

DANCE HACKING: DIGITAL TECHNOLOGY AND THE PERFORMING BODY

by

George Scott Hardwig

A thesis submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Master of Fine Arts

Department of Modern Dance

The University of Utah

August 2014

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The University of Utah Graduate School

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The thesis of George Scott Hardwig
has been approved by the following supervisory committee members:

<u>Ellen Bromberg</u>	, Chair	<u>04/25/14</u> Date Approved
<u>Satu Hummasti</u>	, Member	<u>04/25/14</u> Date Approved
<u>Eric Handman</u>	, Member	<u>04/25/14</u> Date Approved

and by Stephen Koester, Chair of
the Department of Modern Dance

and by David B. Kieda, Dean of The Graduate School.

ABSTRACT

The questions posed in this research involve the massive effects of the cyber-revolution on the human experience of embodiment and identity formation. Our technologies have begun to merge with the human body in new and unforeseen ways, from the development of smartphones, to new advances in Internet technologies, to the motion capture gaming systems of KINECT infrared cameras. This revolution has affected fields as wide-ranging as dance, gender studies, digital technologies, media studies, music, the visual arts, economics, and socio-anthropology. The hybridity of digital self and corporeality is permeating all aspects of life, from the growing use of projections in music and dance performances to the many permutations of human identity online on sites like Facebook or Twitter. For this research, I have focused on the effect of digitally interactive performance media in the field of dance, and how the performing human body-mind is impacted by virtual spaces and digital performance practice. With a focus on my own work (from digitally integrated live performances like *the words we missed* to screendance films like *we walk blood earth*) and the creative work of other dance artists, I've tried to investigate this constantly shifting dialogue between the human body and our digital counterparts.

In my creative research with dancers, I've become aware that the ripples of what might be called "active digital translation" are being felt across disciplines and impacting

our society and culture in fascinating ways. It has impacted the globalization of the human race, the spiraling, outward momentum of technological innovation. I've posed the questions: can the integration of digital technologies in the practice and performance of dance result in a different kind of embodiment and identity formation, one that meshes the physical and the virtual into an aesthetically, politically, and kinesthetically new sensation? What are the implications of this for the dance field, for performers of the physical arts, and for our corporal bodies within society? I have found that this newfound potential for identity formation, virtuosic transformation, and digital embodiment in the cyber age has put forth many exciting and challenging prospects for the human body.

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INTRODUCTION

APPALACHIA TECH

As a child, I grew up in a remote farmhouse in the Appalachian mountains of southwest Virginia. It was a rural place at the end of a road with a sign that read “end state maintenance,” a 30 to 45 minute drive from the nearest town. The mountain families would shoot deer, tan the hides, freeze the carcasses, and eat venison for months. It was a place of boots and raw bodies. In the winter months, when snows would block the roads and ice would make the mountains impassable, and the outhouse and water furnace would freeze along with our well water, it felt like a place of isolation. Hunting, gardening, and taking care of the animals were priorities for the people who lived in these mountain hollows, and it was from this place that my penchant for fantasy and exploration began. It was also, consequently, the beginnings of my fascination with technology, the brick ovens that baked clay for our pots and cups, or the simple pulleys of the clothesline swinging in autumn.

I still remember my childlike wonder at the functional machinery of dishwashers, toilets, and hoses, which were not a given but rather a luxury. The clanking of my father’s new boiler furnace and the calls of crows sang me to sleep. It was around this time that I first encountered computers: an ancient Windows PC at a school friend’s house (on which I would beg to play Minesweeper for hours on end), an old Apple

clunker in my sister's dorm room, and the library computers in secondary school that for the first time began to have access to the vast reaches of the Internet. I logged on to chat rooms and delved into the vast and often horrible alleyways of the web, portrayed myself in anonymity as older, more experienced, and more intelligent. I was enthralled.

