social practices in ethnographic description, thick description allows for the addition of “more empathetic detail” through subjective observations of personal experience (Lindlof and Taylor 135). As a

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7. Although it was the initial inspiration for this dissertation, I was not able to experience Paul Sermon’s *Telematic Dreaming*, described in Chapter Two. I did have a brief email conversation with Sermon regarding his work, which aided in the development of my own performances to explore telematic engagements of virtual touch.

participant-observer to the artworks described in this study, I use thick description to give the reader a personal perspective into the experiential nature of these works.

Using an inductive methodology, my analysis focuses first on the artworks themselves, putting the embodied experience first and foremost in my analysis. Because of my focus on the phenomena of the perceptual experience of these artworks, it would be impossible to write this study without this first-hand experience. Working outward from my experience of each of the artworks assures that my analysis remains grounded in what it means to be an embodied subject in the world. Although this inevitably leads to a description of some experiences that will not be universal, I have tried to account for this with my inclusion of scholarly analysis and accounts of other audience-participants to give the reader the widest breadth of the possibilities of embodied experiences within each installation.

From an embodied and artwork-centered perspective, I use of performative writing in the form of thick description as both a method and a way to frame the journey that I took in traveling, creating, and experiencing each of the artworks included in this study. Borrowing from dance scholars Susan Leigh Foster and Marta E. Savigliano who use choreographic forms in their writing as a way to impart knowledge that cannot be expressed in simple words, I structure this dissertation as a journey, through time and (cyber)space, inviting the reader to take a break from the consistency of reality, allowing themselves to feel through my eyes and see through my skin.

In the following chapters, I focus on three broad categories of installation artworks that engage the audience-participant in acts of virtual touch. Chapter Two examines intimate connections between two bodies separated by distance, creating a sensation of virtual touch and disembodied-embodiment. As these artworks use telematic technologies in real-time, I examine

the affective response of touch felt by performers, audience-participants, and observers in both staged performances and interactive installation art. I begin with an analysis of Suzan Kozel's experiences performing in Paul Sermon's *Telematic Dreaming* as well as my own practice-based research in the creation of two performances: *Being Present* (2016) and *(dis)embodied in space* (2019). Chapter Three broadens the scope of intimacy and connection to consider interactions between audience-participant and digital processes, focusing on French artist duo Adrien M & Claire B (AM-CB) and international art collective teamLab. Each uses motion sensor technology and computer animations to engage the audience-participant in instances of virtual touch. Interactions in these kinetic environments are not just between viewer and computer process but are also affected by the larger surroundings of the other audience-participants, both past and present. Chapter Four takes a step back from traditional digital and computer technology to explore two artworks by light and space artist James Turrell: *Perfectly Clear* (1991) and *Hind Sight* (1984), immersive environments in which the audience-participant is engulfed in complete lightness or darkness respectively. My analysis examines full-body sensations of virtual touch through perceptual and visual deprivation in these works. Supplemented by Turrell's thoughts on light as a tactile medium, this chapter describes the embodied sense of being held gently in the light, being touched without touching, and a sense of the body dissipating in the darkness.

### **Limitations: Focus on Vulnerability, Experience, and Embodiment Through Technology**

In this study, I focus on artworks that fully engage the audience-participant, using technology as a means of artistic expression, rather than a means to express technology. Because of the vast number of digital artworks available to study, and my specific interest in works that elicit an affective sensation of touch, I have limited my selection to artworks that primarily engage the audience-participant through visual senses and have at least one non-machine



participant. Further, because I am interested in the embodied experience, I chose artworks that allowed for free exploration and discovery rather than the presence of a narrative thread. Given these limitations, I sought out artists that invite vulnerability, trust, and wonder in their work.

In line with the characteristics of digital environments outlined by Murray, I am interested in how technology can be used as a medium of artistic expression, rather than as a showcase of spectacle. While many of the artworks in this study create an element of spectacle by the novelty technology, I have avoided including artworks that favor what I call the ‘magic,’ or illusion created by technology solely for its own sake. Unlike artist groups like The Builders Association and Wooster Group, who employ multimedia as a dialogic tool through which live performance and mediatized technology engage in “mutual connections and commentaries between and about one another” (Dixon 347), the artworks I have chosen work through technological media to engage in a dialog of relations that arise between people, art, and nature. Using the roughness of technology as a narrative tool in service of the story, both The Builders Association and Wooster Group make no attempts to hide or smooth over the integration of multimedia technologies, encouraging the audience to empathetically disengage their bodies in favor of critically engaging with their minds. In contrast, American theater director George Coates’s seamless integration of 3D projections with live performers comes closer to the types of artworks that I have chosen for the focus of this study. While the first research performances that I describe, *Being Present*, uses similar staging techniques to Coates, the majority of works that I describe eliminate the delineation between observer and observed, allowing the audience to enter into the immersive world created through this blend of digital technology and embodied experience.

In looking at artworks that prioritized the experiential over the spectacle, I further limited my selection to artworks that did not possess a narrative arc or storyline. As meaning-makers, humans will naturally piece together elements in artworks to create a narrative thread. From the artworks that I have experienced, even the slightest hint of story placed by the artist immediately overshadows the focus embodied experience. As an example of a narrative-free immersive experience, Yayoi Kusama's *Infinity Mirror Rooms* succeed in creating the type of wonder that I looked for in this study. However, because of the lack of interactivity between audience and artwork, I ultimately did not include Kusama's work in my final analysis.

Also focusing on the total environment, Santa Fe based artist collective Meow Wolf's art installations invite their audience to step outside of the mundane world into what they describe as a "multidimensional mystery house" of sculptural art, video, music, and extended reality content (*Meow Wolf: About*). While Meow Wolf does allow for free exploration and discovery within their 20,000 square-foot installation space, *House of Eternal Return*, the work itself differs from the pieces in this study in several distinct ways: first, there is an underlying narrative that exists within the larger space that can be solved. While the storyline can be actively pursued or ignored, the presence of a storyline itself imposes the artist's intentions on the experience, rather than focusing on the experience itself. In contrast, artworks that intentionally eschew storylines allow the audience to focus on the experience in the moment without having to reconcile the intentions of the author-artist. Second, the larger space lacks cohesive curation, but rather is put together as a collective installation in which each room is the creation of an individual artist. Finally, the interactions in Meow Wolf are based around the novelty of the space and pursuit of the narrative, rather than inviting a sense vulnerability that leads to intimate connection.

Finally, I sought out artworks that invited vulnerability and connection through technology. With the understanding that true vulnerability is difficult to attain in a public performance, I look to Marina Abramović's 1974 performance *Rhythm 0* as an extreme example of the quality of vulnerability I was looking for in artworks. Taking place over the course of six hours, *Rhythm 0* consisted of Abramović standing beside a table of seventy-two objects while audience members were allowed to do whatever they wished to her body. She did not move of her own accord but allowed the audience to freely manipulate her body. Gradually getting more intense in their actions, the audience's actions built to a point where she was kissed, undressed, her skin cut, and a loaded gun held to her head.

While Abramović is known for both her endurance work and placing her own body in harm's way, I am less interested in the vulnerability of her body in *Rhythm 0*, but rather in the aftermath of what happened once the performance was over. During the performance her body was still, her face a blank slate in her role as 'performer.' At the end of the six hours, as planned, she stood up, breaking her neutral character and walking towards the audience to exit. Seemingly ashamed at the lengths they had gone in the treatment of Abramović's body during the performance, the audience refused to make eye contact with her and ran away. This is the moment of vulnerability that I am interested in, the intimate connection that can only arise in moments of extreme trust. As in Abramović discovered in *Rhythm 0*, and similar to the virtual violence enacted on Suzan Kozel's body in *Telematic Dreaming* which I describe in Chapter Two, this trust can often lead to extreme violence and a violation of the invitation of intimacy.

With these limitations in mind, I see the artworks in this study as engaging the audience-participant through an economy of sensory engagement. This is not to say that these works do not cause overstimulation in audience-participants, but that each artist has specifically chosen to

focus on a primary sense with which to engage the embodied experience through technology. I believe this specificity results in a stronger, more intimate connection between audience-participant and artwork, focusing on the embodied experience of vulnerability, touch, and connection through digital technology.

## CHAPTER 2. TELEMATIC CONNECTIONS: SENSING, FEELING, BEING IN SPACE TOGETHER

*An empty room. Darkness. A bed. An invitation to fill the void, not with bodies, but with presence. A dimly lit room, the illusion of privacy, the pretense of leaving the outside world behind, if just for a moment. Reaching out to touch nothing. The projected image of a body that is present in spirit, if not in flesh. (Personal imagining of Paul Sermon's *Telematic Dreaming*).*

In 1994 Paul Sermon presented his interactive installation *Telematic Dreaming*<sup>8</sup> as part of a larger contemporary art exhibition in Amsterdam called 'Ik + De Ander' ('I + the Other'). *Telematic Dreaming* used high definition cameras, projectors, and video monitors to create a virtual performance space. The installation featured performer and digital dance scholar Suzan Kozel, who's projected image appeared in the installation on a seemingly empty white bed through telepresence. Often using long-distance video projection, telepresence allows performers to interact remotely in real-time using digital technology, or telematics. Although telematics refers to the general use of digital technology to connect over distance, in digital art it is generally used to refer to the use of video projection to connect performers who are not physically present in the same location. Kozel was able to interact and physically engage with audience-participants as they entered one or two at a time into the private space. Lying on the bed in virtual form, visually engaging with each new audience-participant who entered the space, Kozel's two-dimensional projected image was linked through a live-feed video camera from a nearby room in which she inhabited an identically plain, white bed. Able to see her visitors

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8. *Telematic Dreaming* debuted in 1992 as part of the annual summer exhibition 'Koti' at the Kajaani Art Gallery in Finland. Performing in the piece himself, Sermon was located at the Tele Gallery in Helsinki and connected via an ISDN teleconferencing link to the audience-participant space in Kajaani. The installation was commissioned by the Finnish Ministry of Culture with support from Telecom Finland.

through video monitors placed around her on three sides, Kozel could interact with and react to each audience-participant in real-time (figure 2.1).

“In *Telematic Dreaming*,” Kozel writes, “human interaction was reduced to its simplest essence: touch, trust, vulnerability” (93). Though literal physical touch was not possible, the liveness of her body combined with the absence of her corporality elicited physical responses of both tenderness and violence from those who visited the performance. Movement and visual contact took on greater importance, and became, as Kozel describes, “an emotional investment which shocked and sometimes disturbed people” (94). Reactions varied widely, from audience-participants who approached Kozel with tenderness, taking great care in the presence of her virtual vulnerability, to those who took advantage of her lack of corporality to act out physical and sexual harm. Ultimately grounded in an embodied experience, Kozel describes the experience of virtual stimuli enacted on her physical body, with the body being “the final reference point and the source of meaning” (100).



Figure 2.1. Projected image of Susan Kozel interacting with a gallery participant in ‘Telematic Dreaming’ for the exhibition ‘Ik + De Ander’ in Amsterdam 1994, Photograph by Paul Sermon.

Kozel also describes the sensations that she felt in this performance as “the relation between my ‘cyber-body’ and my fleshy body” (92). This chapter focuses on affective feelings of virtual touch through telepresence, specifically analyzing two performances that I developed as part of my research in the HopKins Black Box at Louisiana State University: *Being Present* (November 2016), and *(dis)embodied in space* (January 2019). My analysis will focus on real-time connections between bodies and the implications that arise when our conceptions of ‘touch’ are expanded beyond the tactile surface of the material body. Working with Laura Marks’s theory of embodied visibility, in which the sense of sight can create a haptic response in the body and “the eyes themselves function like organs of touch,” (162) this chapter will analyze interactions that create a physical sensation of touch through visual stimuli for the performers and audience-participants. In contrast to “optical visibility,” which sees the world at a distance, Marks defines “haptic visibility” as focused less on the definition and identification of objects, and more on the affective feeling as the eyes travel over the visual texture. Haptic visibility “tends to move over the surface of its object rather than plunge into illusionistic depth” (162), with the eyes acting as tactile sensors, seeing texture with what Massumi calls “visual touch” (158).

### **Intimacy at a Distance: Devising, Staging, and Performing *Being Present***

September 18, 2016: the cast and creative team for *Being Present* sign on to Slack, a group message board. One performer, Jason, is in his living room in Somerville, Massachusetts while the rest are in various locations across Baton Rouge and New Orleans, Louisiana. For nine weeks rehearsals are held in cyberspace, each member of the team cyber-commuting from their living rooms, kitchens, porches, and eventually the performance space in the HopKins Black Box at Louisiana State University, where Jason telecommutes via Skype. Projected onto strips of

black scrim hung strategically throughout the performance space, Jason's image has the illusion of being present onstage alongside Gabi, the performer in Baton Rouge. Although the two have never met in person, through the performance process Gabi and Jason developed a deep connection, including being able to "touch" and interact onstage (figure 2.2).



Figure 2.2. Gabi Vigueira and Jason Jedrusiak 'touch' in *Being Present*. HopKins Black Box, November 2016. Photo: Michaela Todaro.

*Being Present* is a telematic performance that was created, rehearsed, and performed via text-based communication and video conferencing technologies. This performance explores themes of intimacy, touch, and connection via computer-mediated communication (CMC). Developed along with two actors, Gabi Vigueira in Baton Rouge, LA, and Jason Jedrusiak in Somerville/Cambridge, MA, *Being Present* was devised, rehearsed, and performed through long-distance communication, and presented using live-feed video projections that allowed Vigueira and Jedrusiak to interact in real-time. The loose narrative arc followed several relationships developed via CMC and experienced by the author and performers, as well as the relationship formed by Vigueira and Jedrusiak during the creation of the performance. Although Vigueira



and Jedrusiak developed a deep connection during the devising process, to date they have never met face to face (F2F).

Both as process and product, *Being Present* addresses the ways in which online friendships develop, maintain, and often fall apart. Following personal experiences from the cast and crew in the formation of online connections, several reoccurring themes surfaced: the desire for online connections stemming from physical loneliness; the ease of communicating via text-based communication; and the intense intimacy that can develop quickly yet drop at an instant in digital contexts. Using these narratives along with personal reflection on Vigueira and Jedrusiak's own journey in developing a devised performance without having met in person, *Being Present* was a study in the nature of long-distance intimate connection and digital liveness.

### **Re-Defining Liveness**

November 16, 2016: opening night. The audience approaches the small box office table equipped with two computers: one faces the box office attendant Adam Harvey, and the other faces the line of approaching audience members. As the audiences' initial introduction to the aesthetic world of *Being Present*, Harvey keeps his eyes down, looking directly into his computer screen, which is linked to the second computer via FaceTime, which rings as each successive individual approaches the table. At first, confused by this extra layer of mediation, the audience soon catches on and accepts the FaceTime call, navigating a computer-mediated box office experience to communicate with Harvey even though he sits less than three feet away. Ending each call, Harvey then invites the audience to enter the theatre, reminding them to "turn off their cell phones, and be present."

Using the juxtaposition of communicating through FaceTime and close physical proximity, the entrance to *Being Present* works to comment on our deep entanglements with

digital technologies. As technology is ever-present in our daily lives, the use of “reproductive technologies” in performance echoes the lived experience. Further, by juxtaposing the theme of presence with the reality of physical absence, *Being ~~Present~~* calls into question the nature of computer-mediated connection, intimacy, and the physical “space” of cyberspace.

By using CMC as a means to connect two live bodies via visual and auditory long-distance communication, *Being ~~Present~~* complicates how liveness is enacted onstage. While Jedrusiak was not physically present with Vigueira on the stage of the HopKins Black Box, the use of Skype and video projections allowed him to be virtually present in space and time. The use of CMC allowed for a broadening of possibilities in the creation of the types of interactions, which Phelan insists are at the heart of live performance: an ephemeral, non-reproducible performance event in which live bodies interact onstage and with the audience.

Having made it through their box office experience, audience members enter what appears to be a nearly empty theatre with Vigueira seated far upstage in a lonely pool of light, her face illuminated by the sticker-laden laptop at her fingertips (figure 2.3). As the performance begins, projections of a text-based conversation appear to float in mid-air, filling the empty space. Throughout the performance Jedrusiak and Vigueira interact onstage together, sometimes dancing (figure 2.4), sometimes conversing, speaking to each other through the distance of cyberspace. Except for the floating text and one pre-recorded video section, everything is performed live through a tenuous Skype connection that could drop at any moment.



This precarity played out in unexpected moments, most notably during one performance when Vigueira accidentally turned off her headset and Jedrusiak was unable to hear anything for the latter half of the performance; and on the closing evening when the Internet disconnected and Jedrusiak's Skype connection was lost, causing a momentary panic while it was reconnected. But despite each of these glitches Vigueira and Jedrusiak were able to reconnect, as it were, to the non-linear narrative created over those nine weeks, connecting virtual and physical bodies in images of contact, intermingling words and stories, and sharing tender moments performed so smoothly that some audience members responded that they thought the whole piece was pre-recorded and carefully choreographed.

### **Creating a Deeper Connection Through Absence**

In a devising process that focused on themes of intimacy, connection, and virtual touch, the moment that resonated most fully for both performers and audience members did not manifest until just a couple of days before opening night. In the final scene, Vigueira walks into the audience, looking back longingly at Jedrusiak's projected image as if forcing herself to let go of this tenuous relationship, strained by distance. As she walks, a pool of light appears in the aisle. She stops. Placing one hand on the audience riser, she gently lifts up the other (figure 2.5). Onstage Jedrusiak also walks to the edge of his space (figure 2.6). The camera catching his image begins to jerk, drawing attention back to the now seemingly empty stage. The Skype technician in charge of maintaining Jedrusiak's connection during the performance repositions the camera to catch both Jedrusiak and Vigueira, touching palms from fifteen hundred miles away (figure 2.7).



Figure 2.5. Gabi Vigueira stands in the audience (left) raising her hand to connect with Jason Jedrusiak in cyberspace (seen on the screen on the right) in *Being Present*. HopKins Black Box, November 2016. Photo by Michaela Todaro.



Figure 2.6. Jason Jedrusiak positions himself to connect hands with Gabi Vigueira in *Being Present*. Community Art Center, Cambridge, MA, November 2016. Photo by Giuliana Funkhouser.



Figure 2.7. Caught in the camera, Gabi Vigueira connects with Jason Jedrusiak in *Being Present*. HopKins Black Box, November 2016. Photo by Michaela Todaro.

In this final scene, Vigueira is simultaneously standing alone in the audience, while also being transported to a virtual plane in which her hand meets Jedrusiak's onstage. Caught in the webcam that was pointed at Jedrusiak's Skype window, this moment emerged as an accident during the final days of rehearsal. After multiple failures getting Jedrusiak's long-distance live feed video to run through QLab (a projection mapping program developed by Figure 53 that allows for a seamless aesthetic and a more realistic virtual presence) my last trick was to point an additional webcam at the computer screen with Jedrusiak's Skype window, running that camera feed through QLab and mapping through the three projectors in the HopKins Black Box. Of the various technologies that I had at my disposal, I still consider this to be a hack born out of necessity. And even though the mechanics of this moment still use digital technology, the manipulation of the camera pointed at the Skype window to catch both Jedrusiak and Vigueira in the same virtual plane blurs the distinction between digital/virtual and analog processes.

This moment captured the essence of the entire show: the energetic, embodied connection between these two performers who had developed a deep relationship over the previous two months. In talking about the connection developed during this process, Vigueira remarked that of all the tricks and choreography we created in the performance, this was the one time when she felt truly connected to Jedrusiak, even though in this instance she could not actually see him. Sensing each other over the virtual distance -- the empty touch of Vigueira hand floating amidst the audience -- the *weight* of her connection to Jedrusiak through virtual space was palpable.



## Feeling Through the Screen: Staging *(dis)embodied in space*

*The body blends with the world. It's no longer a separation of my body against the world, but instead my mind against my body and the world.* (Audience-participant feedback,<sup>9</sup> *(dis)embodied in space*, January 2019).

An interactive art installation presented at the HopKins Black Box performance laboratory in January 2019, *(dis)embodied in space* was comprised of six interconnected installations among which the audience-participants were invited to move around and interact freely (figure 2.8). Exploring different elements of touch, presence, and intimate connection, the overall installation included six performers who acted as both moving elements within the individual installations and as mentors to guide the audience-participants on how to navigate the space. Dressed in plain street clothes, the performers began the evening dispersed throughout the playing spaces, either interacting with their assigned installation (A. *cataract*; B.1 *un clin du corps*; and B.2 *surface|tension*), interacting with each other within an installation (D. *aisthēsis*), or waiting for audience-participants with whom to interact (C. *flōt*). The final installation was staged as a feedback station in which audience-participants could leave responses in the form of images, thoughts, or experiences (E. *ambedo*). The overall installation space was intended to promote a sense of calm, encouraging the audience-participants to explore, play, and discover new ways of connecting through virtual touch.

*The whole installation felt timeless. It felt like it transcends time in a way that not many things do. It required a self-reflection, a look into oneself and what role one plays as a part of a*

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9. Audience-participant feedback came from student response papers written for classes in the Department of Communication Studies at Louisiana State University, and from personal conversations the author/director had with audience-participants during the exhibition. All feedback is used with permission and an agreement of anonymity.

*system, or as part of their environment.* (Audience-participant feedback, *(dis)embodied in space*, HopKins Black Box, January 2019).