Into my teens, technology became my intellectual, metaphysical, and geographical escape from the limitations of my rural Virginia life. The surreal spaces of the digital became my outlet for exploring myself, and a space of play: I recorded music, as I had been trained as a folk musician on banjo and guitar, and created opus after postmodern opus fusing folk music and electronica through the wonders of recording software. These wild graftings of folk art and digital music were, though I hadn't yet realized it, the beginning of my work as a digital artist. It was also the space of games, my first interaction with virtual realities and imagined digital spaces. I played many games late into the mountain nights, constantly fixated on reaching a new level (in old puzzle games like *Mist*), raising cities and empires, or creeping through dungeons and fighting monsters. By creating virtual avatars, new digital bodies for myself, I was able to escape the physical world and find a multitude of alternative possibilities for self-identification in super-real environments of splendor and heroism. It was a place of self-fulfillment that I had only been able to find in books, for humans have long found this kind of vicarious heroism in those fantastical pages, but now (imagine my youthful delight) I could physically become the digital hero in my own epic saga.

Since that time, I have been fascinated with concepts of identity formation and the potential of creating other bodies and other visions of myself through art. Whether through the avatars of popular video games or through the mediated identity formed

through language (my undergraduate thesis in English was a study on “performing identity” in Shakespeare), I have always been keenly aware of our human potential to create and mold our own identities. With the recent surge of public interest in our online bodies (Facebook, Second Life, *World of Warcraft*) and telematic relationships (Skype, Facetime), there is a constant question of how technology can provide new worlds of identity creation and embodiment, worlds that allow us to construct and reconstruct our bodies and ourselves in completely new ways. As a gay man raised in the rural American south, the knowledge of how society constructs my gender, sexuality, and body has been a constant friction against the boundaries of culture and subculture. Perhaps I have always been looking for ways to physically and symbolically reconstruct myself in a new image. Certainly, in the alter-spatial dreamworlds of the digital age, anyone can be anyone, these constructions of politics and body can be subverted, and I see the potential of both terrible risk and limitless freedom in that.

I Sleep in Castles Far Away: On Video Games

During my pivotal teenage years I discovered an incredible fantasy experience from an open-ended role-playing game set in an entirely virtual world. A recent release from the same video game series, *The Elder Scrolls V: Skyrim*, has been hailed as one of the greatest games ever produced. It is a series of games set in a vast and beautiful high fantasy world that players can choose to interact with in any way they see fit, in any identity that they choose, allowing what Lisa Nakamura called “identity tourism” (Nakamura, 2000, p. 1). Like the fluidity of gender, politics, personality, and body that can be found in internet chat rooms, forums, and MUDs (multi-user dimensions like

Second Life), these identity vacations have been the inspiring force of role-playing video games. It has also been the focal point of my research as a dance artist. Video games are the place where improvisational play, the performance of identity, and fluidity of body all collide.

Numerous customizable bodies are available from a variety of different human and nonhuman races, allowing powerful avatars to be built and crafted in numerous ways: athleticism, intellect, skills, and relationships. Like most fantasy games, it involves questing into dungeons to defeat epic monsters, undead, dragons, and evil wizards. But there are other possibilities as well: to steal, murder, build houses, marry, adopt children, and influence an ever-changing political landscape in an inherently interactive world. At the center of this all resides a super-human avatarial body, the way through which players vicariously explore themselves in a virtual realm. It is a distinctly disembodied experience, but my digital existence as a wood elf sorcerer in the mythic world of Tamriel allowed the markers of my identity to fall away at a time when I felt most trapped by my corporeal, isolated existence. I craved disembodiment, escape, and freedom from the material world.

But it is these forms of virtual disembodiment that create moral and philosophical issues, and though many virtual reality scholars believe it to be healthy and deeply satisfying, there are others who identify the deep dangers of this kind of fantasy disembodiment:

We create avatars to leave our bodies behind, yet take the body with us in the form of codes and assumptions about what does and does not constitute a legitimate interface with reality – virtual or otherwise... the worlds we create – and the avatarial bodies through which we experience them – seem destined to mirror not our wholeness, but our lack of it. (Gee, 2004, pp. 123-124)

Gee delineates this process of “leaving the body behind” as expressive of an existential sense of something lacking in our real-world bodies, so that we create avatars to interact with a world somehow more perfect than the one our biological shells inhabit. Thus, the growing popularity among these games reveals a “lack of wholeness,” a deep sense among millions of people that our body and the world it exists within is somehow not enough. It is representative of that “mismatch” between our bodies and the world set against our bodies, the rift between fantasy and reality. These are fictional worlds where the body channels magic, can change into the shapes of animals, walk through walls, fly, where the body has the ability to teleport. Abilities like teleportation, flight, invisibility, and other supernatural powers have been a fascination of mankind for millennia, and the source of magic for our most cherished legends and fairytales. In a way, these avatars allow the human body to live within the most vaunted dreams of humanity, to transport the self into a realm of symbolically reified desires.