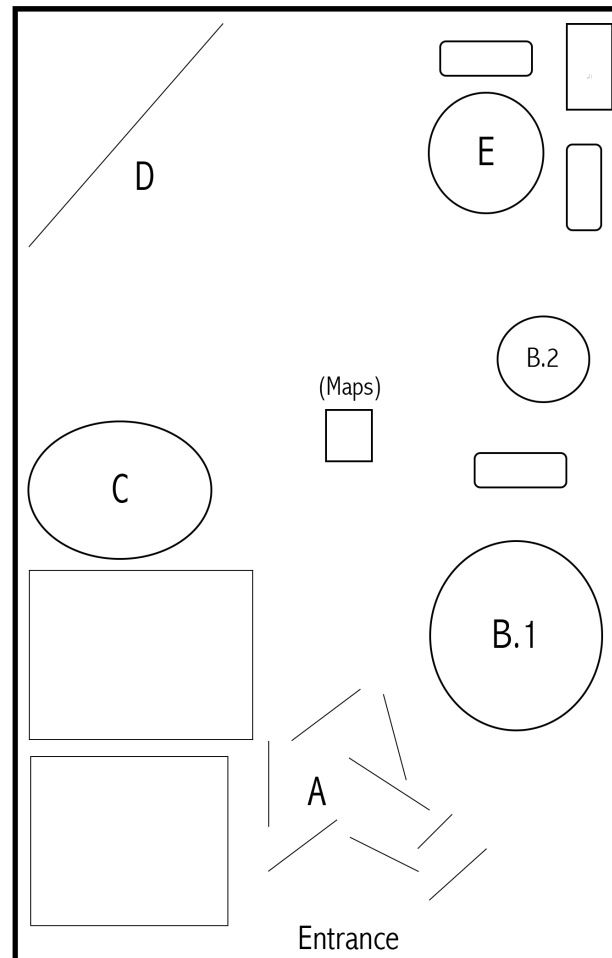


Figure 2.8. Program Map for *(dis)embodied in space*.

Stepping into the space was like stepping into a different world. Underscored by Hal Lambert's ethereal soundscape, the HopKins Black Box was transformed into a space of full sensory engagement. Time slowed down, absorbing the full attention of the audience-participants as they stepped across the threshold. Many spent their first twenty to thirty minutes just watching, soaking up the sensations before choosing one or two installations with which to fully engage. Although many audience-participants appeared to take on a more observational role, most participated on some level, spending an average of one to one and a half hours in the space.



## **Entering the Space: Observations In, Within, and Around Virtual Touch**

*I soon began to think of myself just floating around in the world and seeing it's different forms of beauty. The darkness of the room made most thoughts in my head flee . . . the soothing sounds of the music and people walking around made me feel like I was a part of something, but at the same time, being alone to wander.”* (Audience-participant feedback, *(dis)embodied in space*, HopKins Black Box, January 2019).

Entering through a maze of textured white fabric, layered with macro-projected images of water flowing over rocks, red ants frantically crawling over bright green leaves, falling grains of rice, amber colored oil pouring into blue water, and the billowing cloud of smoke from an erupting volcano, audience-participants described the transition into another realm: from the harsh glare of the fluorescent lights in the hallway to the dimly lit performance space of the HopKins Black Box. Voices chattering with excitement fell silent as audience-participants crossed the threshold, the door placed gently shut as each group entered.

The space was roughly set up in order of low to high stakes, the audience-participants entering through *cataract*, a maze of various hanging fabrics that were then layered with visual textures through video projections. Moving beyond the entrance, audience-participants entered an open area with a small plinth containing a stack of program maps (figure 2.9), with the remainder of the exhibits encircling the space along the walls. Some audience-participants, eager for direction, immediately headed to the map for guidance. However, most were disappointed. The map, which was purposely not given out at the entrance in order to encourage self-directed exploration, contained little more than placement (figure 2.8) and the names of the individual installations. The descriptions, instead of offering insight, instead poetically illustrated the intention behind each installation without actually telling the audience-participant anything about

them. Although this map frustrated some of the more detail oriented audience-participants, the intention was to encourage an environment of playfulness and discovery.

#### installation exhibitions

##### A. cataract

**cataract** is a large, powerful waterfall.

Chuck E Cheese but they got bought out by a contemporary art museum.

Learning by repetitive falling and folding.

##### B.1 un clin du corps

**un clin du corps** literally translates to **a wink of the body**, unless you speak French, in which case it is nonsense.

That moment when you realize your corpse is in a small dome and your question your whole existence.

The subtle falling towards a celestial body.

##### B.2 surface | tension

**surface tension** is the elastic tendency of a fluid surface.

What allows insects the ability to glide along a water surface.

Incidental human complex; accidental god complex.

##### C. flōt

**flōt** is a pure JavaScript plotting library for jQuery, with a focus on simple usage, attractive looks and interactive features.

Can you make bubbles? Attaches to parts 57A and C234ZB.

Riding on the porcelain memory lying on your friend's spine.

##### D. aisthēsis

**aisthēsis** is the direct opposite of **noesis**, or the perception of the mind.

Like phantom limb, but phantom body.

Puppeting yourself for the study of unlooking you.

##### E. ambedo

**ambedo** is Latin for "I gnaw," "I weather away," the search for meaning, or something missing that you heard about as a young child.

In the dictionary of obscure sorrows, **ambedo** is a melancholic trance in which you become completely absorbed in vivid sensory details, soaking in the experience of being alive.

Fingertips searching, texture found.

Figure 2.9. Descriptions for *(dis)embodied in space*.

Just past the entrance to the right was the large, igloo-esque shape of *un clin du corps*, an inflated dome into which audience-participants could enter. Inside projections of moving through outer space, layered with a live-feed video of hands and faces from the neighboring installation

*surface|tension*, were projected onto the sky-like dome. *surface|tension*, a round disk connected via webcam to *un clin du corps* and constructed of the same ripstop nylon, allowed performers and audience-participants to interact through a live-feed webcam that was then projected onto the surface of the *un clin du corps*. This created the effect of those interacting with *surface|tension* appearing to be reaching into and looking down upon those inside *un clin du corps*. However, because of the opaque barrier of the dome, those interacting with *surface|tension* could not see the audience-participants reactions inside of *un clin du corps*. On the far back wall was *ambedo*, a place of rest and reflection where audience-participants could leave feedback on various textured round pieces of fabric. Just to the left was *aisthēsis*, two separate spaces in which audience-participants could move and dance solo, connecting via telepresence to touch in the center area. And along the left-hand wall near the center of the room was *flōt*, a large, claw-foot bathtub filled with small white balls into which the audience-participants could enter and interact with the telematic projection of a performer sitting directly behind the shower curtain on a similarly shaped chaise lounge. Except for *ambedo* each of the individual installations was occupied by one of the six performers, who would rotate throughout the evening at regular intervals.

Because of the nature of *(dis)embodied in space* as an experiential art installation, rather than a timed performance with a story arc, entrance into the space was allowed every fifteen minutes over the course of a two-hour period each night. However, once inside audience-participants were allowed to stay as long as they liked. Many reported lingering much longer than they had anticipated, slowly returning again and again to each of the exhibits, becoming more involved as time went on. Over time audience-participants grew comfortable interacting

with the various installations, however the most timid or reserved individuals seemed to prefer to engage with the lower stakes exhibits such as *un clin du corps* or *ambedo*.

One audience-participant whom I observed stayed nearly the entire two hours, spending the last twenty minutes standing with his hand inches away from one of the hanging cloths on the edge of *cataract*, the entrance exhibit, his palm just-not-touching as the video projection cycled through the various macro-textures. Arranged in a maze-like pattern at the main entrance, *cataract* was the introduction to the world of the performance, a safe space in which the audience-participants were encouraged to touch the hanging cloths with their skin and feel the projected textures with their eyes, without the pressure of another body being at the receiving end of the sensation. While there was always a performer wandering through and interacting with *cataract* (figure 2.10), the intention was to partner with the cloth, rather than with the other bodies in that space. Each section of fabric was a different tactile texture, which was then layered with various visual textures projected from four different angles surrounding the entrance space.

Three main themes arose out of the five-day installation: visual sensations of touch on the surface of the skin; intimacy and invasion of personal space; and a sense of collective space, consciousness, or greater universal purpose, described by audience-participants as a spiritual or religious experience. Following these themes, I will analyze *(dis)embodied in space* in relation to the sphere of the skin, the sphere of the personal, and the sphere of the collective.



Figure 2.10. Performer Montana J. Smith feels her way through *cataract*. HopKins Black Box, January 2019. Photo by N. Eda Erçin.

### The Sphere of the Skin

*I reach out my hand to touch yours, feeling the warmth radiating from your palm. Our flesh meets, then slides through, coalescing as the image of our bodies meet in the space between sensations of the tactile and the visual.* (Personal observation in *aisthēsis*, HopKins Black Box, January 2019).

Located at the far end of the exhibition room, *aisthēsis* utilized similar concepts as *Being Present* in that it connected individuals in two separate locations so that they appear to be physically present in the same space. However, while Vigueira and Jedrusiak in *Being Present* were located in geographically distant locations, the performers (and later audience-participants) in *aisthēsis* were only about twenty feet apart, allowing them to see not only their virtual selves, but physical bodies as well. Configured using live-feed video projections, *aisthēsis* invited audience-participants to interact telematically with one another through the overlapping projected images of their technologically mediated selves. Physically located on either side of a

large center projection screen, audience-participant stood alone in their own spaces in front of live-feed webcams (figure 2.11). The two video images of each individual were then relayed through overlapping projections, connecting their bodies on the center screen (figure 2.12). This configuration allowed individuals to see both the physical body of their partners along with their projected selves, creating moments of connection through telepresence in the virtual center space. Additionally, each individual's image could be seen on the intermediary computer screens, creating a further mediation visible to audience-participants observing from outside the playing area (figure 2.13). These multiple layers of mediation in *aisthēsis* via physical bodies, computer screens, and video projections further called attention to perceptions of presence when connecting with other bodies in space. In this way, *aisthēsis* invited audience-participants to see through their skin and feel through their eyes, blurring the sensory boundaries of touch and sight.

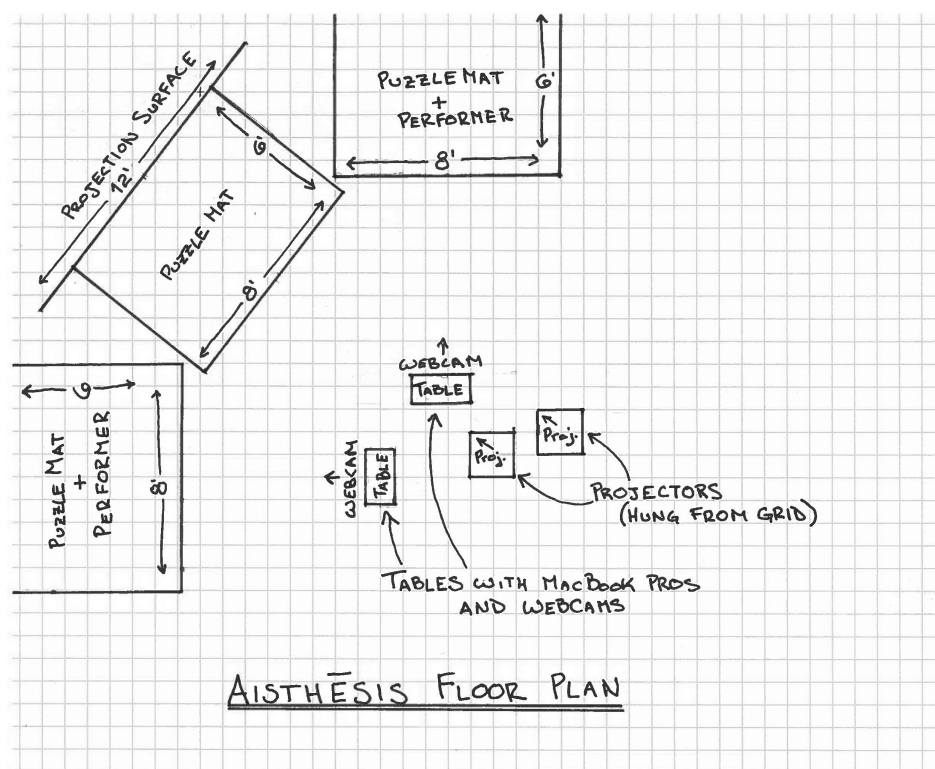


Figure 2.11. A visual floor plan of the *aisthēsis* set-up.





Figure 2.12. Performers Josiah Pearsall (left) and Ethan Hunter (right) meet in the space between in *aisthēsis*. HopKins Black Box, January 2019. Photo by N. Eda Erçin.



Figure 2.13. Performers Josiah Pearsall (left) and Ethan Hunter (right and on the computer monitor) in *aisthēsis*. HopKins Black Box, January 2019. Photo by N. Eda Erçin.

Through a co-functioning of the senses of sight, touch, and proprioception, *aisthēsis* invited an alternate sensory experience of touch, an embodied experience that transcends the presence of physical contact. Through the act of visual mimesis of the overlapping bodies

projected onto the third, telematic space between, acts of touch were enacted in real-time, creating what Hansen describes as vision enabling an extension of touch “beyond the boundaries of the skin.” (79). As in the final moment of *Being Present*, touch in several instances was felt not only through sight but also through interpersonal connection, manifesting more powerfully between individuals who had already developed a deep, personal bond.

### **Feeling Ma: Developing Space Between Through Contact Improvisation**

*It started with a firm, yet gentle touch. Rolling over and under and through each other's bodies, connecting inches of skin I had long forgotten about. It started with weight. It started with an assurance that each of us was a solid, real object in space. As our bodies rolled together, the gentle guiding voice suggested a parting, a separation of flesh -- but not a separation of weight. We were reminded to keep the connection alive, to keep the electricity that had been flowing freely through our entwined bodies. To give space between the physical and sensation of the air between, the distance, the ma, or the potential that lived in the gap. Stretching, separating, keeping the string of connection like taffy pulled just before it snaps. Sometimes our eyes met, but it was not necessary. The ma kept us tethered together.* (Personal observations during a physical theater workshop at the Dance Complex, Cambridge, MA, circa 2008).

First conceived through a collaboration of experimental dancers including Steve Paxton, Yvonne Rainer, and Trisha Brown in the early 1970s, Contact Improvisation (CI) has since spread to be a global practice.<sup>10</sup> Typically organized around an open “jam” setting, CI is a partner dance based on the principles of “touch, momentum, sharing weight, and most quintessentially – following a shared point of contact” (Zemelman). A pioneer in the early modern dance movement, Paxton was an active voice in challenging preconceived notions about

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10. According to the *Contact Quarterly* website, CI is taught on all continents except Antarctica (“About Contact Improvisation”).



the methods of creation and types of physical movements that were considered dance (“About Contact Improvisation”). As my personal practice began to extend to challenge preconceived notions of what constituted touch, CI seemed to be a fitting method to push boundaries of physical movement, sensations of touch, and intimate connection.

Using CI as a grounding technique, the development for *(dis)embodied in space* began with a question of the boundaries of physical touch, weight, and the experience of tactile pressure outside of the corporeal body. Rehearsals with the six ensemble members for *(dis)embodied in space* primarily consisted of a modified CI practice that focused on spatial connections, bodies, and moments of touch without touching (figure 2.14). This practice of distanced contact was most visible in *aisthēsis*, in which audience-participants and performers could explore telematic touch and contact in real-time.



Figure 2.14. Performers Montana Jean Smith (left) and Greg Langner (right) dance together during a photoshoot for *(dis)embodied in space*. HopKins Black Box, November 2018. Photo by Naomi P. Bennett.

Further, group practice in the fundamentals of CI turned out to be an important tool in creating a cohesive ensemble that proved essential once we got into performance, particularly in regard to the movements of the performers between the individual installations. During the two-hour period of the public exhibition, the performers worked on a ten-minute rotation in each of five stations, with one ensemble member on break in the green room. Movement between the stations occurred through brief non-contact CI exchanges in which one performer would slide into the place of another, relieving them to float to their next destination. Audience-participants commented on how “in sync” the ensemble was, seeming to “mentally interchange bodies in order to go to the next station . . . like [they] were changing spiritually” (audience-participant feedback).

Each rehearsal began with the fundamental elements of CI: sharing of weight, rolling points of contact, and a focus on embodied listening. As the ensemble grew more in tune with one another, our explorations expanded to a broader sense of proprioceptive awareness and sensations on the edge of touch, searching for the electric moment of anticipation just before the point of physical contact. Beginning with the reminder of touch, we began to separate, allowing space for energetic connections of *ma* to flow.

As a phenomenological experience in which space and time are relational, *ma* has evolved out of a rich historical and cultural tradition that can be difficult to understand from a Western perspective. Originally a Shintō concept, *ma* describes a fundamental perspective of the relational nature of space, time, and the fluid intervals between objects and bodies. In his chapter “The Skin of Culture” Derrick de Kerckhove notes that “for the Japanese, space is a continuous flow, alive with interactions and ruled by a precise sense of timing and pacing” (157). Although translated into English as “space-time,” de Kerckhove explains that *ma* “does not correspond to

our idea of space” (157). Unlike the Western concept of neutral, or empty space, *ma* describes the “complex network of relationships between people and objects” (157). To understand the perception of the world through *ma*, it is necessary first to look at the concepts that make up the Japanese perception of the world. Of the related subthemes, I will focus on the five most relevant concepts to understanding *ma* as a component of *virtual touch*: *kami* (divinities), *himogori* (body), *hashi* (interval), *utsuroi* (change), and *michiyuki* (creative rhythm).

According to Arata Isozaki, the Japanese perception of space likely arose from a visualization of *kami*, or divine spirits that permeate the living world (156). In “Being *Ma*: Moonlight Peeping through the Doorway,” Christine Bellerose applies the concept of *kami*, which are responsible for “ruling the ebb and flow of all creation,” to the movement of dancers and the “ebb and flow” of energy between bodies (166). The *himorogi*, or altar, serves as a temporary structure that gives a material body to summon *kami*. Designated by four poles, the *himorogi* “recalls the anatomy of the human body: the four limbs, the heart, and the nervous system” (Bellerose 167). Like the imagery of the body, the *himorogi* allows space through which the *kami* may move, creating an “altar of wood, altar of flesh: *ma* regulates a flow between bodies thereby connecting bodies” (167).

The space and time between *ma* is described by *hashi*, or interval, which “implies the bridge of *ma* . . . represent[ing] the limit of one world, assuming the existence of another world beyond” (Isozaki 158). *Utsuroi*, or change, is the transformation or “passage from one state to another” (159). Isozaki describes *utsuroi* as “sensing the moment of movement” (159). This moment of change, described as “bellboy for *kami*” by Bellerose, is both spatial and temporal. Drawn to the life-cycle of the natural world, *utsuroi* becomes a passage between states, ferrying *ma* through the cosmos as “the expectant stillness of the moment attending to this kind of

change” (159). Lastly is *michiyuki*, or creative rhythm, describing movement through space as “divided invisibly by one’s movements and breathing” (Isozaki 161). In a garden, road, or path, *michiyuki* can be seen as the designated stops, or points of pause, which create a rhythm of “time-flow” in which experience is perceived (161).

Using this definition of *ma* as an energetic description of space, time, and rhythm, I worked with the ensemble to develop a practice of CI that acknowledged the connection in the interval between bodies. Starting with weight sharing through definitive points of physical contact, training with the ensemble gradually shifted from the full weight bearing of CI to the expansive taffy-like connection that allowed *ma* to flow freely between bodies. Cultivating this charged space, our explorations searched for the feelings of potential touch in the instances when *not* touching. As a group, we worked to develop a sensitivity to the physical and energetic connections that carried the weight of our bodies as we leaned towards and away from one another, sensing the near-but-not-touching of our bodies, gradually working towards connecting through the distance of the screen (figure 2.15).

In explorations of the possibilities of virtual touch, our work included sensations of body heat, spatial awareness, and extension of physical boundaries through the imagery of the aura. “Feel yourself sliding off the edge of your partner’s aura.” This directive slipped out of my mouth one evening, searching for words to express the felt potential, expressed by one of the ensemble members as “the anticipation of a gentle touch.” Describing the aura as “the material trace of prior contact,” Marks refers to Benjamin’s definition of the aura as a “temporal immediacy, a co-presence, between viewer and object” (140). This manifestation of the aura as a feeling of co-presence of bodies became a foundational image in our training, and even surfaced

during the performance when one audience-participant commented to me that she felt like her “aura had just gotten a massage.”



Figure 2.15. Performers Josiah Pearsall (left) and Ethan Hunter (right) lean on each other in virtual space in *aisthēsis*. HopKins Black Box, January 2019. Photo by N. Eda Erçin.

### **Audience Response: Absence, Presence, and the Space Between**

*Each night a crowd of observers gathered around the edges of the installation. Although several benches had been placed for audience-participants to sit should they want or need to, no specific area had been designated specifically for an ‘audience.’ With no verbal or written instruction, audience-participants tended to watch, murmuring to each other and quietly questioning whether they could participate in the installation. (Personal observation, January 2019).*

Audience participation in *aisthēsis* proved to be more difficult than I initially anticipated. Without explicit instructions, audience-participants defaulted to an observational role, gathering around the edges of the space regardless of the lack of intentional delineation between observer and performer. Night after night, crowds gathered around the playing space, watching with

curiosity and wonder as the two solo bodies of performers moved together in virtual space. Seeing audience-participants mesmerized by the movements of the performers and unsure if they were allowed to participate, I stepped in to quietly encourage those whose bodies seemed to radiate a physical interest. Some took me up on the offer (figure 2.16); some declined, not ready to cross the thin line that had inadvertently manifested between observer and observed.



Figure 2.16. Audience-participant Alaina Carper (far left) reaches out to virtually touch her mother, Laura Carper's hand (far right), while her father Rob Carper (center left) and brother Winston Carper (center right) watch in *aisthēsis*. HopKins Black Box, January 2019. Photo by N. Eda Erçin.

Many of the audience-participants who did step up seemed at a loss: how do you touch a stranger? What do you do? Audience-participants shook hands, gave high fives, hugged, took selfies, and a few even started fights -- not all of which were consensual. One audience-participant, noting the disconnect between physical and visual feedback, described a sense of embodied dissonance, a “contradiction and dissociation of [their] vision and touch” forcing an “awareness of [their] own action.” Others experienced an emotional or energetic connection, observing that “it was almost like they could feel each other's inner emotion and guided

themselves on what to do,” or described feeling “a sense of phantom touch [. . .] a thrilling sensation” or observed that “their bodies weren’t physical to touch but to see, they were existing without their body.”

Contrary to my original theory that one could feel physical sensations of touch with the eyes while actively participating in *aisthēsis*, the majority of the audience-participants -- as well as the ensemble -- reported feeling a stronger sensation of touch through the act of observing. In both verbal and written responses, the sensory feedback was consistent: watching two performers' bodies interact via telematic connection created a greater sensation of touch for the observer than actually participating in the installation. Consistent with Marks's definition of haptic visuality as the focus of vision being “over the surface of its object” (162), the intense focus on seeing two bodies connect in *aisthēsis* created a sensation of virtual touch for the observers, while not necessarily for the participants. This could have been partly due to the set-up and difficulty in navigating the position and displaced proprioceptive sense of the body: because of the limited space, the two projected images were not equally placed, with the right-hand area (from an observational perspective) at a slight angle, causing it to be much harder to reconcile the navigation of one's physical body with one's projected body.

### **Virtual Violence: Possibilities and Implications Revealed Through *aisthēsis***

I knew that creating a space to encourage free movement and interaction could also lead to problems if an audience-participant decided to act inappropriately. Based on Kozel's reports of violence in *Telematic Dreaming*, I prepared my performers with tools to recognize and remove themselves from uncomfortable or violent situations. Although *aisthēsis* had a different configuration than Sermon's *Telematic Dreaming* in that the performers' physical bodies were visible along with their virtual images, similar instances of both sensuous and violent interactions

occurred over the course of the exhibition. These moments often caused a disconnect in which the performers became hyper-aware of the potential for violence, even though there was no possibility for material physical harm.

While the majority of audience-participants explored positive interactions of touch, whether it was simple gestures of hands meeting, or more complex interactions of leaning, giving weight, or even overlapping bodies to create new forms of contact available through telepresence, there were two clear instances of virtual violence over the five-day exhibition. One was a consensual, impromptu video-game style fight between a young woman and man that ended in laughter. This pair embraced the nuanced layers of the medium, ending their exploration by taking a telematic selfie in which each individual was in their own space, yet on the center screen their bodies aligned for a perfect “photo op.”<sup>11</sup>

The second instance of violence occurred between a male audience-participant and one of the female ensemble performers. Approaching the playing space, the audience-participant repeatedly put his virtual hand on the top of the ensemble member's head, trying to push her downward into a submissive position. Seeing this, another (male) ensemble member stepped in to replace the female ensemble member and engage with the audience-participant, whose behavior immediately became competitive rather than domineering, physically shifting his posture to a fighting stance. Similar to the type of distanced violence that often occurs in online social environments, the audience-participant seemed unaware of the repercussions of his actions, appearing to be having fun engaging in behavior that seemingly caused no harm because of the lack of physical contact. This parallel was also noted in the audience-participant feedback

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11. Because of issues of consent and wanting the audience-participants to feel free to play and experiment, I only took photos during the invited dress rehearsal, and not during the public exhibition. However, audience-participants were encouraged to take photographs and video, as well as to post to their social media, but were asked to request permission of anyone they documented.



I received, interpreting the space as “society connecting through phantoms or social media, without physically being with each other.” Over the course of the five-day run, this was the only notable instance of unwelcome violence -- and with preparation, the ensemble was able to address and deal with this behavior before it got out of control.

### **The Sphere of the Personal**

*As I let my body sink deep into the cavernous bathtub, I look up to see you staring straight at me. Eyes connecting through digital space, we lay face-to-face yet spaces apart.*  
(Personal experience in *flōt*, January 2019).

Halfway into the space and tucked into a corner on the left-hand side was a bathtub enclosed by a freestanding shower curtain, the physical container in which audience-participants could experience *flōt*. Inspired by the intimate setting of the bed in Paul Sermon’s *Telematic Dreaming*, the intention with *flōt* was to put the audience-participants in an otherwise personal space with the telematic presence of another body. Stepping into the extra-large claw-foot bathtub, which was filled with small white ball-pit balls, the audience-participants sat directly across from one of the six performers, who were located just beyond the shower curtain and could interact via a two-way webcam connection (figure 2.17).

Like all of the exhibits in *(dis)embodied in space*, there was little separation between performer and audience-participant, between the presentation and the technology making it possible. Although the performer in *flōt* sat in plain view (from outside the exhibit), many audience-participants were surprised when they entered the exhibit and looked up to see a face and torso staring back at them in an otherwise private space. Some became shy, wary, or outright ignored the performer’s telematic presence. During the dress rehearsal, I spoke with one audience-participant who refused to enter the bathtub, because of who they saw on the other side.

Similar to an experience described by Kozel in which the Dutch royal family refused to approach the bed that held her projected body (Kozel 94), this audience-participant avoided entering the bathtub for fear of being seen in a compromising position with the other body in a bathtub. Another response came from a young child, who gleefully entered the bathtub with excitement, happy to play in the ball-pit balls, only to look up with a concerned look upon seeing the unexpected face staring back. Dismayed at not being alone, the child simply uttered: “Oh, that changes things.”



Figure 2.17. Emily Graves (left) and Kalli Champagne (right) play in flōt. HopKins Black Box, January 2019. Photo by N. Eda Erçin.

Although many audience-participants enjoyed the game of interacting with another in the bathtub, the overall mood of the larger exhibition space created an expectation of comfort, which was broken the moment they discovered that they were sharing a virtual bath with another live body. One responded that “the bathtub with plastic balls gave me a sense of comedic relief, but was quickly changed to a slight instance of fear when seeing the unexpected figure that was awaiting my arrival.” Unlike *Telematic Dreaming*, most audience-participants did not see the

other body until they were already immersed in the bathtub, often resulting in an experience of unexpected vulnerability.

## **The Sphere of the Collective**

*[It] feels like someone's in control of my life, or, it makes me feel so small, when I'm in there.* (Ensemble performer interview, February 2019).

Stepping through the curtains of *cataract*, audience-participants were immediately confronted with the giant white globe of *un clin du corps*.<sup>12</sup>

“Please refrain from touching.”

The attendant would say, the hands of the audience-participant instinctively reaching for the projected galaxy that traveled through space on the nylon surface.

“You can enter, you can leave your shoes by the bench over there.” Pointing just past the globe, a bench sat nestled between *un clin du corps* and *surface|tension*, its partner installation. Many audience-participants were hesitant to remove their shoes, but as the night wore on a pile of shoes, bags, and coats accumulated as more audience-participants ventured into the globe, trusting the safety of the space with both their bodies and their personal items.

Inside *un clin du corps*, audience-participants could sit or lie down on a white shag carpet, the projected images moving them ever-onward through an unknown galaxy as they reclined under the smooth, white-colored ripstop nylon of which the globe was constructed. There was a noticeable difference in the quality of the air inside the globe, which was inflated by a small fan. Upon entering, audience-participants reported feeling a sense of stepping into the

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12. Derived by the author/director from the phrase “un clin du l’oeil,” which is French for “wink” or “a wink of the eye,” *un clin du corps* is a nonsense phrase that literally translates to “a wink of the body.”

expansive space of another world, and even though it was an enclosed area, many expressed a feeling of freedom and openness.

Loosely inspired by James Turrell's *ganzfeld* pieces, *un clin du corps* explored touch that was not only disembodied but also lacked a visual connection between its partners. The *ganzfeld* effect creates a sense of perceptual deprivation through an unstructured, uniform field of light. I will discuss *ganzfelds* and their use in the artworks of James Turrell further in Chapter Four. Located about 15' beyond the dome sat *surface|tension*: a large, white disk, made of the same ripstop nylon, connected via a webcam and projected onto *un clin du corps*. Through the webcam, any pressure on the disk created the illusion of the same pressure on the globe, like a disembodied hand was grabbing or pushing against the ceiling of the sky (figure 2.18). This virtual exchange created a sensation of touch in which the one touching (*surface|tension*) could not see the effect of their touch on those inside the globe (*un clin du corps*). Overwhelmingly, the response from those inside the globe was one of peace and comfort, with many audience-participants responding that the installation allowed them to step away from the small day-to-day worries and gain a greater perspective on life.

The thin veil of separation inside the bubble created an island of solitude both in rehearsals and during the public performance. During rehearsals, the performers would spend their breaks inside of the dome, quietly communing or relaxing in peaceful solitude. However, while *un clin du corps* served as a place of rest and contemplation, it was also the least accessible installation, requiring that the audience-participants remove their shoes and enter an unknown space. Many were hesitant to enter because of the perceived confinement of entering the dome (figure 2.19). However, those who did enter expressed a sense of openness and expansiveness of space. One audience-participant responded: "I felt as if when I was there that I had no limitations

of space and that I could move how I wanted but I didn't want to move because I loved the space [. . .] I was in." What many initially confronted with mild apprehension was eventually embraced as a place of calm, a place of comfort and peace.

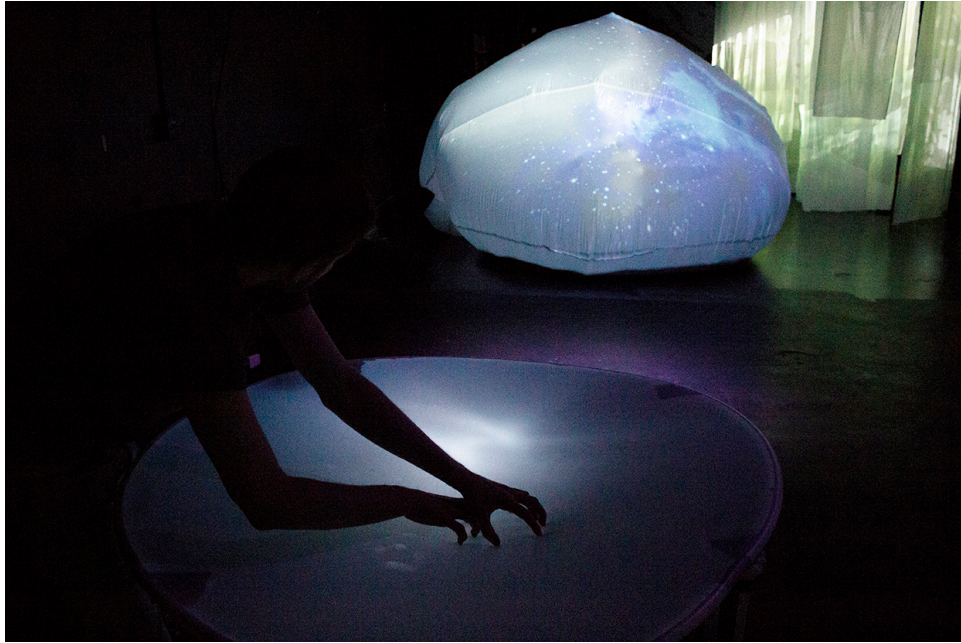


Figure 2.18. Greg Langner on *surface|tension*, with *un clin du corps* in the background. HopKins Black Box, January 2019. Photo by N. Eda Erçin.



Figure 2.19. Attendant unzipping *un clin du corps*. HopKins Black Box, January 2019. Photo by N. Eda Erçin.

Inside *un clin du corps* many audience-participants responded with a sensation of being watched over by G-d, guardian angels, or a celestial being, creating the feeling that their own individual problems were somewhat less all-consuming in the grand scheme of life. Themes of floating in a cloud and being held up by unseen arms allowed for a space of contemplation, a space in which many said they could step back from current stresses and concerns and see the world from a wider viewpoint. One audience-participant noted that it was “similar to how you are never completely aware of what’s going on inside the world until you step in it and look from a different perspective.” This sense of greater connection to what I would call a universal consciousness or collectivity, interpreted through each individuals’ belief system, created a space of calm, a space in which audience-participants could let go of the stresses of life, school, and the larger world, a place where they could feel a sense of being gently held by the light that illuminated from within. The sounds, sights, and sensations all pointed to touch, connection, expansion, and sensing from an alternate perspective.

### **A Place to Release Memories: *ambedo***

The final exhibit, *ambedo*, was designed as a place for audience-participant to be able to share thoughts, feelings, and other feedback inspired by the larger installation. To design this installation, I collaborated with Jamie Kutner and Cynthia Sampson. The three of us worked outside of the regular rehearsals to design a self-directed exhibit that would elicit feedback from the audience-participants while also exploring themes of disembodied touch, tactile sensations, and intimate connection. What came out of this collaboration was a low, round table covered in cream-colored felt, on which were placed various sized pieces of round cloth of different textures -- all in various shades of white, cream, light blue, or brown (figure 2.20). Placed in the far-right hand corner of the space, *ambedo* was designed to be visited after the audience-participants



interacted with the other exhibits, as a moment to reflect and offer non-verbal<sup>13</sup> reflections back to myself, the ensemble, and future audience-participants.



Figure 2.20. Audience-participant writes a message of touch in *ambedo*. HopKins Black Box, January 2019. Photo by N. Eda Erçin.

Approaching the table, audience-participants found benches to sit, several sharpies, and instructional text that read:

PLEASE FEEL FREE TO ADD YOUR OWN IMAGES, THOUGHTS, OR EXPERIENCES.

Seeded by textual and visual reflections from the ensemble, this simple, open-ended directive was designed to guide -- but not limit -- the audience-participants' feedback. One audience-participant described this area as a place to "release one's memories," comparing memories to "a tether to the physical world, a world in which our memories may hamper our sense of play and ability to have fun without inhibitions and truly inhabit a space." Over the course of the five

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13. While the intention in designing *ambedo* was to create a place of artistic, non-verbal feedback, many of the responses came in the form of written language. This exhibit was successful in its ambiguity, allowing audience-participants to reach to the edges of their imagination in connecting their thoughts to the experiences in *(dis)embodied in space*, resulting in feedback that included in poetry, personal confession, and drawings.

performances the audience-participants shared deep sensations of peace, connection to the self and others, fears and wonder regarding death, and pleasant confusion.

The way in which *ambedo* functioned during the performance, it became impossible to separate the original circles seeded by the performers, and the ones added by the audience-participants. However, since the performers were given a similar prompt and space to create their own visual thoughts, my analysis will not attempt to distinguish contributions from performers and audience-participants.

*I feel the ambiance of PEACE.* (Anonymous response, *ambedo*, HopKins Black Box, January 2019).

With a strong sense of hope, the responses left in *ambedo* mirrored the sensation of peace felt in the installation. Some were simple promises that echoed the sense of peace felt in *cataract* and *un clin du corps*, “to make space & time to love myself unconditionally,” to “start dreaming and make a difference with me...,” and “all around me is what I need.” Others expressed a sense of feeling lost to others, “de temps en temps, je crois que je suis rien pour presque tous le monde,”<sup>14</sup> or ambivalence, “nothing makes me happier and nothing makes me sadder than you...,” another expressing relief in a lifelong friend while realizing sadness and “wondering which one of us will have to endure the other’s death.” These deep thoughts were sprinkled with multiple drawings of wide-open eyes, half of them dripping with tears, and realizations of truths, like questions of the self, “reality is shrouded in a fog of expectations,” “existence revolving around someone else,” and “the truth is only as strong as the number of people who witness it.” These generous tidbits drawn on little circles of cloth created their own type of virtual touch. As I sift through them, I wonder how conscious was the choice of texture, how impulsive was the

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14. “From time to time I think I am nothing for almost everyone.”



image or the thought that was rendered, and what was the inspiration that touched that feeling to be written?

In this chapter I have talked about the affective response of virtual touch elicited through telematic connections between living bodies through live-feed video projections. Continuing with some of the same principles of connection via video projections, the next chapter broadens the scope of intimate touch to include interactions between audience-participants and reactive digital animations activated by motion sensor technology. Although not ‘live,’ these digital connections perform liveness in a similar manner as ELIZA. Engaging audience-participants through action, rather than text, the artworks in the following chapter create a sense of virtual liveness that can be felt both as personal, one-on-one interactions as well as in a larger context of virtual touch in a digital environment.

### CHAPTER 3. KINETIC VISIONS: TOUCHING THE DIGITAL

*I stand before Adrien M & Claire B's Coincidence #1. Tentatively, I reach my hand towards the vertical surface, the large dark particles giving way inches before my palm connects with the cold plaster. The ripple of movement courses through my senses of sight and touch, sending shivers through my body like the gentle wave of light.* (Personal experience, *XYZT: A Journey in 4 Dimensions, Coincidence #1*, Peabody Essex Museum, Salem, MA, March 2018).

The lights are dim inside Adrien M & Claire B's (AM-CB) *XYZT: A Journey in 4 Dimensions*, the crisp black and white projections cutting cleanly through the dark. To my left is the long corridor of *Anamorphosis in Space*; as I pass through my footsteps create ripples and waves in the topographical lines that shape the floor (figure 3.1). Straight ahead the room opens up to reveal *Kinetic Sand* (figure 3.2), a large flat horizontal touch screen of digital sand that reacts to direct contact. Beyond, the room opens up to include *Anamorphosis in Time*, engaging audience-participants in a live-feed video that morphs their bodies in real-time. Directly opposite *Anamorphosis in Time* is *Coincidence #1*, a vertical wall of quivering particles that ripple and part at the anticipation of touch (described above). In the center sits the contemplative *Letter Tree*, on which a digital wind whisks away letters in random sequences much like the poetic fridge magnets that were once popular. Beside the *Letter Tree* towards the back of the room is *Shifting Clouds* (figure 3.3), a projected swarm of tiny particles that mirrors the silhouette of any audience-participant who stands in front of it. Just beyond the main area to the left is *Discrete Collisions*, a vertical touch screen of falling letters, able to be manipulated much like the game Tetris; also towards the back is *Field of Vectors* (figure 3.4), a spikey field that reacts as the audience-participants walk through it. Interspersed throughout the space are *Typographic Organisms*, two Plexiglas tanks filled with projected letters that jumble and rearrange with a loud

clap or strong breath. *Abstract Landscapes*, a combination of contemplative immersion and non-tactile touch, is housed in its own room at the far end of the main area. Audience-participants enter into a cube structure and are surrounded in all directions by an “alphabetical world, subject to the hazards of a whimsical meteorology” (“XYZT” 6).

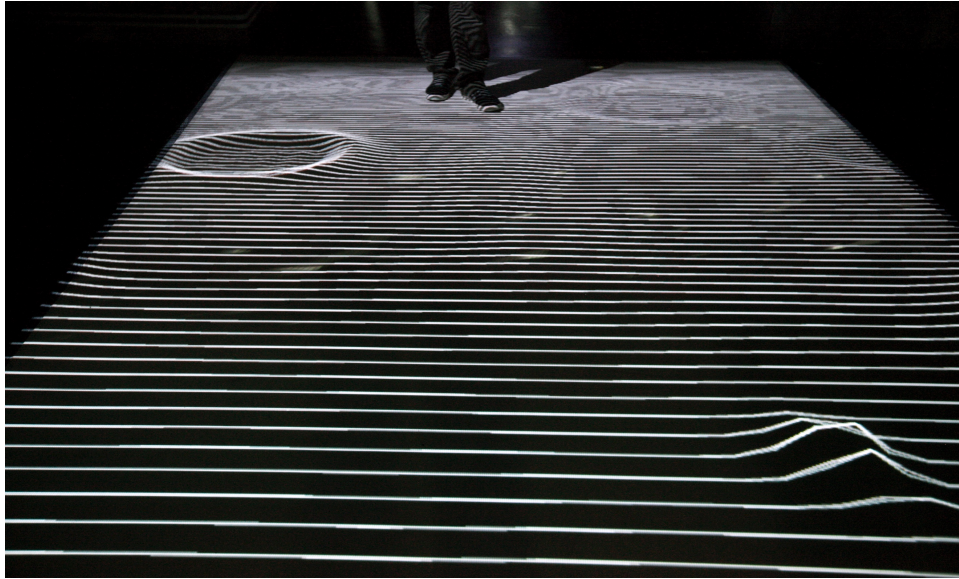


Figure 3.1. Adrien M & Claire B, *XYZT: Anamorphose Spatiale (Anamorphosis in Space)*, photo by ©Laurence Fragnol.



Figure 3.2. Adrien M & Claire B, *XYZT: Kinetic Sand*, Photo by ©Romain Etienne.



Figure 3.3. Adrien M & Claire B, *XYZT: Shifting Clouds*, Photo by ©AdrienMClaireB.