In games, like in much of my creative digital-dance work, it is not just the virtual body that becomes super-real, but the very environment the body exists within. According to Castronova (2003), “the Earth has a physical environment, with certain laws of motion, gravity, force, and so on...our bodies must react to the forces imposed on them by the Earth’s environment” (p. 5); similarly, the avatar must respond to the limitations and rules of its fictional world. But it is the discrepancy between the two, says Castronova, where the truly subversive things start happening. In the creation of virtual worlds, “reality must be bent” for the game to be considered interesting. Some games, such as *Halo*, bend the mechanics of gravity, force, and motion. Other games, like *World of Warcraft* and *The Elder Scrolls*, include the existence of “magic,” which epitomizes

the ability to make the impossible possible. Symbolically, the existence of magic in fantasy games represents the magic of technology, its freedom and power to subvert corporeal norms. The body can heal in seconds from the brink of death, slow down time to an infinitesimal tic, or harness the elements to their command. These sorts of games are even based in fantasy worlds (that mimic our own), where the laws of society, ethics, race, and political hierarchy exist like nothing seen on earth.

These are spaces outside of society where codes of morals and ethics are bent, where murder, thievery, and warfare have their own rules that, in general, vary drastically from our contemporary perspectives. Participants in one study, players of the open-ended geographical and moral wilderness of *The Elder Scrolls*, claimed that “they would never steal anything outside of virtual space,” but that “ethics ‘are a bit looser’ in the virtual worlds of video role-playing games” (Waggoner, 2009, p. 82). Players noted how they were able to steal and murder quite freely, allowing their character to tread the evil path even though in their real-world societies, this would not have been possible. Castronova (2003) calls this the pleasure of “visiting virtual worlds” (p. 3), a sense of freedom from physio-social constraint that allows players to explore alternative, sometimes pure and beautiful, sometimes dark and violent, aspects of themselves. Video games, for me, were a dance both of space and identity, environment and subject. The body is mutated, allowing players to explore facets of themselves and free themselves from their geographic or ethical/societal limitations.

Jane McGonigal, in her groundbreaking *Reality is Broken*, claims that the pleasure of inhabiting these worlds stems from an innate desire for “self-improvement,” but these are also worlds where death does not exist. In *World of Warcraft* and other

massive online role-playing games, players have the ability to die and resurrect an infinite number of times without any permanent consequence to the avatar-self. These are virtual bodies that do not show fatigue – they do not age, grow sick or hungry; they are eternal and immortal digital entities, all in the shape of a humanoid body. These are places where violence, warfare, and killing are often morally justified within the confines of the virtual world. In fact, for games like *WoW*, it is an absolute requirement for advancing in the game: you must kill things and take their stuff (a process referred to in gamer lingo as “looting the corpses”). The avatar then is certainly a tool for identity exploration, but they are also posthuman and postsocietal, perhaps displaying a desire for some darker freedoms that deep down we wish we had: the freedom to kill, the freedom to steal, and the freedom from mortal existence. Katherine Hayles writes about the dangers of what she calls “becoming posthuman”:

If my nightmare is a culture inhabited by posthumans who regard their bodies as fashion accessories rather than the ground of being, my dream is a version of the posthuman that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality, that recognizes and celebrates finitude as a condition of human being, and that understands human life is embedded in a material world of great complexity, one on which we depend for our continued survival. (Hayles, 2003, p. 5)

What may be called a harmless, even mentally beneficial, separate reality, avatar-based games could also be referred to in Hayles’ terms as seductive “fantasies of unlimited power and disembodied immortality.” Many of these games do not recognize the finitude of the human condition; rather, they offer an alternative to it – an alternative body, one that is immortal and infinitely more powerful than our earthly one. The underlying philosophy of desiring a more perfect body, then, runs counter to Hayles’ idea that bodies

are “the ground of being” and that all must be experienced through them lest the information age steal our most ancient vessel of self – the physical body.