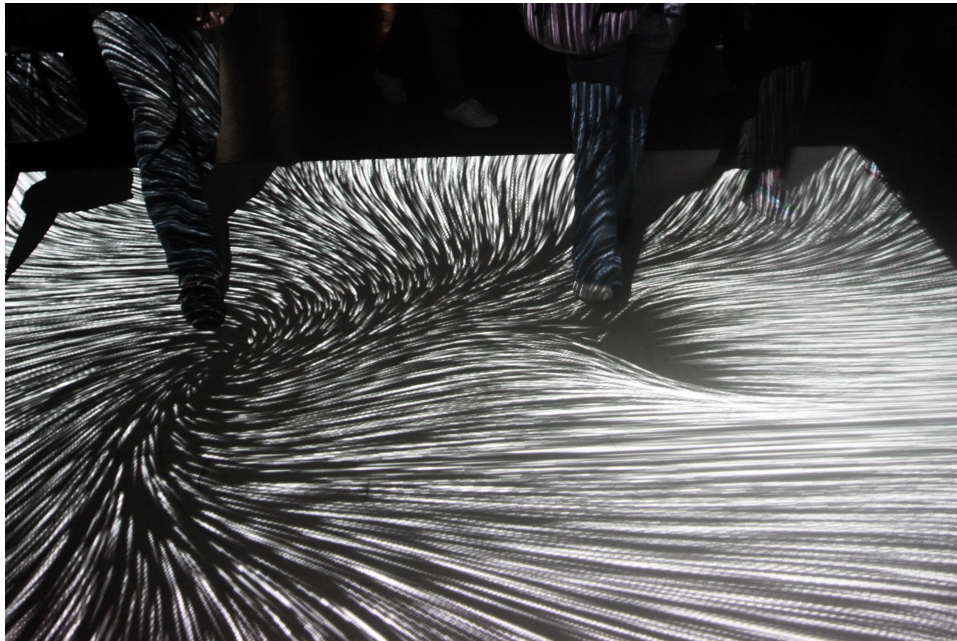


Figure 3.4. Adrien M & Claire B, *XYZT: Champ de Vecteurs (Field of Vectors)*, ©LaurenceFagnol.

Based on the four dimensions (X = horizontal; Y = vertical; Z = depth; and T = time) *XYZT* uses nature, mathematics, and the movement of the human body to engage audience-participants in interactions of virtual touch. For the purposes of this study, I will focus my analysis on two installations which specifically engage non-tactile sensations of touch:

*Coincidence #1* and *Abstract Landscapes*. Using the Microsoft Kinect<sup>15</sup> to engage the *ma* between the audience-participant and the digital animation, these two artworks create a similar experience of touch as the telematic encounters described in the previous chapter. The second half of this chapter will focus on international art collective teamLab, which also engages audience-participants in interactions with artworks created using digital technology. teamLab's artworks encourage contemplation, extending perceptions of touch to include the future implications for the surrounding environment.

### **Inter-activity in Digital Artworks**

Employing Nathaniel Stern's implicit body framework, in which "the reaches and limits of the body and meaning are explored, *together*, to better understand how they are formed, *together*" (14), this chapter will examine artworks that engage interactions of virtual touch between human audience-participants and digitally reactive animations. In *Interactive Art and Embodiment*, Stern argues that inter-activity and relationality are the key components to examine the ways in which digital art creates an embodied experience for the audience-participant. Stern's focus on the "moving-thinking-feeling" body is similar to Massumi's emphasis on the body in motion as a way to examine engagement in interactive art. The body, Stern argues, "is not a static 'thing,' but rather an active relation to other forces, matter, and matter-in-process" (57). The implicit body framework, as outlined by Stern, includes four "areas of examination" (91) from which to approach interaction artwork: artistic inquiry and process, artwork description, inter-activity, and relationality. While most digital art achieves the first two, Stern notes the tendency to focus solely on the capabilities of technology, rather than the synthesis, or inter-

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15. The Microsoft Kinect is a motion sensor input device released in 2010 for the Xbox 360. Because of its capabilities, the Kinect quickly became popular in interactive digital arts.

activity and relationality, of the embodied subject with the artwork through technology. Quoting Erin Manning, Stern notes that the goal is not to argue for a “‘pre-technologized body’ but ‘to explore the potential of technogenesis in relation to the sensing body in movement’, to emphasize qualities of movement and emergence *with* technology, rather than technology itself” (64).

Returning to Marks’s theory of haptic visuality, which “encourages a bodily relationship between the viewer and the image” (164), this chapter focuses on artworks that emphasize both interactions with the audience-participant and the relationality between the body and digital process in the co-creation of the experience of virtual touch. While AM-CB focuses on individual encounters, teamLab creates digital environments in which both audience-participants and artworks can roam freely. Using Hansen’s theory of “the body-in-code,” which he describes as “a body whose embodiment is realized, *and can only be realized*, in conjunction with technics” (20), my analysis will highlight the importance of not just the digital process *or* the human body, but the virtual experience that emerges at the junction of the two to create an embodied experience of virtual touch.

Both teamLab and AM-CB create artworks that extend sensations of touch through interactive digital processes. Seeing this inter-activity between digital and material as complementary, Hayles points to the posthuman as grounded in the body, not devoid of its materiality but “one that opens up the possibilities of seeing pattern and presence as complementary” (49). Through this co-functioning of analog and digital, a virtual relationship between audience-participant and artwork emerges that challenges questions of reality, materiality, and of course, the nature of touch.

## **Balancing Pixels: Feeling the Weight of Light**

Born from a collaboration between Adrien Mondot and Claire Bardainne, AM-CB's focus on physical sensation stems from Mondot's dual interests in juggling and computer programming. Balancing his long days as a computer programmer with the "highly material" art of juggling, Mondot's interests began to merge into "a desire to juggle with pixels" (*Snow* 16). Describing the "carnal feel" (18), Mondot utilized the weightlessness of digital technology to bring a new perspective to juggling, and in 2003 began working on his first live performance, *Convergence 1.0* (17).

Meanwhile, Bardainne, having left the graphic design studio she founded to focus on her drawings, explored the work of Marshall McLuhan in relation to abstract images as a means to "open up gates to textual meaning" (19). Bardainne and Mondot met in March of 2010, forming the duo company under the moniker Adrien M & Claire B -- or AM-CB. The two quickly bonded, recognizing their shared aesthetic and "interest in movement and overlapping reality" (5). Six weeks after this first meeting, Mondot contacted Bardainne to help in his current work, *XYZT*, which has developed through several iterations since its initial inception.

Peabody Essex Museum (PEM) curator Janey Winchell explained that their work is an "experience in collaboration with the visitor, that's not directive," encouraging discovery and play as part of the interactive experience. While my experience was one of excitement at the opportunity to play and discover each installation, I saw many audience-participants become frustrated at the lack of instructions. This lack was particularly difficult when the space was crowded as it became harder to see the effects of one's individual interactions with the artwork. To help mitigate this frustration, each of the ten installations at the PEM contained a small video totem displaying a short explanation of each artwork.

Similar to *(dis)embodied in space*, discussed in the previous chapter, each of the discrete installations within *XYZT* encourages a personal, individual experience focusing on one aspect of virtual touch between audience-participant and artwork. Further, just as the development of *(dis)embodied* was grounded in principles of weight sharing and rolling contact of CI, AM-CB ground their work in Mondot's expertise as a contact juggler. Made popular by Michael Moschen's crystal ball manipulations as the hands for David Bowie's character in the 1986 film *Labyrinth*, contact juggling differs from toss juggling as it is based on the manipulation and balancing of objects in contact with, and rolling across the body. Like CI, contact juggling relies on the weight, feel, and constant motion between the body and the manipulated object. AM-CB's work echoes the weight of the contact juggling balls, highlighting Hansen's assertion that physical action, or "motor activity" is the central element in connecting with the virtual (2).

### **The Act of Not Touching**

*The tenderness of not touching the wall. The soft caresses of the air, parting the cotton-ball like particles, waves made of light and shadow that respond like ripples of water to the whisper of my hand brushing the air.* (Personal experience, *XYZT: A Journey in 4 Dimensions-Coincidence #1*, Peabody Essex Museum, Salem, MA, March 2018).

According to Winchell, *Coincidence #1* (figure 3.5) is the most difficult installation in *XYZT* for audience-participants to figure out, because it is activated by *not* touching the projection surface. Using Brownian movement<sup>16</sup> to create a sensation of liquid touch that precedes the physical, the pulsating splotches of darkness separate at the mere wave of the audience-participant's hand. Like a still lake disturbed only by the gentle breeze, *Coincidence #1*

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16. Brownian movement describes the random motion created by particles that are continuously impacting each other.



is happy just to exist in its own rhythm until I -- or any other audience-participant -- brush the air adjacent to the projection surface, our presence disturbing its serene state of just being. Like several of the exhibits in *XYZT*, *Coincidence #1* did not require touch, but the anticipation of touch, brushing one's hand against the aura of the projection surface.



Figure 3.5. Adrien M & Claire B, *XYZT: Coincidence #1*, Photo by ©Adrien M & Claire B.

Applying Merleau-Ponty's theory of the *chiasm/reversibility* in which the sensation of touching draws on the knowledge of the sensation of being touched, but which is "always imminent and never realized in fact" (*Visible* 147), I felt virtual touch most strongly *Coincidence #1* as it was one of the few installations that I encountered that reacted to the presence of potential touch, rather than the pressure of actual touch. The effect is a similar feeling to the interactions of touch in *aisthēsis* described in the previous chapter. This touch in not-touching, or as Hansen describes, an "extending [of] touch beyond the boundary of the skin" (79), created a sense of intimacy that was broken once my hand made contact with the plaster wall of the projection surface.

Recalling Benjamin's discussion of aura in relation to art, Marks asserts that "aura entails a relationship of contact, or tactile relationship . . . co-presence" (140). This co-presence created a sensation of tenderness that was absent in the artworks in which I had to make tactile contact, such as *Kinetic Sand* (figure 3.2), or even my feet walking across the floor in *Anamorphosis in Space* (figure 3.1).<sup>17</sup> The connection of *ma* between my hand and quivering dark particles in *Coincidence #1* was palpable, creating an energetic connection that sent shivers up my arm -- a familiar feeling, like a gentle brush of fingertips against my skin. Without the feedback of the hard wall to interrupt my senses, the feeling remained in the realm of the potential, allowing my body to feel in response to my eyes without interference. However, unlike a telematic connection between two bodies in real-time, the connection between myself and *Coincidence #1* was between my body and digital projection controlled by the Kinect sensor. In addition to the space between my hand and the wall, what made this experience so powerful was the responsiveness of the projections -- not too fast, not too slow, reacting just within the minute parameters that my body expects when touching another living being. The combination of time and space -- both aspects of *ma* -- created an empathetic response between my body and AM-CB's digital artwork.

Relying less on direct contact with the projection surface, but instead activated by touching the air adjacent to the surface, the weight of the projection can be felt more clearly through the senses of sight and proprioception. Further, the precise reaction time that AM-CB can create through the Kinect motion sensor mimics the real-time reaction between bodies, creating the strongest sensation of touch that I experienced in all of the artworks described in this

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17. I did attempt to engage in sock feet with *Anamorphosis in Space*, as well as another artwork activated by walking, *Field of Vectors*. The connection to the artwork without shoes was stronger, but still lacked the intensity of not touching because of the tactile sensation I received from the hardness of the floor.

dissertation. Therefore, I argue that it is the act of *not* touching, or the anticipation of touch, coupled with a precise window of reaction time, that creates the strongest sensation of touch.

### ***Abstract Landscapes: Surrounded by a Web of Light***

*My hands sweep the web-like image in front of me, caught on the barely visible gauze wall that catches the projection (figure 3.6). It parts at the hint of my touch, the breeze of my movement breaking through the projected web of light. (Personal experience, XYZT: A Journey in 4 Dimensions-Abstract Landscapes, Peabody Essex Museum, Salem, MA, March 2018).*

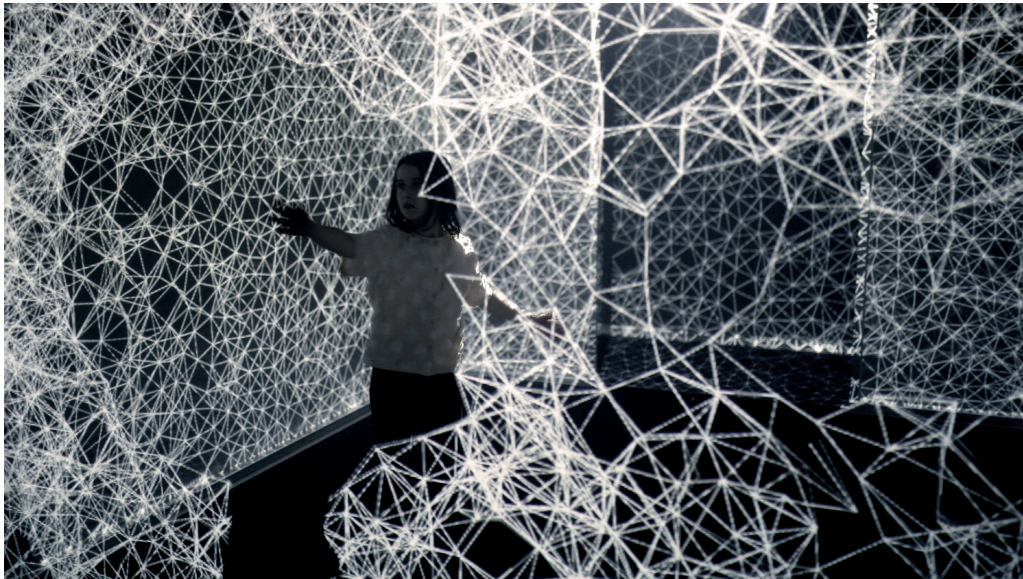


Figure 3.6. Adrien M & Claire B, XYZT: *Paysages Abstraites (Abstract Landscapes)*, Photo by ©Adrien M Claire B.

Tucked away in its own room at the PEM, the large cube structure of *Abstract Landscape* loomed before me. Constructed of a simple metal frame onto which was stretched white gauze, the installation used four cameras and two Kinects that allowed the audience-participants to enter into a 360-degree immersive space that is a part contemplative, part touch-reactive, constantly moving web of geometric projections. The structure itself is a smaller version of the one used for the stage performance *Hakanai*, which I was able to see in May of 2018 at La Pléiade, in La Riche, France. Using their custom-built software eMotion, performer, video, and sound all move

together in real-time. The result of AM-CB's research into juggling, eMotion "goes way beyond its original subject while at the same time inheriting the concrete and sensitive relationship to matter, body and movement" (*Adrien M & Claire B: Hakanai* 9).

*Abstract Landscapes* allowed audience-participants to choose their level of involvement, interacting either as an active participant within the gauze walls or as observers on the outskirts of the structure. Both vantage points created a sense of immersion not found in the rest of the exhibition, as *Abstract Landscapes* was the only installation to have its own room -- and therefore was the only one to be free from overlapping influence. This was also the only installation in which the audience-participants could be immersed in all four dimensions: horizontal, vertical, depth, and time. Similarly, teamLab, the next art collective that I will explore, create an entire world in which the audience-participants are enveloped, not only in the present, but with echoes left by the traces of past visitors and the consequences of present actions shaping the artwork for those who will come in the future.

In contrast to the works discussed in the previous chapter, which focused on bodies interacting with other bodies, AM-CB is interested in the relationship between the body and graphic art through the manipulation of pixels. Bardainne's influence as a graphic designer can be seen in the clean, black and white aesthetic whose seemingly simple visuals allow for the audience-participant to experience connections of virtual touch without the distraction of reconciling the presence of another body. Their use of abstract geometric shapes creates a relationship that turns the focus back to the body of the audience-participant, rather than the artwork.

Diverging from the motif of abstract images, *Anamorphosis in Time*, located in the main room, was the only artwork in *XYZT* which did not use graphically designed abstract shapes or

letters. Instead, *Anamorphosis in Time* points a camera directly at the audience-participants, reflecting their own image through a live-feed black and white video. Standing in front of the projection surface, the audience-participants' movements cause their bodies to distort in a vertical swirling wave, “as if suddenly take over by a fluid dance composed of curved movements” (*Adrien M & Claire B: XYZT Abstract Landscapes* 7). This effect is achieved by a four-second delay in the refresh rate of the lines of video between the top and bottom of the image. While *Anamorphosis in Time* diverges from AM-CB’s focus on the use of abstract images, it instead creates the body of the audience-participant as an abstract image.

The next art collective I will discuss, teamLab, takes a different approach to connection and interactions of virtual touch. The colorful environments of teamLab invite audience-participants to become an inhabitant of their “borderless” world, interacting not only with other audience-participants but also with projected bodies of local flora and fauna, creating a complex virtual ecosystem. In teamLab’s immersive, digital worlds, individual actions create lasting impressions that impact the digital environment; audience-participants are both affected by the actions of the past and leave an impact on the future. This sense of interconnectivity changes the nature of touch to extend beyond the individual and brings it into the realm of the collective. Even though the creatures that inhabit the world are stylized animations, the effect of being physically immersed creates a sense of a complete environment not achieved by the individual installations of *XYZT*.

### **teamLab: Transcending Boundaries of Art, Nature, and Virtual Touch**

*I tentatively pull back the black curtain as I step into a sea of color. Ahead and to the sides stand steeply sloped walls adorned with hopping children, each jump creating a splatter of color that accumulates as the day goes on. Among the splatters of color and children are various*

*projected creatures: a bird, a butterfly, a crocodile.* (Personal experience, *teamLab: Au-delà des limites*, La Grande Halle de La Villette, Paris, France, May 2018).

Reacting to the presence of live bodies, teamLab's immersive environments are incomplete -- and often devoid of any imagery -- without the presence of audience-participants. *Graffiti Nature - Mountains and Valleys* (figure 3.7), which I describe above, serves as the entrance and introduction to the world of *teamLab: Au-delà des limites*, part of the *Japonismes* 2018 cultural expo marking 160 years of diplomatic ties between France and Japan (Kikuchi). Beginning as a blank space, the virtual canvas of *Graffiti Nature - Mountains and Valleys* blooms with life daily and builds over the course of each day. A side room provides pre-outlined sheets of paper and crayons for audience-participants to create their own virtual creatures, which come to life through a digital scanner and are set free into the borderless world (figures 3.8 and 3.9). Entering the space, the creatures are free to roam the space, interacting with each other and the audience-participants. They can eat or be eaten, or die over time. If an audience-participant happens to step on one of the creatures it creates a splash of color that paints the floor of the space.

An art collective founded in 2001 by Toshiyuki Inoko and several of his friends, teamLab now employs several hundred people. Using digital technology to “liberate [art] from the physical and transcend boundaries” teamLab “aims to explore a new relationship between humans and nature, and between oneself and the world through art” (teamLab). Through the creation of a “borderless world” between bodies and art, teamLab's installations highlight the



embodied experience of entering into, being surrounded by, and having agency to co-create the environment in collaboration with other audience-participants and the artworks.



Figure 3.7. teamLab, *Graffiti Nature - Mountains and Valleys*, Interactive Digital Installation, La Grande Halle de La Villette, Paris, France, May 2018. Photo by Patricia A. Suchy.

Although their installations are expressed through digitally interactive environments, they do not consider themselves digital artists. Rather, teamLab uses digital technology to create immersive art environments that explore the relationship among the living bodies of audience-participants, the artworks, and the natural world. Their work is body immersive, engaging both Stern's concepts of inter-activity and relationality, using the moving body of both audience-participant and artwork to create a living, breathing, virtual world. By giving freedom to both art and people, teamLab transcends not only traditional borders of art, but also transcends the screens that have become a common prosthetic in our daily lives. By focusing on the inter-activity of audience-participants within the artworks, which includes the echoes of all past, current, and future interactions, teamLab creates a microcosmic world in which the audience-

participant's touch affects not only their present environment, but also the development and life of the artwork for future audience-participants.



Figure 3.8. Original drawing of a bird that comes to life in teamLab, *Graffiti Nature - Mountains and Valleys*, Interactive Digital Installation, La Grande Halle de La Villette, Paris, France, June 2018. Photo by Patricia A. Suchy.

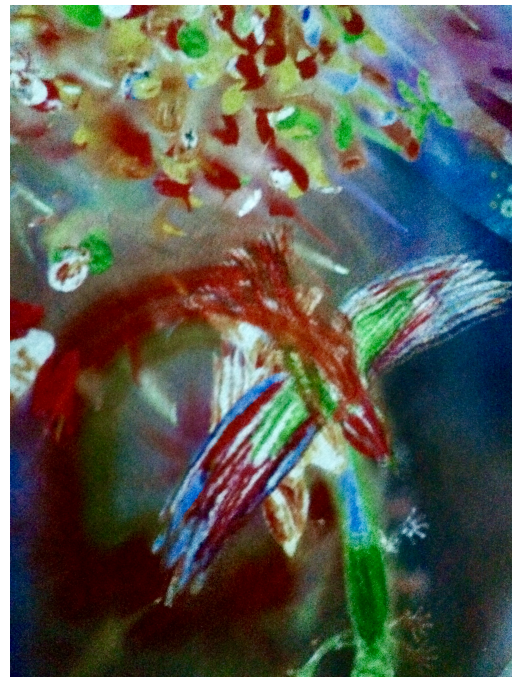


Figure 3.9. Digital bird created from previous image. teamLab, *Graffiti Nature - Mountains and Valleys*, Interactive Digital Installation, La Grande Halle de La Villette, Paris, France, June 2018. Photo by Patricia A. Suchy.

In a 2018 interview with *Euronews*, Inoko discusses the importance of the body and the use of interactive digital technology as a way to shift focus back to it: “People move in the same way that we are walking right now. We move and perceive their environment with their bodies. I want to create a universe that interacts with visitors. I would like the visitor to walk in this space, to feel that his whole body is interacting with the work” (Meddeb). Although the quality of touch is different from that of AM-CB’s installations or the telematic encounters in Chapter Two, teamLab’s focus on the embodied experience of the audience-participant in co-creation with the digital environment engages what Massumi describes as a “processing” of digitally created artworks, through the analog body of the audience-participants, to create a virtual experience of touch and embodiment (142). teamLab member Takashi Kudo discusses this relationship and the



group's hope that they can "change the relationship between humans and art and other humans," pointing out that boundaries are man-made, "an image, like illusions" (Stagers). Unlike the artworks of AM-CB that engage a more individual relationship, teamLab's work engages the total environment over a span of time, creating a space in which the actions of both audience-participants and artworks can be felt in the way the exhibition takes shape over the course of a day.

### **Ultrasubjective Space: Separating the Layers to Feel the Depth**

*I am alone. Alone with the crows, my body pulled in and out of space, diving through time, flying through an artistic rendition of the universe made up of the most delicately crafted brush strokes. As I feel the walls and the floor disappear around me, I try to relax. My balance falters. My feet planted firmly on the ground are my only reference point. Soaring in and out, the crows pull me through ribbons of the universe and across the cosmos, setting me gently back down on the ocean floor. (Personal experience, teamLab: Au-delà des limites, Crows are Chased and the Chasing Crows are Destined to be Chased as well, Transcending Space, La Grande Halle de La Villette, Paris, France, May 2018).*

Blurring the boundaries between the virtual and the real, nature and technology, teamLab uses a concept they call ultrasubjective space as a way to "transcend physical and conceptual boundaries" (teamLab), pulling the audience-participant through the screens that pervade our everyday lives. Based on "a sense of spatial awareness interpreted in pre-modern Japanese Art" ultrasubjective space is omni-perspectival. Unlike Western art, which is created using a forced perspective and a single focal point of the viewer, pre-modern Japanese perspective allows the viewer to observe the artwork from any angle. Appearing flat to the Western or modern eye, this omni-perspective can also be seen in Japanese Kabuki theater, in which the stage is very shallow

but layered to give the impression of depth and perspective from any angle, creating a sense three-dimensionality and of being inside the artwork. Believing that their pre-modern ancestors depicted the world the way they saw it, teamLab explores the depth within what has generally been described as flat by the Western art world.

This technique can also be seen in the recent video projection exhibition of the works of Gustav Klimt at the Atelier des Lumières in Paris during the summer of 2018. Created by Gianfranco Iannuzzi, Renato Gatto, and Massimiliano Siccardi, in collaboration with composer Luca Longobardi, *Gustav Klimt* featured over 3,000 images animated using the AMIEX<sup>®</sup> process (Art & Music Immersive Experience). Atelier des Lumières, a former iron foundry that opened in April of 2018, debuted *Gustav Klimt* in the summer of 2018 and was the second exhibition space to feature the AMIEX<sup>®</sup> process, in which the audience<sup>18</sup> is “[t]otally immersed in the picture and music” allowing them to be “carried away in a sensorial adventure” (Elodie D.). Through this process, the paintings of Klimt are brought to life by animating the otherwise flat layers that make up the original 2-dimensional works of art. Animating the artworks on a large scale creates both a sense of immersion into the paintings and a sense of movement in what once was viewed as still.

### **Dissolving the Frame**

*I remember the first time I stepped through the frame. I soared above the earth, floating weightless in our planet’s atmosphere. My parents had taken me to see The Dream is Alive at the Smithsonian IMAX theater in Washington, D.C. As I sat in the raked seats the screen engulfed my field of vision, taking up my whole world, pulling me through the screen, beyond the*

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18. In this instance, I use the term audience, rather than audience-participant to distinguish the lack of interactivity in that the artwork did not change in reaction to the audience’s actions.

*frame, and taking me on an exhilarating ride through the vastness of space.* (Personal experience, *The Dream is Alive*, Smithsonian Air and Space Museum, circa the mid-1980s).

Like the perceptually encompassing screen of the IMAX theater, teamLab's work engulfs the audience-participants and draws them through the frame of the artwork to interact with the creatures and elements that reside within it. Seeing the world from a single plane of depth, in which many layers appear on top of each other, allows the viewer to see from multiple perspectives, rather than the single perspective as seen in Western art. This creates the perspective of Merleau-Ponty's being-in-the-world, rather than looking into the world, placing the viewer inside the artwork, rather than outside the frame.

Taking away the frame, or rather, bringing the audience through the frame, does two things: first, it breaks the traditional binary of spectator separated from framed artwork. The spectator is not only inside the artwork, but a part of the artwork. Second, as I saw in my time participating in *teamLab: Au-delà des limites*, dissolving the frame creates an environment where audience-participants transcend the contemporary connection to the screens of their phones. Encouraging selfies, photographs, and other social media,<sup>19</sup> teamLab makes an effort to appeal to younger audiences who are used to seeing the world through the screen of their phones. However, many if not most of the audience-participants eventually put their phones away in favor of immersing themselves in the environment. By focusing on the inter-activity of audience-participants with the artworks, which includes the echoes of all past and current interactions, teamLab creates a digital environment in which the act of touch by the audience-participants not only has a visible effect on the world, but also on the development and life of the artwork for future audience-participants, as described immediately below.

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19. Appealing to social media and selfie culture has been a successful strategy employed over the last couple of years by many museums to draw in younger patrons.

## Butterflies Born in the Digital, also Die in the Digital

*Smack, thud, smack, whack. The little boy's eye light up with delight as he smacks, wacks, thuds, the translucent images of butterflies born of light and they fall dead at his feet. His father stands by, doing nothing. Smack, thud, whack. Several of the audience-participants watch in horror as these beautiful creatures of light are smacked out of existence. Over time the butterflies grow scarce, their numbers diminished in the space, they don't fly here anymore.* (Retelling of events seen by Patricia A. Suchy, *teamLab: Au-delà des limites, Flutter of Butterflies Beyond Borders, Ephemeral Life born in Au-delà des limites*, June 2018).

Described above, *Flutter of Butterflies Beyond Borders, Ephemeral Life born in Au-delà des limites* (figure 3.10) is a free-moving flock of countless butterflies born through audience-participant interaction inside of *teamLab: Au-delà des limites*. Like other artworks in teamLab's borderless worlds, *Flutter of Butterflies Beyond Borders* moves about the entire exhibition freely, “dissolve[ing] the boundaries between works, seamlessly flying into other artworks” (teamLab). Both affecting and being affected by their surroundings, this ephemeral lifeform dies when touched by the audience-participant, creating a tangible effect on the larger environment whose repercussions linger beyond any single moment. By creating a reciprocal relationship in which the audience-participants influence the artwork, which in turn influences the other audience-participants, the nature of the digital environment is built upon an interdependent cycle whose repercussions can be felt long after the butterfly-smacking boy is gone. This web of relationships creates an environment in which acts of touch live not only in the present, but also echoes well beyond their initial manifestation. Actions of the audience-participants can both create and destroy the world around them, building off the traces of the ones before, and leaving traces for

those who come after. In this way, the interdependency between art and people creates an experience of being able to feel the echoes of the past and to touch possibilities of the future.



Figure 3.10. teamLab, *Flutter of Butterflies Beyond Borders, Ephemeral Life born in Au-delà des limites*, 2018, Interactive Digital Installation, Endless ©teamLab.

As the fourth element of Stern’s framework, interactions in *teamLab: Au delà des limites* must be looked at in terms of their “relationality.” A key concept outlined by teamLab on their website, the artworks encourage “Relationships Among People” by making the audience-participants part of the artwork. teamLab creates a reciprocal relationship in which the audience-participants influence the artwork, and in turn influence each other in the large communal space, which then leads to the motions of the artwork influencing the individual yet collective bodies in the space, creating a web of relationships that cannot be pinpointed to any one instigation.

### **Slowing Down and Feeling with the Eyes**

*My eyes feel with my whole body. A constant pressure will part the water, or make the plants bloom (figures 3.11 and 3.12). It is slow. It causes me to go slowly, to notice, not to miss a single moment of the digital world coming to life around me. The water particles gently part at my touch as flowers begin to bloom beneath my pressed palm. The hard walls and floor seem to*

*contradict the depth of the world, the canvas on which teamLab paints their projected environments.* (Personal experience, *teamLab: Au-delà des limites*, *Universe of Water Particles* on *Au-delà des limites* and *Flowers and People, Cannot be Controlled but Live Together - Transcending Boundaries, A Whole Year per Hour*, La Grande Halle de La Villette, Paris, France, May 2018).

The water that I see is a projection, a skillfully crafted digital environment completed by



Figure 3.11. teamLab, Exhibition view, *teamLab: Au-delà des limites*, 2018, Grande Halle de La Villette, Paris, France, June 2018. Photo by Patricia A. Suchy.

the presence of the audience-participants as perceiving subjects. The visual sensing of the water particles is as Matthews describes, intentional, creating “something other than a passive response to that thing, caused by its impact on our sense-organs” (45). The full-body immersion of teamLab’s installations creates a reciprocal response between audience-participants and interactive installations. Although both teamLab and AM-CB create experiences of virtual touch through digitally reactive animation, the quality of sensations felt in *teamLab: Au delà des limites* were in direct contrast to those of *XYZT*. Rather than creating a sense of anticipation of



touch across the surface of my body, sitting in *Universe of Water Particles on Au-delà des limites*, I felt a sense of peaceful connection to my own inner consciousness and the greater world beyond. The slow change of the water and flowers did not give the instantaneous feedback that caused goosebumps to run up my arm in *XYZT*, but instead fostered a feeling of slow contemplative touch that sent warm waves to ripple through my soul.



Figure 3.12. teamLab, Exhibition view, *teamLab: Au-delà des limites*, 2018, Grande Halle de La Villette, Paris, France, June 2018. Photo by Patricia A. Suchy.

Not wanting to leave, I eventually pick myself up from the crop of flowers that had bloomed at the point of contact with my body, letting the water flow back into the space now devoid of obstruction. The descriptions I have provided are only a fraction of the life that was present in *teamLab: Au delà des limites*, each artwork overlapping and intermingling throughout the digital environment. In addition to the two installations I just described, the main room also housed *Born From the Darkness a Loving, and Beautiful World* in which *kanji*<sup>20</sup> gently fall from

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20. *Kanji* are a system of syllabic pictographs used in Japanese writing that are derived from Chinese characters.

the sky into a “360-degree computer-generated space” (teamLab). Reacting to the close proximity of the audience-participants, the *kanji* erupt and “the world that that character embodies will appear and a new world will be created” (teamLab).

Accessed through the main area is a room in which lives *Impermanent Life: People Create Space and Time, at the Confluence of their Spacetime New Space and Time is Born*, a texture of sound and sight in a continuous cycle of life and death, in which “a circle is born and grows to radiate at a certain rhythm and a specific interval. The circle born transforms only the light and darkness of the background world” (teamLab). Midway through the space behind a hidden doorway that blends with the wall live two spatially immersive installations: *Crows are Chased and the Chasing Crows are Destined to be Chased as Well, Transcending Space* (described above), and *The Way of the Sea, Transcending Space - Colors of Life*. Both take the audience-participant on a journey transcending space -- creating a sensation similar to that of *The Dream is Alive* -- in which the floor and walls disappear and the body is carried away by the digital world. The last room is at the far end towards the entrance: a mirror-walled space containing rows of Plexiglas panels for *Peace can be Realized Even without Order*. Projected onto the panels are the semi-transparent images of figures who “exist independently from one another. They play instruments and dance, and each individual is influenced by the sounds from the figures close to them” (teamLab). Entering the room, the audience-participant can wander through the “seemingly endless number of life-sized holograms” -- however close proximity to a figure will sometimes cause them to stop, temporarily affecting the harmony of the group.

Several other installations live and move through the larger exhibition space, but one I want to describe specifically is *The Way of the Sea, Flying Beyond Borders - Colors of Life*, a school of fish that travels through the halls. When touched by an audience-participant the fish



change color and divert direction on their vertical surface. This installation reminded me of the discrete installations in AM-CB's *XYZT*, creating an immediate and direct connection between audience-participant and artwork which felt individual, as opposed to collective. Although each of the installations in *teamLab: Au delà des limites* has its own space, iterations of them are free to roam and mingle with each other along the walls and in the main room, transcending the traditional frame that separates artworks and places them neatly on a wall.

In addition to their touring exhibitions, *teamLab Borderless* opened in June 2018 in Odaiba, Tokyo, “billed as the world’s first digital art museum” (Tiffany). A partnership between Mori Building Co., Ltd. And teamLab, the museum occupies over 107,000 square feet of space with over fifty “interactive displays that blend into one another over five different zones” including, “‘Athletics Forest’ a zone intended to train the brain’s spatial recognition abilities and get people moving,” and “Future Park” for children, “designed to help expand the imagination and teach scientific concepts” (Vonesh). Designed to “encourages breaking down barriers – barriers between one piece of art and another, art and its visitors, and one person and another” (Vonesh), *teamLab Borderless* is the digital theme park of our virtually entangled present.

### **Beyond the Digital: Immersion Fascination**

Similarly incorporating the presence of audience-participants within their immersive world, British theatre group PunchDrunk’s 2011 *Sleep No More* -- a site-specific production primarily based on Shakespeare’s *Macbeth* and inspired by noir films -- invites audiences to enter the world of the performance via a 1920s speakeasy where they are instructed to act as voyeurs of the unfolding action -- the role in which most audiences are already cast. However, this voyeuristic role is identified differently through two distinct elements: first, the donning of a

long-nosed, Venetian style mask and second, the explicit instruction *not* to engage or speak to anyone without a mask (i.e. the performers).

Audience members are encouraged to attend *Sleep No More* alone, or if they do come with a companion, to be prepared to abandon them during the course of the evening. Inside the immersive performance, natural groups of audience members gather, seemingly gaping at the action like a surrealistic version of the bystander effect in which passersby stand gazing at a car accident. These simple costumes and directives allow audience members to enter the frame of the play without detracting from the aesthetic illusion of the world of the play. The visual created by the donning of identical masks add a layer to the aesthetic that would not have the same effect if the audience were simply observing their seats. However, even though *Sleep No More* invites the audience members into the immersive world of the performance, the audience members have very little agency through which they can affect the overall environment or development of the story.

Appealing to these same sensibilities and fascination with immersive environments, physical destinations such as theme parks (including ride-based parks like Disney World, historical reenactments parks like Colonial Williamsburg, and renaissance fairs) and virtual environments such as Massively multiplayer online games (MMOs<sup>21</sup>) create an analogous experience to teamLab's digital environments, allowing audience-participants to temporarily step into an alternate reality. While MMOs engage the audience-participants in similar ways to teamLab's work, these interactions between players exist under the pretense of playing a fictional role. And while theme parks appear to engage the audience in varying levels of interactivity, they instead operate similarly to immersive performances in that the visitor is cast

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21. MMOs are defined as online games that can support a large number of players connected via the internet within the same game-world.

as an outsider who has little to no effect on the world. teamLab, by inviting the audience-participant to come as they are and freely engage with the artworks, allows a deeper, more genuine connection between audience-participant, artwork, and the larger digital environment.

In this chapter I discussed sensations of virtual touch felt by audience-participants in relation to digitally reactive animations. Creating individual connections similar to the telematic encounters described in Chapter Two, AM-CB engages audience-participants with abstract, black and white animations. The use of bodiless, geometric shapes keeps the focus of touch rooted in the bodies of the audience-participants rather than in the artwork. In contrast, teamLab's immersive environments create an interactive world in which the audience-participants are one of many interrelated parts that make up the digital world. Like my description of teamLab, whose artworks blur the traditional boundaries that separate the artwork from the observer, in the next chapter I will focus on the works of James Turrell, light and space artist whose immersive installations engulf audience-participants in experiences of perceptual and visual deprivation. In contrast to teamLab's lively, intricate environments in which multiple artworks roam freely, Turrell's work relies on the properties of light and perceptual science to focus attention on the unreliability of the senses, creating experiences in which light takes on a feeling of tactility.

## CHAPTER 4. FLOATING IN THE LIGHT | DISSIPATING IN THE DARK: TOUCHING WITH THE WHOLE BODY

*Standing at the threshold of light, I reach through the thin veil of fog that is not as solid as my eyes perceive. I step closer, right up against the glowing white edge of the portal before me, reaching my hand out as I feel a sudden drop in temperature. As I stand and stare, my hand floats in the misty light, feeling the expanse of space that looks so small yet feels so distant. The opposite of intimacy, the space beyond reaches further than what my eyes allow.* (Personal experience, *Guardian (Wedgework)*, “James Turrell: Into the Light,” Massachusetts Museum of Contemporary Art (MASS MoCA), North Adams, MA, January 2018).

Touch is a full-body experience. Although often relegated to the fingers and hands -- less often to the feet -- the act of touching is an act of sensing with the whole body, an act of reaching out and physiologically connecting with the world around us. This chapter will explore sensations of virtual touch as an expansive experience created through visual and perceptual deprivation in which the senses have to work together to re-interpret the bodies’ placement in space. I analyze two of James Turrell’s artworks, *Perfectly Clear* and *Hind Sight*, both featured in his recent retrospective, “Into the Light,” at MASS MoCA, in North Adams, MA. Creating highly controlled environments, Turrell works “directly with light and space to create artworks that engage viewers with the limits and wonder of human perception” (Turrell). For this chapter, I employ Brian Massumi’s writings on visual perception and the co-functioning of the senses when one sense is rendered mute, and James Elkins’s theory of sight as a transactional act of metamorphosis that “alters the thing that is seen and transforms the seer” (11-12). Using these

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concepts, my analysis focuses on the ways in which these artworks cause the audience-participants to reinterpret their own experiences of physical reality, creating sensations of virtual touch and intimacy through feelings of floating, flying and losing one's body in the expansiveness of space.

### **The Act of Being Held Gently by Nothing at All**

*I stand floating in the light, my body suspended in nothingness, my eyes seeing only a vast expanse. Even as I feel my feet firmly planted on solid ground, a rush of strobing lights encompasses my field of vision, creating a sense of being un-stuck, a loss of physical placement that feels perfectly clear, perfectly safe, as if being held tightly by nothing at all.* (Personal experience, *Perfectly Clear*, MASS MoCA, North Adams, MA, January 2018).

In January of 2018, I first stepped through the large white portal at MASS MoCA and into James Turrell's *ganzfeld* exhibit *Perfectly Clear* (1991). Turrell's work often employs the *ganzfeld* effect from the German word for "complete field," a form of perceptual deprivation caused by exposure to an unstructured, uniform visual stimulation field. Interested in the ways in which vision constructs reality (*James Turrell: Into the Light 2*), *Perfectly Clear* creates an immersive encounter designed to deprive the eyes of the perceptual cues used to mark boundaries of space and distance, causing sight to become unreliable (figure 4.1). Rather, as James Elkins describes of a visit to an art museum in his 1996 book *The Object Stares Back: On the Nature of Seeing*, one's "eyes and mind and body and fingertips all respond," (24) creating a juxtaposition of expansiveness and proximity through the co-functioning of sight, touch, and the body's physical sense of displacement in space.

First introduced in the 1930s by German psychologist Wolfgang Metzger, research into the perceptual effects of the *ganzfeld* continued throughout the mid-twentieth century. Early

participants described their experiences within the *ganzfeld* in physical terms, such as being in a fog or cloud (Hochber et. al. qtd. in Avant 246), a “mist of light” (Metzger qtd. in Cohen 403), or a “sea of light” (Gibson and Waddell 267). In 1968, Turrell, along with artist Robert Irwin and psychologist Dr. Edward Wortz, began their own research with *ganzfelds* through the Art and Technology program at the Los Angeles County Museum of Art (LACMA). Partially driven by their interest in synesthesia -- a physiological response in which the stimulation of one sense activates a different sense response (“Synesthesia,” def. N.1) -- the three combined the total visual field of the *ganzfeld* with an anechoic chamber (a total aural field) to investigate “the ways light and sound could affect the perception of space” (Adcock 69). In Craig Adcock’s 1990 book *James Turrell: The Art of Light and Space*, Turrell describes light within the *ganzfeld* as a thing of substance that participants often reach out to “try to touch” (2). Working with light as an object that can be actively felt, Turrell’s *ganzfelds* transform what is often thought of as an “untouchable essence” (1) into one that can be felt and sensed throughout the entire body.