Virtual reality computer games, with their emphasis on self-perfection through the creation of an avatar, could thus be considered a dangerous form of posthumanism: entrapping the self with desires of illusive immortality, the seductions of power, the body as accessorized and replaceable. And yet the allure is palpable, to create a character and become superhuman, to unthread the human body and unravel all the social markers that say: “This is my body, this is me.” Nearly every philosophical and religious tradition in existence has written about the dangers of seeking immortality, the seduction of power and self-fulfillment, and with the onset of digital media it seems that these possibilities are drawing ever nearer. With online role-playing games growing with subscriptions in the tens of millions worldwide, it would seem that the need for a more perfect body, a superbody, is becoming more palpable. For a dancer, fully invested in my own corporeality, these concepts of posthumanism seem particularly dangerous as an allure away from the “ground of being.” But that is also what makes it so seductive.

Intuitively, this initial interest in video games and my career as a dance artist have informed one another. Both involve the loosening of my corporeal identity and the freedom to perform any self that I choose. The act of performance, like the state of virtual play invoked by virtual reality role-playing games, is one of fluidity and exploration. As Broadhurst writes, “the implication is that the embodied self as any other aspect of the conscious self is transitory, indeterminate and hybridized” (Broadhurst, 2012, p. 188). And it is this space of transition, indeterminacy, and hybridization that lays the foundation for limitless possibility for new kinds of embodiment and experiences of the

physical. Rather than being a detraction from our experience of the physical self, it can provide a deepened understanding and renewed sense of identity within the moving body, the space it occupies, and the energetic/spiritual/visual effects of performance.

My artistry, then, is informed not only by the personal experiences of the boy who grew up in the mountains of Virginia, but also by my experiences sleeping in the far-off castles of imaginary lands. I have inhabited many different places, in many different bodies. These experiences are all both real and imaginary, and I remember them as a part of the life I have lived. Susan Sontag writes about photographs in her work *Regarding the pain of others* (2003), and how the images in photographs are often dismissed as “illusionary” or somehow displaced from reality: “...we live in a ‘society of spectacle.’ Each situation has to be turned into a spectacle to be real...Reality has abdicated. There are only representations: media” (p. 109). She speaks of being “engulfed by the image,” and all the transpositive power that these mediated representations can have to either distance us or bring us closer to that real place, that living moment. Like a photograph, existence in digital realms could easily be dismissed as secondary to the lived experience, but I prefer the more radical view that it is merely a different way of experiencing reality. It is a medium for the hyperreal experience.

When Jean Baudrillard (1988) first proposed his concept of “hyperreality,” a theory of existence that merges the real and the many simulacra that humans have created to represent the real, he says that “simulation is no longer that of a territory, a referential being or a substance. It is the generation by models of a real without origin or reality: a hyperreal...the desert of the real itself” (p. 166). These simulations, whether created by virtual reality video games or by any other digital representations of self that transmute

our human essence into the digital realm, are “the reflection of a basic reality” that simultaneously “mask and pervert a basic reality” (Baudrillard, 1988, p. 167). It is precisely this perversion that provides the basis for my work as a dance artist, the creation of spaces around the moving body, or the translation of the moving body into some “masking” or “perversion” of the illusion we call reality. We see this on Facebook, where each individual strives to digitally represent themselves digitally in the most positive, cool, or beautiful ways. In video games, it is Baudrillard’s transference of origin that allows for the ecstatic mergence of generation and simulation leading the human experience into realms where reality and fiction begin to blend, with no clear boundaries between where one ends and the other begins. When I control my avatar, it is a dance of visual sensing, feeling, and visceral transposition. Reality has not abdicated, but merely changed forms through my experience of it, through the “engulfing image.” I’ve seen the Himalayas with my human eyes, and I have seen the towering peaks of Skyrim with my elven ones, both gorgeous and awe-inspiring, each memory informing the other. In a sense, my knowledge of place has been doubled: all of these real and imaginary spaces have given me a million ways to look at a mountain. Real space and real time have been transfigured, and this focus on hyper-real environments has been a central part of my work as a dance artist.