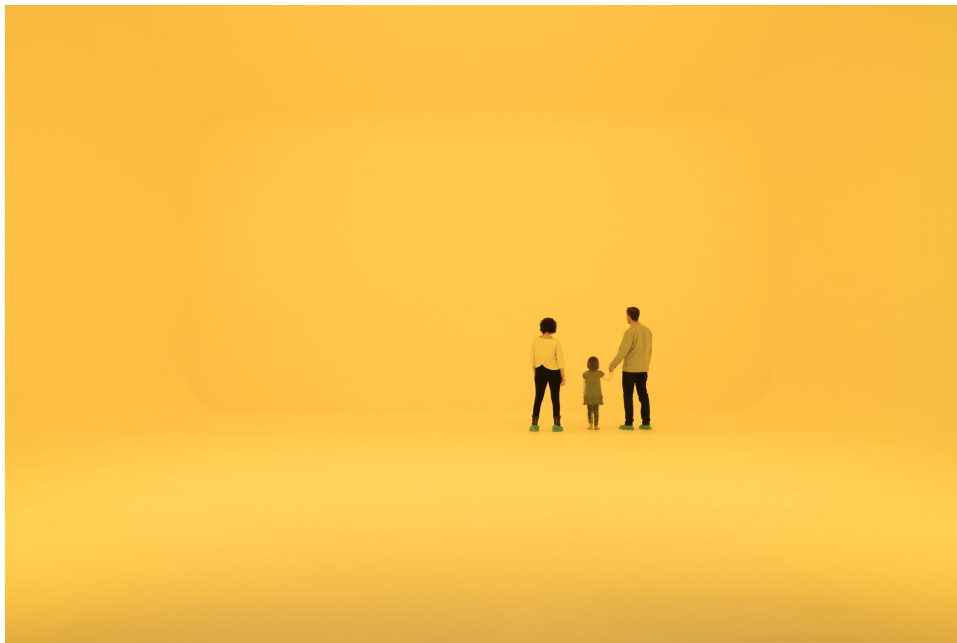


Figure 4.1. *Perfectly Clear (Ganzfeld)*, 1991 Gift of Jennifer Turrell. © James Turrell, Photo by Florian Holzherr. Photo courtesy of the Massachusetts Museum of Contemporary Art, North Adams, MA.

The perceptual deprivation of the *ganzfeld* creates a heightening of the senses in which audience-participants' whole being engages to make sense of the world around them. In her 2016 article "Perceptual Cells: James Turrell's Vision Machines Between Two Paracinemas," Alla Gadassik notes this heightened engagement of the senses, adding that the lack of perceptual cues creates an experience in which there are "no boundaries" (313). Turrell describes the lack of perceptual boundaries to guide the eyes in the construction of physical reality as one in which "it becomes difficult to differentiate between seeing from the inside and seeing from the outside" (qtd. in Bishop 85). The sensory experience of the embodied subject allows for the internal construction of reality from one who is confronted with the infinite boundaries created by the *ganzfeld* effect. Through this juxtaposition of sense-making and perceptual deprivation, I argue that the *ganzfeld* effect in *Perfectly Clear* creates an experience of disembodied-embodiment, in which the decentering of visual perception and the reinterpretation of physical reality creates an experience of intimacy, touch, and of being held gently by nothing at all.

### **Floating in the Light**

*Standing at the entrance to Perfectly Clear, a portal which at first appears to be a flat image of color against the smooth, white wall, my eyes gradually adjust to see into the infinite space beyond. As I approach the threshold I stop, standing at the edge of the light, gazing through the portal that now seems to defy logic, to defy the possibilities of depth. From what I perceive as solid ground, I step into a void -- leaping, walking into nothingness. My sensation of floating is only interrupted by the solid ground beneath my feet. As I step into Perfectly Clear, my whole body responds. My sense of distance, of gravity, of my physical placement in the room, all dissipate. I float in light. (Personal experience, Perfectly Clear, MASS MoCA, North Adams, MA, January 2018).*

The overwhelming sensory stimulation caused by the uniform field of light in *Perfectly Clear* creates an experience of proprioceptive confusion and an inability to locate one's body in space. Elkins argues for the inclusion of proprioception, defined by the American Heritage Dictionary as the "unconscious perception of movement and spatial orientation arising from stimuli within the body itself," ("Proprioception," def. N.1) as in addition to the usual five senses (sight, sound, touch, taste, and smell), as the body's "innate sense of its own position" (Elkins 137). As the primary way in which human beings experience and encounter the world around them, proprioceptive awareness is the body's internal vantage point. As I noted in the introductory chapter, Elkins compares the proprioceptive sense to physical empathy, describing it as the ways our surroundings "provoke a physical reaction in [the] body" (138). As a communicative exchange, the body takes on an empathetic response, whether through adopting the feelings and emotions of those around us, by tensing up when confronted with images of contorted flesh, or by "the body swell[ing] when it enters a wide hall" (138).

Using this last example as the most immediately relevant, I refer back to the experience I described at the beginning of this section: confronted with the sense of floating in *Perfectly Clear*, my body's response was one of empathetically engaging with the physical expanse I saw before me. Since the space appeared to be endless, my physical reaction was the sensation of my body floating freely while simultaneously being supported from all directions. As Massumi notes the heightened activation and co-functioning of the senses within the *ganzfeld* creates a space in which audience-participants "float out of their bodies and lose themselves" (145). Because of the lack of perceptual cues, stepping into the light of *Perfectly Clear* created an experience for me in which my eyes became unreliable, requiring my remaining senses to engage, interpreting and making sense of my world. In effect, I was seeing with my body.



Seeking to facilitate co-functioning of the senses, Turrell designs his artworks not as optical illusions, but as experiences which utilize optical phenomena to highlight the ways in which our brains process the images that we see. Benjamin Backus, an associate professor at the Graduate Center for Vision Research at the SUNY College of Optometry, notes that unlike an optical illusion, which relies on a specific relational position of the body, Turrell's artworks reveal "the fact that everything you see is constructed by your brain" (qtd. in Ferro). Although this still might sound like an optical illusion, Backus instead claims that "everything you see is an illusion. What we experience are just mental representations" (qtd. in Ferro). According to Anil Seth, conscious perception is more than just sensual interpretation. In his 2017 TEDtalk on the workings of consciousness, Seth notes that "we don't just passively perceive the world, we actively generate it." Tying back to both Elkins's concept of sight as a transactional encounter and Merleau-Ponty's embodied subjects as constructors of their own realities, Turrell's artworks do more than just trick the eye; they isolate the ways in which our senses interact with surrounding stimuli. Through a combination of our previous experiences and expectations, our senses interpret reality through what Seth calls our "best guess."

### **The Day my World Changed Shape**

*On a recent morning in late April, one month after my last visit to Perfectly Clear, I witnessed a building on the campus of Louisiana State University change shape. As I approached the building in the crisp morning air, scattered clouds bouncing across the sky, my eyes caught an image in the large round window at its peak. In that instant, the building became a façade through which I could gaze (figure 4.2). The window, having caught the reflection of the clouds above, lined up perfectly to create the appearance of a portal to the sky. The gentle ripple of the clouds dancing across the blue sky crossed paths so perfectly with the reflection in*

*the window that, for a moment, the entire building changed shape. I was no longer at the side of a structure whose depth contained two rows of classrooms and a wide hallway. Rather, I was staring at a flat façade, reaching through the large round window to the vast sky beyond.*

(Personal experience outside of Coates Hall, Louisiana State University, Baton Rouge, LA. April 2018).



Figure 4.2. Reflection on the third-floor window of Coates Hall, Louisiana State University, Baton Rouge. Photo by Naomi P. Bennett.

Although I knew in my mind the actual shape of the building, for that moment, standing in the middle of the parking lot, the structure became a single standing wall. Matthews notes that: “[p]erception in one sense creates the world perceived, but in another sense does not” (36). At that moment, my experience of reality and the physical structure of the building changed.

Although the image I saw was essentially an optical illusion, my attempt to make sense of what I was perceiving visually caused me to reinterpret my construction of reality. Even after I realized

the “trick” that the reflection had played on my eyes, I stood there, staring at the structure that had now taken on a completely different shape in my world.

Like Turrell’s artworks, this moment called into question how I perceived the physical world around me. However, even though his artworks appear to manipulate the ways that the audience-participants experiences the world through sight, Turrell, who has a degree in perceptual psychology, reiterates that his use of light is not an optical illusion. Jeffrey Kosky, in his 2013 article “Contemplative Recovery: The Artwork of James Turrell,” notes the difference between an optical illusion and Turrell’s work as an optical phenomenon: “An illusion vanishes or is at least explained when you adopt the right place from which to see it and examine it with great care and effort. In Turrell’s viewing chambers, there is no right place where you can stand to make the illusion vanish ... There is nothing to see but what you see” (51). Unlike the reflection in the window which vanished as I changed my position, Turrell’s artworks use light and perceptual deprivation to “pose questions relating to the ways human beings engage the world with their visual systems” (Adcock 38). Rather than creating an illusion to trick the senses, Turrell’s artwork puts the audience-participant in an environment that questions how we co-create reality through our sensual experience of the world.

### **Entering the Sky**

*I am twelve years old. I step off the plane into a desert climate and a world in which I suddenly feel pressed flat, shorter than how my 5’4” stature is used to feeling in humid, and often cloudy, New England. More than just the disorientation of being in a foreign land and hearing a strange language, I feel pushed downwards, exposed on all sides and stuck to the earth as if some force were weighing me down. I turn my gaze upwards and see sky -- clear, blue, and*

*utterly devoid of clouds.* (Personal experience outside of Ben Gurion Airport, Israel. March 1990).

Growing up in the Northeastern United States, I had never witnessed a sky without clouds -- an empty sky which creates “an undifferentiated field of blue color whose distance and location are difficult to specify” (Adcock 137). Without visual markers such as clouds, stars, or the contrails of passing airplanes, “the empty sky presents the viewer with what amounts to a homogenous visual field” (137). In other words, this empty sky was my first experience with the visual displacement caused by the *ganzfeld* effect.

January 2018. I am no longer twelve years old. I step through the portal into Turrell’s *ganzfeld* exhibit *Perfectly Clear*, into and inside of the vast expanse of that very same sky I first encountered almost thirty years ago. As my thoughts return to the memory of my first steps onto the dry desert sand, I am brought back to the weight of the deep blue sky pressing down above me. Except now, at MASS MoCA in North Adams, MA, I enter into, instead of just under, that same blue sky. This time, without the visual cues of the red earth beneath me or the distant trees on the horizon, exposed on all sides and dimensions of time and space, my body feels the possibility to expand infinitely in every direction all at once. Confronted with the seemingly limitless space, my “body swells” (Elkins 138) with proprioceptive empathy, filling the vast openness. The sensation of being inside the *ganzfeld*—instead of crushed under it—creates a physical feeling of lightness, of being embraced and lifted on all sides, rather than pressed from a single direction.

Designed to make sense of our reality, “[o]ur eyes” Elkins claims, “are built to seek out complete figures,” (125) to use the available markers and fill in any gaps and missing information. However, when confronted with an unstructured visual field devoid of these visual

markers, the empty blue sky becomes a chaotic image to the perceptual senses. In an attempt to organize this chaos, which Elkins claims is both “beautiful but intolerable to our eyes” (126), human beings have created constellations, playing connect the dots with the stars as a way to be able to imagine visual and perceptual markers in the sky above, making, as Elkins observes, “a comprehensible unity out of an underlying chaos” (126-128). However, when I entered into the chaos and total engulfment of *Perfectly Clear*, my eyes had no pictures to guide them, no markers to hold onto, and I had to make a new reality -- a reality to make sense of the overwhelming lack of visual difference, a reality in which my body became untethered, floating alone in space.

### **Sharing Space**

*Shoes off, socks on; I want to feel the ground beneath me. I keep my gaze fixed on the expansive nothingness that envelops my peripheral vision. I am alone, the entire endless field of light all to myself—the only soul in a cloud of blue, then green, then purple.* (Personal experience, *Perfectly Clear*, MASS MoCA, North Adams, MA, March 2018).

I have returned to MASS MoCA to take my second journey into the “horizonless landscape” (*James Turrell: Into the Light* 4) of Turrell’s *Perfectly Clear*. I am alone, my body floating freely in space. After a while, a family of four adults with an over-talkative father enters the space. I try to drown out the father’s blaring voice as I watch their silhouettes against the endless color, seeing what I cannot see when I am alone: their bodies floating in the void of blue, then green, then purple. I step back. I walk forward. The strobe lights flash and the whole world is immersed in color; my only point of reference is my feet on the ground as I watch the bodies of my fellow audience-participants float as if caught in a cloud (figure 4.3).

*The room is loud, full of excited, nervous chatter. As I look deeper into the light the cacophonous sound of voices echoes in the room, transforming into a droning score. I float in the light, my body resting softly in its embrace.*

*“This is what it’s like to live inside a television, an old television.”*

*The over-talkative father interrupts my calm -- his voice pulls me out of the clouds, slamming me to the floor. In a way however, he is correct: at times, the round-cornered rectangular recess in the far wall looks remarkably like the old bubble screen of a tube TV (figure 4.4). I push his voice back into the drone. My eyes linger on the back wall, gazing out, from inside the screen. (Personal experience, *Perfectly Clear*, MASS MoCA, North Adams, MA, March 2018).*

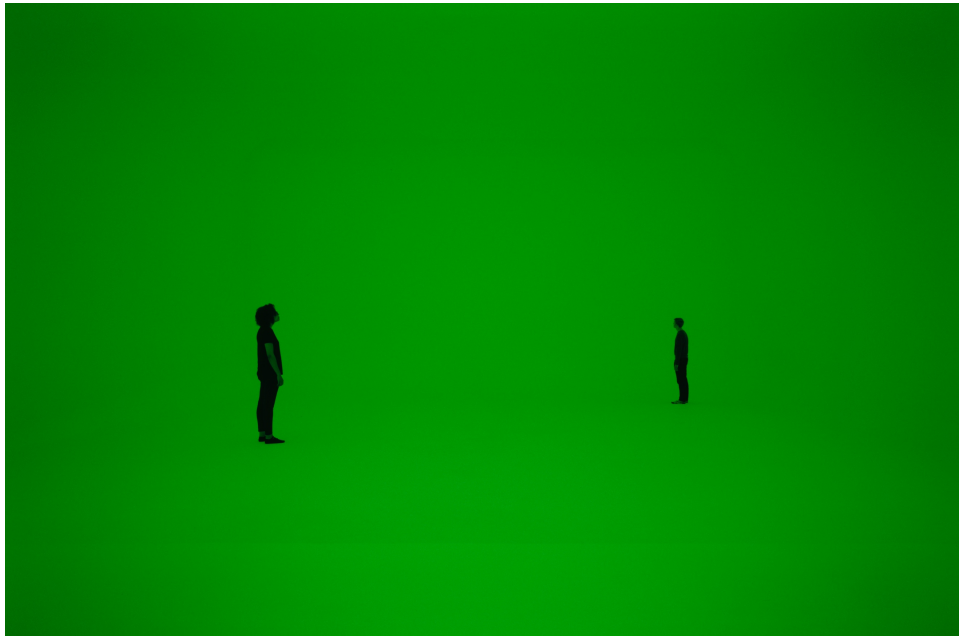


Figure 4.3. *Perfectly Clear (Ganzfeld)*, 1991 Gift of Jennifer Turrell. © James Turrell, Photo by Florian Holzherr. Photo courtesy of the Massachusetts Museum of Contemporary Art, North Adams, MA.

*Popular Science* describes Turrell’s *ganzfeld* installation at MASS MoCA as unlike the typical museum experience, rather as “a canvas you can walk through,” in which visitors tend to “lose all sense of place . . . like being suspended in sea foam at sunset” (“Artist-Grade

Construction” 44). Like teamLab’s immersive environments, *Perfectly Clear* invites the audience-participant to step through the frame, dismantling the divide between artwork and observer. Described by Turrell as a thing that “occupies space” (*James Turrell: Into the Light*), light in the *ganzfeld* takes on a physical form, creating a tactile sensation that can be palpably felt by the audience-participant. A sensation, as I described at the beginning of this chapter, as one of being held tightly by nothing at all.

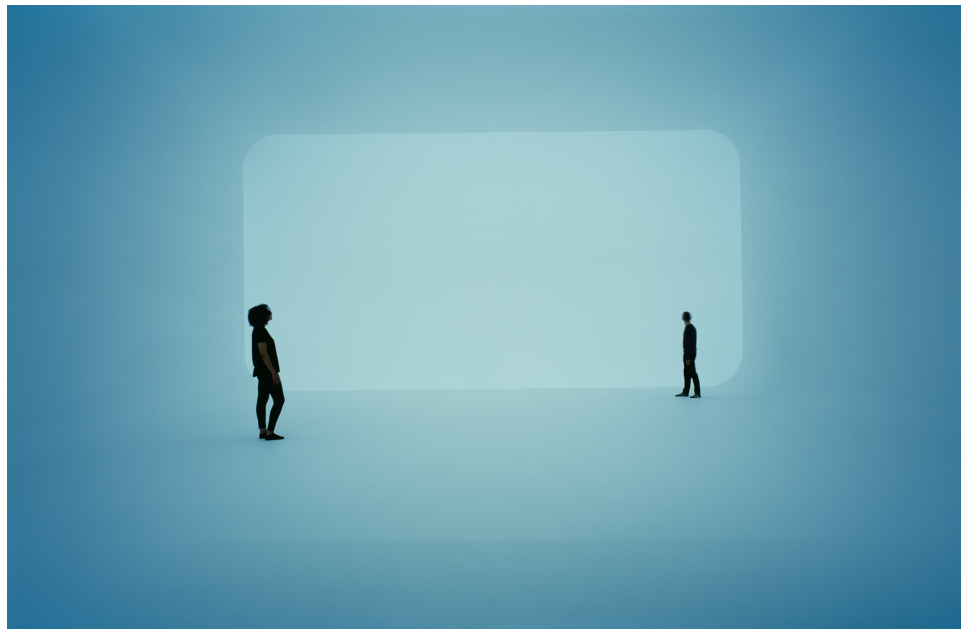


Figure 4.4. *Perfectly Clear (Ganzfeld)*, 1991 Gift of Jennifer Turrell. © James Turrell, Photo by Florian Holzherr. Photo courtesy of the Massachusetts Museum of Contemporary Art, North Adams, MA.

Although I find it difficult to put into concrete terms, the feeling is that of the lightest of touch over the whole expanse of my skin, while conversely being totally alone in an infinitely empty space. My limbs seem to float and lift with ease, and my body feels weightless, as if I am standing suspended in a pool of deep water. My inability to judge the dimensions of the room and the uniform field of color create a sense of expansion in my spine; I simultaneously feel stretched outwards while also feeling the slight compression of the surrounding mist of light and

color. Sharing this space with the physical presence of light creates a world which forces me to define a new perspective, a new sense of embodiment, a sense of disembodied-embodiment.

### **Seeing with Closed Eyes: Losing Oneself in the Light**

*I close my eyes. Or I think I have closed my eyes. When the lights strobe, colors bleed into my vision, penetrating my eyelids. My lids shoot back open. I have roughly nine minutes each time I enter the exhibit, and I do not want to miss a moment of the ever-changing color. With eyes wide open, I notice how the light creates patterns on surfaces I know are a smooth, solid field.* (Personal experience, *Perfectly Clear*, MASS MoCA, North Adams, MA, January 2018).

Turrell's artworks focus on using light and color as elements of visual sensing to displace visual perception, resulting in full sensory activation for the audience-participant. Turrell describes the effects of his artworks as "the joy of sensing, which is, the sensual" (Rose 10:40), and laments the trend to focus on the technical, rather than the emotional and physical experience of his work. Adcock further describes this sensing experience of the audience-participants in Turrell's artworks as being able to "feel light with their eyes, like pressure on the skin of visual perception" (2). Often taking on a tactile function, the concept of being able to "see texture" (Massumi 157) and feel with the visual sense, is not as foreign as it sounds. The body knows the soft feel of velvet or the hardness of a rock, and can even adjust to anticipate the texture of an unknown substance (157). In the absence of physical contact, the observer's vision takes on a "tactile function" (158) of being able to feel the texture of their surroundings.

Originally trying to isolate the conditions for pure sight, early experiments with *ganzfelds* instead highlighted the co-functioning of the senses in the interpretation of physical reality. Not only did the *ganzfeld* fail to isolate mechanisms of pure sight, but some observers reported



“difficulty sensing whether their eyes were open or closed,” “blank[ing] out,” and “complete absence of seeing” (Massumi 145). This loss of the visual sense is not darkness, but a sense-overload, resulting in sight taking on a dreamlike quality. The loss (or partial loss) of the visual sense presents a new perspective from which one can view the world. Often described as encouraging a meditative or spiritual state, Turrell’s artworks can evoke a deep sense of calm. Through what Claire Bishop calls mimetic engulfment (82), the *ganzfeld* effect engages a full-body sensory experience in which the audience-participant is inside the light. Pointing to the heightened awareness created by Turrell’s fields of colored light, Bishop notes that it “frustrate[s] our ability to reflect on our own perception: subject and object are elided in a space that cannot be plumbed by vision” (87).

As Adcock states, the intent is to “change one’s thinking about seeing” (140), but the lack of physical-visual orientation turns what for some is a contemplative experience into one in which audience-participants become confused or disoriented, getting “lost in the light” (Bishop 87). In his 2002 article “Learning from the Cornell Box,” Simon Niedenthal notes that Turrell’s *ganzfeld* exhibits create “an encompassing space that is full of light but devoid of visual information,” stating that the physical effect on the body “can be striking” (253). The proprioceptive confusion created by the *ganzfeld* effect has resulted in audience-participants becoming disoriented, losing their balance, and even falling over (Adcock 140). During the 1976 exhibit of *Arhirit* at the Stedelijk Museum in Amsterdam, several audience-participants “felt so disembodied they had to crawl through the space on hands and knees” (Niedenthal 253), while at the subsequent 1980 exhibit of *City of Arhirit* at the Whitney Museum of American Art in New York City, one visitor “leaned back on the dense leading edge of the *ganzfeld* -- what they took to be a solid wall surface -- and tumbled into the space of the chamber” (Adcock 140). Although

Turrell insists his artworks are not intended to be disorienting to the point of creating a physical hazard (140), these early incidents point to the inherently embodied experience of the *ganzfeld* effect in what is often regarded as being primarily in the realm of visual perception.

### ***Hind Sight: Without Sight of Myself, I Myself Dissipate***

*I place my hand over my eyes. I take it away. I hold my hand directly in front of my nose. Nothing. Closed, open, it all looks -- and feels -- the same. Or doesn't feel, it is more than not seeing my hand, not seeing whether the lids of my eyes are open or closed. The lack of vision makes me doubt the physical presence of my body. My hands, nose, even eyelids dissolve into ideas rather than reality. My torso, limbs, even my back and hips which sit pressing against the chair, become a question mark, fading into the darkness. As in Perfectly Clear, my body feels untethered, free from gravity and posture and the weight of being a solid mass. I dissipate in the darkness. (Personal experience, Hind Sight, MASS MOCA, North Adams, MA, January 2018).*

During the latter part of his *Mendota Stoppages*<sup>22</sup> period in the 1980s, Turrell began working on a series of Dark Spaces, using nearly complete darkness in order to isolate light and to bringing attention to the physiological experience of seeing. Using a digital video projector to cast a barely perceptible amount of light on one wall of a room, the Dark Spaces allow audience-participants to experience their own physiological process of vision adapting to the dark. Describing the mechanics of the Dark Spaces, Adcock explains that audience-participants are able to experience what is called the Purkinje shift, in which “maximum sensitivity switches from cones to rods, from photopic to scotopic vision” (106). Developed as an evolutionary ability to operate effectively under both daytime and nighttime conditions, the Purkinje shift is

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22. A series of studio-specific works at developed at the Mendota Hotel in Ocean Park, California, which Turrell began working on in the latter part of 1968. The *Mendota Stoppages* were Shallow-Space Constructions, originally meant to be exhibited at the Pace Gallery, but were later rejected because of the inability to market them for sale.

the natural change from day to night vision “accompanied by a shift in maximal color sensitivity,” from the red end of the color spectrum during the daytime, toward the blue end of the color spectrum in lower light levels. The use of minimal amounts of light and the amount of time the audience-participants are asked to remain in the near dark of *Hind Sight* creates an experience in which it becomes difficult to tell what is actually seen by the eyes, causing what Tom Cornsweet explains are physiological impulses that are “the result of small changes in the pressure exerted on the nerves in the eye, such as changes resulting from pressure, breathing, etc” (qtd. in Adcock 107-108). Adcock describes the experience: “[a]reas of luminance seem to move through the space, but these are often phosphenes generated by the random nerve firing inside the retinas” (108). This phenomenon creates a visual sensation of barely perceptible pulsating light, which becomes more perceptible as the eyes adapt to the dim levels.

As in his other artworks, Turrell’s interest in the Dark Spaces is not limited to perception and visual sensation but includes the tactile sensation of sight. Speaking at the Museum of Fine Arts at Tufts, Turrell explains that the reduction of light causes the pupil to open, and “when the pupil is opened, touch comes out of the eyes, and you really can feel light” (Hopkins). Echoing Merleau-Ponty’s phenomenological experience of the subjective nature of reality, Turrell uses the relationship between light and dark to “inspire a heightened awareness of the body, making us eerily cognizant of the world as a product of perception” (Swenson 130). My own experience of *Hind Sight*, much like my experience in *Perfectly Clear*, was one of floating in space, but floating without being bound by the confines of my body. Bishop, in discussing experiences of total darkness, notes that “[t]here is no ‘placement’ in engulfing blackness: I have no sense of where ‘I’ am because there is no perceptible space between external objects and myself” (82). As

in the perceptual deprivation of the *ganzfeld*, my body floats untethered in the darkness, yet I am detached from both space and body, without mass, unable to sense the boundaries of self.

### **The Dark isn't Scary without the Light**

*Two at a time, we are allowed to go in, but I am alone. After listening to the instructions from the museum attendant and briefly studying the map, I brace myself for the long walk into darkness. Placing my right hand on the railing I move slowly down the corridor, corners twisting as I leave the light behind. "Walk until you run into a chair," are my instructions. Slowly, step by step, I anticipate the gentle thud against my shin. Reaching my destination, I carefully feel for the shape of the chair, and sit down. My fifteen minutes has already begun, my eyes comfortably taking in the darkness, staring ahead though I have no idea which direction is ahead. Before me is nothing. Or nothing I perceive. I am alone in the dark, and to my surprise I am not afraid.*

My whole life I have been afraid of the dark. But what I learned in Turrell's *Hind Sight* is that I am actually afraid of the light, afraid of the edge of the light that marks the boundary before the dark. While many audience-participants express trepidation, and even refuse to enter or remain for the durational period required to experience the shift in visual perception in *Hind Sight*, I never felt any fear. Whether it was because I was in the safe environment of a museum, or the lack of sleep from traveling, the total darkness felt more like a cool blanket, protecting me and holding me when all other senses slipped away. Similar to my experience of floating in *Perfectly Clear*, I felt supported by the darkness, suspended in the void. However, the darkness in *Hind Sight* creates a sensation that Turrell himself acknowledges is lacking in his *ganzfeld* exhibits: without being able to visually see any part of my body, I felt the full suspension and dislocation in space, and even more, disassociation from even having a body at all.

## **Fleauxting without My Body**

*Darkness, like lightness, holds my body in suspension. A different sense than floating, the deprivation of my senses allowing my body to dissipate, to fade into the black. Unable to see my hand as I lift it in front of my eyes, I feel my body dissolves into nothingness. It is not a loss of feeling, but rather a loss of the fact that I have a body at all. Floating in the nothing I fade from reality into the darkness.* (Personal experience, Fleauxt Baton Rouge, July 2019).

I enter Fleauxt Baton Rouge, a health and wellness center specializing in floatation therapy -- more commonly known as a sensory deprivation tank. Pushing the fear of my dark deep inside, I have finally picked up the phone to make an appointment, a gift from the cast of *(dis)embodied in space*. As I lay floating in the water, trying to figure out where to put my hands, the edges of my body begin to dissipate, to disappear from my conscious thought. As Bishop describes, “one does not sense one’s boundaries, which are dispersed in the darkness, and one begins to coincide with space” (82). Water and air are strictly regulated, kept at near body temperature in a type of tactile deprivation where I cannot distinguish the edges of my skin from the breaking surface of the water. Surface tension is non-existent. I float, I disappear, and like my body, my thoughts begin to wander in the darkness.

In the technological age of electronic light, being immersed in total darkness is not something we experience often, and when we do, Bishop notes, we “strain to locate our body in relation to the dark environment” (82). Even more than in *Hind Sight*, where I could feel my feet on the ground and the chair I was sitting in, floating in the sensory deprivation tank simultaneously dislocated my body from its placement in space and obliterated my physical sense of self. Unlike *Perfectly Clear*, in which my body floats as a whole, the experience of floating in the darkness was one in which the body seemed to “dislodge or annihilate [the] sense

of self” (Bishop 82). My body ceases to exist in confinement, forcing me to redefine ‘me’ without a body. What it means to be me is no longer physical, no longer tied to my material body in space. As in *Hind Sight*, I am not falling or flying, or even held, because there is nothing to hold. My eyes see nothing and therefor my body expands infinitely into nothing. With the lack of light and the lack of body is a lack of fear -- because fear requires an edge from which for me to fall from. My embodied experience is one of true disembodiment, existing in an intertwined embrace with darkness.

### **Darkness versus Lightness**

*I am alone. Holding my hand in front of me, I see nothing, I feel nothing. My body exists only in the sense that I know it exists, I remember it existing. I am alone with the memory of my body, unsure if my eyes are open or shut, unsure if I even have eyes with which to see.* (Personal experience, *Hind Sight*, Mass MOCA, North Adams, MA, January 2018).

As a sensing being, I am, as Merleau-Ponty describes, both object and subject. My body as subject is “something I ‘live, something I inhabit, as vehicle of my subjective experience” (Matthews 51). As a form of visual -- and perceptual -- deprivation, darkness, like Turrell’s light, creates a world that forces the body to define a new perspective. “[O]ur perceptual being,” Merleau-Ponty writes, is “cut off from the world, evol[ving] a spatiality without things” (*Phenomenology* 283). Since the body, according to Merleau-Ponty, is the primary experience of the embodied subject, the removal of any recognizable visual or spatial clues in Turrell’s work creates a disembodied experience of embodiment, challenging how we think of the physical experience of bodies moving through space. Meaning, which exists “neither ‘inside’ our minds nor in the world itself,” is instead revealed through physical interaction, “in the space between us and the world” (Matthews 34-35). In Turrell’s *Hind Sight*, light, like the body, “...occupies a

space between visible and invisible” (*James Turrell: Into the Light* 3). Unable to “distinguish between ‘out there’ and ‘in here’” (Turrell qtd. in Adcock 107-108), audience-participants in Turrell’s Dark Spaces merge body and space, becoming both held up by the darkness, and unable to grasp the incorporeality of the body without sense.

*I float, held by the light. My mind connecting to the little information my eyes can interpret. Turrell’s object of light affecting a change in my embodied experience, creating a disembodied-embodiment of my current placement in the void.* (Personal experience, *Perfectly Clear*, Mass MOCA, North Adams, MA, January 2018).

In contrast, *Perfectly Clear*’s use of light as a form of perceptual deprivation disconnects my body from space. But unlike in *Hind Sight*, my body remains intact within itself. What I see in *Perfectly Clear* can no longer reliably connect to “my present perspective on the world” (Matthews 141). Both artworks illustrate, as Elkins describes, the manner in which “[s]eeing is metamorphosis” (12), physically changing the experience of my body through visual sensation.

### **Infinite Space: I Let My Body Float**

*I step through the portal of light, as if I am calmly walking off a cliff.*

*I am afraid of the dark, but not without my body.*

*I am no longer afraid of heights, because I know the light will not let me fall.*

*My body dissolves into nothing, fading from reality into the darkness.* (Personal experience, *Perfectly Clear* and *Hind Sight*, MASS MOCA, North Adams, MA, January and March 2018).

Darkness, like lightness, causes my body to float. Removing one sense engages the remaining ones in overdrive, highlighting the co-functioning nature of my senses in order to physically respond, interact with, and construct my reality. By using darkness and lightness as

forms of sensory deprivation, both *Hind Sight* and *Perfectly Clear* displace my proprioceptive sense of placement in space. Both encompass my body fully, holding me up while touching nothing at all. I feel myself touching the light, entwined with the dark. What I see is no longer reliable. What I feel is directly connected to the expanse that I see. Through the lack of visual and perceptual stimulation there is a feeling of infinite space, a feeling of my body beginning to float, being held, expanding as it attempts to reconcile and reinvent this new reality. My mind connects the dots of my sensual experience. Turrell's objects of light -- and dark -- affect a change in my embodied self, creating a feeling of full-body virtual touch and disembodied-embodiment of my current placement in the void.



## CHAPTER 5. WHAT IS REAL?

On the eve of Y2K<sup>23</sup> the Wachowskis released their blockbuster hit, *The Matrix*, giving voice to a growing cultural anxiety surrounding computer technology, Artificial Intelligence (AI), and the ontology of human reality. Having swallowed the red pill, escaping from the virtual simulation which passes for reality, before realizing the full ramifications, Keanu Reeves' character Neo is faced with the contradiction of perceptual reality:

“What is real?” Morpheus asks. “How do you define real? If you’re talking about what you can feel, what you can smell, what you can taste and see then real is simply electrical signals interpreted by your brain.” (Morpheus to Neo, *The Matrix*, 1999).

When I try to explain virtual touch in casual conversation, the subject of ‘realness’ becomes a point of contention. What constitutes a real interaction, a real experience, a real sensation? Does something have to be seen, felt, heard, tasted to be real? Does touch have to include an object or a being of solid mass? Seth’s theory posits our shared perception of reality as a “controlled hallucination.” Yet he notes, “when we agree about our hallucinations, we call that reality.” By using art as a lens through which to expand conceptions of ‘realness,’ this study aims to shift the focus of virtual interaction back to the embodied experience. As Kozel notes, one does not have to make physical contact to have a real interaction, or to cause real harm. Reality is a product of our perception, manifesting through our embodied experiences in virtual as well as physical spaces.

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23. Short for "the year 2000," Y2K refers to the widespread computer programming shortcut of using abbreviated two-digit for the year in order to save space (e.g., 99 instead of 1999). This led to a widespread problem when the year changed from 1999 to 2000 and a fear of what would happen when the computer code that regulated infrastructures such as financial records, utilities, and safety appeared to revert back to the year 1900. Computer programmers across the world worked to update the dates to four digits, successfully averting any major issues.

This dissertation has examined instances of virtual touch as real, felt experiences. Rather than being a separation of mind and body, virtual touch and disembodied-embodiment is a sensory experience felt through digital connectivity. Based on energetic connections and a willingness to be vulnerable, virtual touch is not a substitute for tactile touch, but as Kozel explains, it is a “mimetic version with strong physical and emotional qualities” (98). Using live-stream video projection, responsive computer animations, and manipulation of the *ganzfeld* effect and near-total darkness, each of the artworks I have examined engages audience-participants in experiences of virtual touch.

In Chapter Two, beginning with telematic connections between bodies, I challenged notions of liveness as inherently connected to physical presence. Although telematics and telepresence are not new concepts in interactive art, the implications of these works given our current entanglement with social media are just beginning to be explored. The Postal Service’s 2003 video for *The District Sleeps Alone Tonight* uses telepresence as a narrative tool to chronicles a fading long-distance relationship between lead singer Ben Gibbard and his girlfriend. The music video features her sleeping alone on an empty bed, in which Gibbard lies next to her as a virtual projection. As he wraps his arms around her sleeping form, she fails to notice his presence, signifying the absence of both online interactions mirrored with that felt in a long-distance relationship. This representation of disembodied-embodiment signifies virtual touch not only through the distance of cyberspace but as a memory of lost intimacy, shown through the juxtaposition of physical and virtual bodies.

Drawing on the dance practice of CI and the Japanese concept of *ma*, telepresence offers a new realm of possibilities to consider in terms of embodied connections in virtual environments. As spaces that are commonly relegated to the domain of “not real,” virtual

environments and the people who inhabit them are also often considered less-than-real in their humanity because of the lack of visual and physical corporeality. This can clearly be seen in Kozel's experiences in *Telematic Dreaming* as well as the instance of violence in *(dis)embodied in space*. Given the current global conversations surrounding #Metoo, cyberbullying, and recent surge in online dating, the concepts I put forth in this study surrounding virtual touch and connection have the potential to shift the conversation to acknowledge these spaces as having real, embodied repercussions to the human beings on the other end of the digital line.

Expanding the concept of *ma* to include interactions between living bodies and digital processes, Chapter Three continues to challenge the 'real' in terms of interaction and liveness between the audience-participant and digitally processed computer animation. Creating kinetic connections that break free of the traditional frame into which art is bound, both AM-CB and teamLab help to dissolve the barrier between what is considered real and not-real. Through teamLab's immersive environments I begin to expand my analysis of touch as reaching beyond the present moment, examining how teamLab's artwork exists alongside the audience-participant, breaking down borders between material bodies and the digital artwork. The success of *teamLab Borderless*, teamLab's immersive Digital Art Museum, is an example of how attitudes towards digital entanglement are shifting to acknowledge the importance of the embodied subject.

Related, yet conspicuously missing from this study is any artwork based in either virtual reality (VR) or augmented reality (AR). During my research, I did visit several VR installations, including Laurie Anderson's *Aloft* and *Chalkroom*, both of which were on display at MASS MoCA in North Adams, MA during the summer of 2018. *Aloft* takes the audience-participants flying in an airplane just above the earth, the ground below appearing as an old-style map. As the

airplane begins to break apart the audience-participants continue on their path through the sky, able to grasp the floating debris which then transports them to alternate worlds. The feeling of floating above the earth, coupled with Anderson's soothing voiceover, creates a sensation much like that of being held in Turrell's *Perfectly Clear*. Although perceptual markers still exist in the VR world, the integration and ability to move freely with the head-mounted display (HMD) creates an interactive environment in which the senses activate to incorporate what is seen in VR into the embodied experience.

Also at MASS MoCA, *Chalkroom* places audience-participants in an environment in which self-propelled flight is the main form of locomotion, giving them the ability to soar through the ruins of a maze-like, stone slab structure. Throughout the experience, audience-participants can freely explore the various rooms that tell Anderson's non-linear story. One particular room, which reveals chalk writing covering the walls, can be activated so that the letters are pulled away and swirl around the virtual body of the audience-participant to form a whirlwind of chalk-language, creating a random configuration of letters similar to AM-CB's *Letter Tree*. However, it was not the jumble of letters that drew me to this room, but rather the experience of being buffeted by the cloud of chalk letters swirling around me, so clearly that I could feel the wind from their movement against my face. This feeling of dimensionality and tactile sensation through VR technology deserves more time than I have given in these two short paragraphs. Given the popularity and advancements in VR, I would even say it warrants a study of its own.

Similarly, AR has entered mainstream culture as a less cumbersome and more accessible alternative to VR, becoming popular with the 2016 release of *Pokémon Go* by Niantic, Inc. Rising to the top of the charts for cellular application games on its first day (Barrett), *Pokémon*

*Go* changed the nature of gaming overnight. No longer were gamers hiding in the confines of basements and garages. *Pokémon Go* required a venture to the *outside*. It required walking. It required going to new places and interacting with the material world. As an example of what Gregory Langner terms “cartoon corporeality,” *Pokémon Go* physically engages the user, and “materially surpasses the mere aesthetic of *Pokémon* ‘appearing in the real world’” (15). While most AR applications require little more than pointing one’s cellular phones at a pre-programmed image to activate the AR animation, Langner points out that *Pokémon Go* “introduced the potential for augmented reality to stimulate a fundamentally physical experience, rather than a primarily visual one” (44). More than just an AR game, *Pokémon Go* truly bridged the gap between the virtual and the material, engaging the body of the player with the world at large.<sup>24</sup>

Although still a relatively new technology, AR recognizes the fundamental importance of the embodied experience and the need for accessibility and ease of use. While VR is still a novelty item because of the high cost of the equipment for both artist and audience-participant, the lack of external equipment required (only a cell phone) has made AR applications popular in such venues as *Living Wine Labels*, a collection of wine labels that when activated tell stories from real-life crime to supplementary snippets from the television series *The Walking Dead*. Exploring AR in their art, AM-CB’s recently published monograph, *Snow does not make sense* (*La neige n’a pas de sens*) features six pages of artwork that can be activated by downloading their AR application. Aspiring to “create living and sensitive digital media” (*Snow* 52), AM-CB

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24. Although other platforms like the Microsoft Kinect and Wii engage the player in a full-body experience, *Pokémon Go* is a more embodied experience in that it requires the user to take the game to the outside world, entangling the reality of the game with the reality at large.

does not limit themselves to any one type of digital medium, but instead they explore the ways that the body and the digital can connect, coming alive through interaction.

Taking a step back from traditional mediatized performance, Chapter Four delves further into notions of disembodied-embodiment by examining perceptual and visual deprivation in the works of James Turrell. Through experiences of total darkness or overwhelming light, Turrell's artworks elicit a sensation of being held gently in space. This affective feeling of touch moves beyond the fingers and hands to seep into the whole body, cradling the audience-participant in the light or dissipating the body in the dark, and expanding conceptions of touch, intimacy, and connection. Still rooted in the body, Turrell's sculptures of light are not an argument against the digital, the body, or the real, but rather place the audience-participant in a position to see the world from an alternate perspective. Like Morpheus' question to Neo from the Wachowskis' movie *The Matrix*, Turrell asks the audience-participant to reconsider the question, "what is real?"

### **Leaving the Body Behind Also Leaves the Virtual Behind**

*The year is 2018.*

*"Soon we won't even need to use our bodies!"*

*A.'s eyes light up as he echoes the sentiment that is familiar within the hi-tech, digital arts, and sci-fi community. Now, walking through the exhibition hall at SIGGRAPH 2018,<sup>25</sup> one of the largest digital arts conferences in North America, we pass booth after booth of cutting edge technology designed to transport the audience-participant into digitally-created worlds,*

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25. AMC SIGGRAPH: Association for Computing Machinery's Special Interest Group on Computer Graphics and Interactive Techniques.

*enhancing the user's experiences of reality, ability, and physical possibility.* (Conversation with the author. SIGGRAPH 2018, Vancouver, British Columbia, Canada July 2018).

Reinforced through cultural media tropes and the persistence of Cartesian dualism, digital disembodiment has persisted in enticing human beings with the promise of freeing the mind from the limitations of the physical body. Yet, as I walk through and experience the various exhibits at SIGGRAPH 2018, each one relies heavily on body-centered knowledge to transport the spectator into virtual, augmented, or otherwise digitally mediated environments. The majority of exhibits couple haptic response devices and wearable apparatuses to make the virtual component seem *more* realistic, connecting sensations of weight, touch, and taste to fully engage the physical body in the virtual experience. As Massumi notes in his argument for the superiority of the analog, the “[t]he processing may be digital – but the analog is the process” (142). Referring to the body, the analog is neither the digital or the virtual, but rather the means through which the digital can be experienced, creating the virtual. Denying digital embodiment only increases the anxiety and fear surrounding digital technology. Through this study, my hope is to help shift the conversation away from the disconnected mind-body dualism that has pervaded popular culture, and toward an understanding that all experiences are necessarily rooted in the body.

Anxiety surrounding a machine rebellion has long tugged at the collective consciousness. This anxiety can be traced back to Karel Čapek’s 1920 science fiction play *R.U.R.* (Rossum’s Universal Robots), in which the word *robot* was coined as a hybrid organic-inorganic invention created for the purpose of serving human beings needs and desires. Much like Ridley Scott’s 1982 film *Blade Runner*, in which life-like androids called Replicants blur the lines between human and machine, Čapek’s robots struggle with their programmed imperative to serve their human masters and the free will imbued in them by their ability to have self-conscious thought.

Fast forward twenty years to *The Matrix*, in which the machines have overthrown their mortal creators, flipping the master-slave relationship and fulfilling humanity's deepest fears about the dangers AI.

Western culture continues to be both deeply entangled in digital technology, and yet still negotiates the ways in which we view our relationship and reliance on it, specifically in terms of the body. Recent advances in AI have led to breakthroughs in medicine, crime prevention, and even AI artists and artworks. *Poetic AI*, by Istanbul based digital creation studio Ouchhh, uses an AI algorithm to create its immersive installation similar to those described in this dissertation. The digital animations, sound, and lighting of *Poetic AI* are the product of the creative AI processing of “millions of lines of theory, articles and books about light, physics, [and] space-time” (Lalueta). Similarly, AI pop sensation Hatsune Miku is a hologram that uses a voice synthesizer to perform ‘live’ at sold-out shows worldwide. The first Vocaloid, or Yamaha singing voice synthesizer, developed by Crypton Future Media, Miku's voice is modeled from Japanese voice actress Saki Fujita, and her name translates to first (初 *hatsu*), sound (音 *ne*), and future (ミク *miku*), thus meaning “the first sound of the future” (“Who is Hatsune Miku?”). While AI artists and artworks are ultimately created by human artists, their existence challenges the superiority of humans over machines.

Well into the 21<sup>st</sup> century, we are living in the full realization of what Donna Haraway described as the cyborg ontology: “a condensed image of both imagination and material reality” (8), in which our lives are enhanced -- and often lived -- through our entanglement with digital technologies that allow us to extend our mental, emotional, and physical capabilities. We both want to become the machine and fear the potential of the machines we have created. And yet, despite our anxieties surrounding humanity's ever-growing codependence not just on computers,



but also on artificial “personalities” such as Alexa and Siri, we continue to create these digital companions, becoming increasingly dependent on them. But, unlike the artworks in this chapter, Alexa and Siri -- like their predecessor ELIZA -- are comprised solely of words and language and do not possess bodies of their own. And it is through our bodies, as Hansen writes, that “human experience actualizes the virtual potential” (19). It is through the embodied experience that interactions possess the quality we call ‘liveness.’

### **Virtual Touch: Towards a New Ethic of Human Behavior**

Grounded in embodied presence, the artworks in this study complicate connection, intimacy, and touch, highlighting an important area of research in terms of both scholarship and artistic practice. Despite culturally ingrained aspirations towards leaving the body behind in favor of the machine, there is a recent push in digital and virtual scholarship to focus on the primacy of the embodied experience. However, even as a means to expand the human experience, Justin Bailey points out that cyberspace technologies “fundamentally reshape us” (211-212). Telematic culture, or the “transition from ‘reality’ to ‘virtuality’” as Roy Ascott argues, necessitates a redefinition of how we think of “culture, in values, and in matters of personal identity” (246). Calling for a collaboration between artists and scientists, Ascott argues that we need “to establish not only a new creative praxis, but also a new value system, new ordinances of human interaction and social communicability” (246). Through looking at virtual spaces as fundamentally embodied, this study is poised to engage in the larger debate surrounding digital ethics and a redefinition of what it means to interact in the age of Web 2.0.

Written in 1990 at the dawn of telematic performance and global internet connectivity, Ascott’s essay, “Is There Love in the Telematic Embrace?” identifies several cultural phenomena that continue to be relevant today: specifically, the need for “new expressive means” (241) as

digital and virtual interactivity continue to challenge and shift how we perceive ourselves, our communities, and our place in the world. Each of the artworks in this study works in some way to challenge perceptions of intimacy and touch, activities that I argue have become ‘invisible’ effects of our entanglement with social media and constant connectivity. In essence, these performances reveal our everyday interactions, doing what Ascott claims is the “overarching ambition of both art and science throughout this century: to make the invisible visible” (243). As performances, they reflect how digital and virtual technologies have not only been integrated into our culture, but have also changed the ways in which we connect with other living beings, how we experience intimacy, and I argue, our embodied perception of virtual touch.

### **Epilogue: Joy**

*“What is the purpose?” the confused man asks, as he reaches for the paper towel I offer to dry his hands.*

*As I am just a volunteer with the conference, I motion to the presenter who speaks the most English, a young Japanese woman with an intense gaze.*

*“What does this do?” the man asks again.*

*Genuine confusion seems to bubble up in his voice, even as he looks longingly at the fairy gently floating on the surface of the water, an image he held with tenderness just moments before (figure 5.1). The woman listens, comprehends, and then points with confidence to the detailed rationale posted on the side of the booth, which reads: “Purpose: Attractive Water Surface.” The purpose, put simply, was joy. (Personal experience, Fairlift: Interaction with Mid-air Images on Water Surface, SIGGRAPH 2018, Vancouver, British Columbia, Canada, July 2018).*



Figure 5.1. *Fairlift: Interaction with Mid-air Images on Water Surface*. Photo by Yu Matsuura, Courtesy of Naoya Koizumi.

Above all, all of the artworks that I chose for this dissertation brought me joy. Without joy I could not relax, I could not feel, I could not feel comfortable to let my skin be vulnerable and experience the touch that was offered.

Developed by Yu Matsuura and Naoya Koizumi from the University of Electro-Communications in Chōfu, Tokyo, Japan, and premiered in the Emerging Technologies section at SIGGRAPH 2018 in Vancouver, BC, Canada, *Fairlift: Interaction with Mid-air Images on Water Surface* uses a concept they call “human-centered computing.” Unlike the other works in this study, *Fairlift* uses water surface reflection rather than video projection to allow the audience-participants to scoop up the moving image of a virtual fairy. Because of the physical medium of the water surface, the focus is more about the interaction between the water and the body -- or the hands -- of the audience-participant rather than the digital technology that is still at work. Reminiscent of Lanier’s plea to shift focus back on the human and Hansen’s insistence on the importance of “motor activity” in engaging with the virtual, Matsuura and Koizumi highlight the action of the body rather than the technological process. Through this shift, *Fairlift* represents

a future direction for both aesthetic art and everyday life, shifting focus from the technologies that connect us to the living beings that exist on either end.

## APPENDIX A. IRB EXEMPTION



### ACTION ON EXEMPTION APPROVAL REQUEST

**TO:** Loretta Pecchioni  
Communication Studies

**FROM:** Dennis Landin  
Chair, Institutional Review Board

**DATE:** November 29, 2018

**RE:** IRB# E11396

**TITLE:** (dis)embodied in space

Institutional Review Board  
Dr. Dennis Landin, Chair  
130 David Boyd Hall  
Baton Rouge, LA 70803  
P: 225.578.8692  
F: 225.578.5983  
[irb@lsu.edu](mailto:irb@lsu.edu)  
[lsu.edu/research](http://lsu.edu/research)

**New Protocol/Modification/Continuation:** New Protocol

**Review Date:** 11/28/2018

**Approved**   X   **Disapproved**           


**Approval Date:** 11/29/2018 **Approval Expiration Date:** 11/28/2021

**Exemption Category/Paragraph:** 2b

**Signed Consent Waived?:** No

**Re-review frequency:** (three years unless otherwise stated)

**LSU Proposal Number** (if applicable):

**By:** Dennis Landin, Chairman 

### PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –

#### Continuing approval is **CONDITIONAL** on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects\*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. **SPECIAL NOTE: When emailing more than one recipient, make sure you use bcc. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.**

\* All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>

## APPENDIX B. PUBLICATION AGREEMENT

### Exhibit B

#### Author Copyright Agreement for University Libraries-Published Journals

##### Authors who publish with this journal agree to the following terms:

1. The Author retains copyright in the Work, where the term "Work" shall include all digital objects that may result in subsequent electronic publication or distribution.
2. Upon acceptance of the Work, the author shall grant to the Publisher the right of first publication of the Work.
3. The Author shall grant to the Publisher and its agents the nonexclusive perpetual right and license to publish, archive, and make accessible the Work in whole or in part in all forms of media now or hereafter known under a Creative Commons License or its equivalent, with the understanding that the above condition can be waived with permission from the Author and that where the Work or any of its elements is in the public domain under applicable law, that status is in no way affected by the license.
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5. Authors are permitted and encouraged to post online a pre-publication *manuscript* (but not the Publisher's final formatted PDF version of the Work) in institutional repositories or on their Websites prior to and during the submission process, as it can lead to productive exchanges, as well as earlier and greater citation of published work (see [The Effect of Open Access](#)). Any such posting made before acceptance and publication of the Work shall be updated upon publication to include a reference to the Publisher-assigned DOI (Digital Object Identifier) and a link to the online abstract for the final published Work in the Journal.
6. Upon Publisher's request, the Author agrees to furnish promptly to Publisher, at the Author's own expense, written evidence of the permissions, licenses, and consents for use of third-party material included within the Work, except as determined by Publisher to be covered by the principles of Fair Use.
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  - b. the Author has not transferred, and will not transfer, exclusive rights in the Work to any third party;
  - c. the Work is not pending review or under consideration by another publisher;
  - d. the Work has not previously been published;
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Author(s): Naomi P. Bennett

Date: 2/4/19

Article Title: Floating in Space: DisEmbodied Experiences of Being Held  
Tightly by the Vast Emptiness in Turrell's 'Perfectly Clear'

Signature: 

Journal Representatives: William W. Lewis  
and Amanda Rose Villarreal

## APPENDIX C. *BEING PRESENT* SCRIPT

# *Being Present*

A devised performance

**Created by the Ensemble:**

Naomi Bennett, Jason Jedrusiak, Evan Schares, and Gabrielle Viguiera  
(with additional creative input by Josh Hamzehee and Shanna Lambert)

**Director:** Naomi Bennett

**Assistant Director:** Evan Schares

**Advisor:** David Terry

**Respondants**

Stephanie Heath and Hal Lambert

**Show Crew**

**Lights and Qlab Operator:** Giles Gomez

**Skype and Network Operator:** Josh Hamzehee

**Technical Crew**

**(Baton Rouge, LA):** Josh Hamzehee, Shanna Lambert, Greg Langner

**(Cambridge, MA):** Robyn Gesek, Giuliana Funkhauser

**(Ogden, UT):** Stephanie Heath

**Technical Support**

**WiFi Networking, Video Conferencing:** Rene Guitart. **Qlab, Video Conferencing:** Fritz

Davis. **Qlab Support:** Sam Kusnetz and luckydave at Figure53. **General:** Clare Bennett,

Michael Burton, Robert J. LeBlanc, Matthew Ragan

**Box Office:** Adam Harvey

**Poster Design:** Brock Bybee

**Program Design:** Cynthia Sampson

**Lobby Display:** Shanna Lambert

**Documentation:** Michaela Todaro

**Additional Thank You** to David Terry, C.C. Collins, Tracy Stephenson Shaffer, Trish Suchy, Loretta Pecchioni, Savannah Ganster, Eryn Johnson, Amanda McGarrity, Sarah Pearlstein, Toby Chandler, Jasmine Alexander, and Clinton Degan.

**Performed (present) by** Jason Jedrusiak and Gabrielle Viguiera

**Guest performances (present) by** Rebekah Whitacker

at

**HopKins Black Box**

Louisiana State University, Baton Rouge, LA

**(Cambridge Location:** Community Art Center, Cambridge, MA)

Wednesday thru Monday, November 16 – 18, 2016

**Pre-Show.**

**Typing.**

*(PRESET: Gabi sits USC at her computer, "typing")*

**SFX:** Typing

**Scene 1.**

**(mis)Connecting.**

**SFX:** *ODESZA- How Did I Get Here (Extended Version)*

**VFX:** *Bekah & I (FB) - setting up connection/misconnection*

**/mixed-crossing transition to:**

**VFX:** Slack Text - connecting/1st rehearsal

**Scene 2.**

**Nani.**

**SFX:** Gabi: Voice Only.

**VFX:** *(Bolded lines will be projected **BIG**).*

We met on a Kristin Chenoweth fan forum about six and a half years ago.

**I'm not sure why we clicked so immediately,**

**But it honestly felt effortless**

Soon after we became fast friends,

We'd log on in the evening and **chat till 1 or 2 in the morning.**

That graduated to skype calls, etc.

Growing up I always **struggled to relate to kids my own age**, and in high school I had a lot of health problems that put some distance between me and my peers at times. This group of people made me feel so at home, Nani especially.

Four months later I was on a plane with my family to New York to meet a bunch of them in person and see Kristin in Broadway.

Nani and I have **just always understood each other on a deep level**, and I've always felt I could **have conversations with her that I wasn't able to with other friends.**

**Scene 3.**

**/First Impressions/Forming Descriptions.**

**VFX:** *Slack Text*

*(Gabi box sequence / Looking for a place to hide)*

**Jason** [Voice Only]:

Energetically I envision gabi as sprite yet cozy, creative, poppy, inquisitive, curious, super hugger, calm and cool. Red warm tones. Some curls or waves, brown eyes. Warm hands.



#### Scene 4.

##### Expression/Isolation.

**Gabi:**

*(Sits on US box).*

I feel like often times, for me personally, it can be easier to express yourself clearly when writing things out. I think when I speak sometimes everything gets jumbled and my thoughts don't come out correctly. So when I get to know someone this way, I think it's more me sometimes.

#### Scene 5.

##### Describing Jason.

**Gabi:**

*VFX: Jason: Hands Dance ObO, projected on the inside of the box lids*

When I hear his voice in my head it's cheerful but relaxed and steady.

A reassuring presence.

I feel like he's physical, someone who gives great hugs and high fives.

Very warm energy, a great and attentive listener, genuinely interested in other people and their stories.

Dark hair.

Lighter eyes, glasses.

Super wide inviting smile.

#### Scene 6.

##### Without My Eyes.

**Jason:**

*(Gabi starts from sitting on the box, dancing with Jason, repeating line: "**Without my Eyes.**").*

**without my eyes** stretching out **nestled against earth**

*(Gabi moves to first screen).*

against rock **my dreams dance** with the water trickling below wrapping the smell through my clothing

*(Gabi moving to the second screen).*

running over the day framing the mud between my toes zipping up open through between all the connections, the tent is open who will step inside to taste the safety of snuggling near the earth

**Scene 7.**

**NAILED it!**

*(Super high energy on each line, with long pause in-between waiting for a response: Gabi and Jason mimic each other's exaggerated positions).*

**Gabi:** *(Jumping forward).*

NAILED the hair, friend!  
:raised\_hands::skin-tone-3:  
Your mustache is AWESOME!!

**Jason:**  
totally!!!! thank you your hair is awesome  
super huggers unite

**Gabi:**  
woop woop!!!  
:smile:

**Jason:**  
are ur ear lobes disconnected

**Gabi:**  
How tall are you @jasonthatsme ?

**Jason:**  
fairly tall

**Gabi:**  
[attached]  
You tell me?

**Jason:**  
6 feet

**Gabi:**  
4'11" here  
:joy:  
Haha!!!

**Jason:**  
lol shucks i guess  
haha  
its my selling point

**Gabi:**

Noooo!

:joy:

**Jason:**

[attached]

**Gabi:**

Squish!

:heart:

**Jason:**

wuzzy.

**Gabi:**

:smile:

## **Scene 8.**

### **Presence/First Impression.**

**Jason** *talks about "Gabi" vs "Gabby"*

*(Gabi goes to each screen, touches to make it ripple, then words appear):*

time pulling different directions at once.  
feels abstract and hard to define  
time to me feels stressful  
time it's fun  
time is something I always feel like I need more of

Swirls swirls swirls maze swirls maze  
childhood clock  
Start stop number sleep  
continuous repetitive pattern  
day to day grind repeat  
when blue depth lacking cut off traffic jam rush  
slippery record scratch swirl swirl swirl go  
a spinning record of time.  
progress without really going anywhere  
hypnotic hypnotize

**Scene 9.**

**Beach. Balls. Bouncing.**

*(Hand Dance: attention to connecting)*

**Gabi:** *(Slow, smooth)*

Energy moving in all directions,

**Jason:**

light and airy,

**Gabi:**

chaotic collision,

**Jason:**

each interaction binds one to another and another until energies are directed in the same way,

**Gabi:** *(Moves faster, smooth)*

growing larger,

**Jason:**

more momentum,

**Gabi:** *(Thrusting)*

more power,

**Jason:**

some break away as impact increases,

**Gabi:**

start smaller groups like satellites,

**Jason:** *(Separate, but connecting. Gabi walks to Center Panel/Jason shifts):*

*VFX: Jason "pops" between screens*

*(Gabi tracks Jason's "movement")*

pop pop pop,

**Gabi:**

colors swirling together motion blurred,

**Jason:**

shapes forming and dissolving,

**Gabi:** *(Gabi follows Jason's image to SL panel)*

the ebb and flow of constant motion,

**Jason:**

compare and contrast,

**Gabi:**  
opposite poles,

**Jason:**  
units in a chain reaction up down up down side diagonal

**Scene 10.**

**Wave.**  
*(Gabi lifts rear box lid, erupting Emoji Balls)*

**Gabi:**  
The first time Nani came to stay at my house. When we went to pick her up from the airport my little brother and I ran from halfway down baggage claim and nearly knocked her down  
*(Big Body Story)*

**Gabi:**  
units in a chain reaction up down up down side diagonal

**Jason:**  
opposite poles,

**Gabi:**  
compare and contrast,

**Jason:**  
the ebb and flow of constant motion,

**Gabi:**  
shapes forming and dissolving,

**Jason:**  
colors swirling together motion blurred,

**Gabi:**  
pop pop pop,

**Jason:**  
start smaller groups like satellites,

**Gabi:**  
some break away as impact increases,

**Jason:**  
more power,

**Gabi:**

more momentum,

**Jason:**

growing larger,

**Gabi:**

each interaction binds one to another and another until energies are directed in the same way,

**Jason:**

chaotic collision,

**Gabi:**

light and airy,

**Jason:**

Energy moving in all directions,

### **Scene 11.**

#### **Milk Drop/Perfect Moment.**

**Music:** Yellow Brick Road – [Play on Computer/On-Stage]

*(Gabi goes to the onstage computer, searches through iTunes, plays music. Slowly walks back around to boxes while Jason speaks.)*

**Jason:**

a milk drop photo. one drop getting caught at just the right time into a warm container  
a rope, a sturdy knot. If that makes sense  
a moment of perfect timing  
something to hold on to  
a lifeline

**Gabi:**

he was a lifeline for sure, and I found out later I was one to him  
I didn't see that at first.

*(Gabi pulls an emoji ball out of her pocket, blows it up. Tosses it gently to an audience member. Jason catches it.)*

## Scene 12.

### MOMENT OF CONNECTION.

**Gabi:**

*(Gabi goes to computer, looks up old conversation with Nani - can have text...)*

Nani and i were discussing something, I have no idea what, probably something **trivial and silly** but eventually it **evolved into deeper** conversation about family and friendship and what it means **to be there for somebody**,

but I realized in that moment how in synch our beliefs were about that particular thing and feeling like I could tell her every thought I had ever had up until then and she may not agree but she'd understand them and why I felt that way, even maybe I didn't have the correct words to explain.

All of that sort of **hit me in a wave**, and it felt **warm and powerful** and a little scary, honestly, because being **deeply connected** with someone also means being particularly vulnerable to them in particular. They can **hurt you more deeply**. And there are **moments when she's hurting** or going through something and I **feel it so deeply**, her hurt, because of this, it's the craziest and most amazing thing. It was the first time i'd felt that way about someone who wasn't family, but in a sense it was **deeper and more intense** because of the physical distance. Feeling that way about someone you rarely, rarely (or never) see in person is such a strange phenomenon.

## Scene 14

### What Jason's Sees/Imagined Interactions.

*(Replay of rehearsal, reapeating, skipping, slowed and sped up with the following text A Visual Poem.)*

**Music:** "One Day They'll Know"

**Beauty** is something Im training myself to see again - my sense of time seems to be a upward battle and in my constant rush its so easy to stop and appreciate whats out there its like beauty exists in so many different forms but were only trained to see certain kinds

*(During this sequence, Gabi shuts down computer, closes it, takes a moment, walks to down stage box. Sits.*

## Scene 15.

### Where Are We Now.

**Gabi:**

*(Gabi sitting on Stage Left box, with large Ball. Jason slowly gets up, walks away, getting more distant throughout.)*

The two of us always seem to have a closeness that we can't shake, but things are different now.

Nani's been through some difficult things,

I've been through some difficult things,

And I'm growing up.

She gets farther and farther away, and I have to work harder to reach her

*(Jason moving farther away.)*

This used to bother me greatly. The last I saw her in person was more than four years ago. We have a deep history and you can still feel that, but I find it's getting harder to hold on to the friendship. I'm sure she feels it too. But ultimately we're both there for each other when we need to be.

When I ask her how she's doing, she just says:

**Jason:**

"Fine"

**Gabi:**

Finally, I told her I knew this was a lie. That seemed to get through to her again. I just hope she doesn't drift away for good. I wouldn't be angry. I'd just always wonder how I could have helped.

**Scene 15.**

**Moving On.**

**SFX:** *"One Day They'll Know"*

*(Gabi looks at Jason, walks toward audience, stops in line of the webcam, projected looking at Jason.)*

*End.*



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## VITA

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