CHAPTER 1

GUERRILLA KNOW-HOW: SPATIAL TRANSFIGURATION

*Clouds are for flying where no one can go. And that's where you are, empty in the sky.
(Heller & Hardwig, from Clouds Are for Flying, 2013)*

From the beginning of my career as an artist, I have been interested in the merging spaces of technology and the body. From my work as a visual artist before becoming a dancer, I was interested in creating digital photography exhibits, video art, interactive performances, and installation projects that incorporated the digitized body and sought to deconstruct our view of the human body through techniques of lighting, superimposition, filtration, and active translation. As a musician, I have been influenced both by my roots as an Appalachian instrumentalist/singer and my interests in electronic arts, having created numerous scores and musical compositions that attempted to blur the line between the traditional and the virtual. Growing up in the midst of a digital revolution has provided my artistry with a radiating view of reality, all virtual places intertwining and bleeding into the terrestrial.

I have found that computers and digitization have provided contemporary artists with new opportunities for fantasy and re-abstraction of the real, a new surrealism that simultaneously comments upon our relationship to our technologies, and explores the potentials of them. Moreover, I have been wrestling with existing preconceptions of

digital technology as an “escape” or “merely virtual” realm (a less-than-real artifice, a paler simulacrum of the physical world), and I’ve been searching for ways of incorporating the raw embodiment of live performance into the surreal spaces that these alter-realities provide. Through technology, the fundamental concepts of space can be reinvented, and this can have immense effects on the perception and performance of a moving body. As dancers, our fundamental concepts about space, time, and energy can be reimaged through virtuality, inherently influencing the sensation of a performer.

Even Loie Fuller, the progenitress of modern light design for dance, performed for Lumière’s camera and “for an eye that the camera only points toward but that film will eventually make possible: the global market for technobodies, the publics created across the century” (McCarren, 2003, p. 63). When McCarren describes this protean stage of dance technology, she refers to “Loie Fuller’s techno-dancing” and the beginnings of a future for the new “eye of technology” in the perception and preconstruction of aesthetics. And Fuller’s *La Danse Serpentine* was in fact an early commentary on the “obscure and obscured body, a heavy body not aiming to seduce its public, a hidden body giving itself over to the representation of something beyond it; a strong body creating structure within her massive veils” (McCarren, 2003, p. 62). These layers of technological representation, seen by Fuller’s lighting, fabric, and color designs and eye for the body with “something beyond it,” can thus be seen as early as the turn of the 20th century in the field of Modern Dance, all of which speak to the underlying allure of corporeal transcription provided by technologically mediated performance. The “global market for technobodies” has been building for a century, and the advent of the digital age has only hastened its fruition.

When Helen Sky writes about this process of technological transfiguration, which she calls “electrophysical dramaturgy,” it sheds a deeper light on the complex dance of data and digits with the real human body. She states that this research into interactive performance has “altered the way I perceive and conceive of the potential of my body in performance, while deepening the questions my body through digital performance asks of culture, through a practice of poetics in art and technology (Sky, 2012, p. 221).” It is a multifaceted issue that ties together the body’s physical practice, aesthetics, and dual-existence, that simultaneously asks questions of the human body in performance, but also questions the relationship of body to culture, and the body to itself. What exactly are these perceptions and conceptions of the “real” body that have the potential to be transgressed and what are the sensations that result from this mergence of the virtual and the physical?

My studio research has included investigations of various software programs and digital technologies that allow for these different types of embodied experiences. For example, my research into the video-jockeying software Isadora has been invaluable as a means of creating alternative spaces, new bodies, and an overarching way of incorporating the digital as a stage space. It is an interactive performance program that can manipulate anything from music and movie files to live motion capture. The movement of the performer’s body can trigger text, video, or manipulate sound, and even serve as a site of active translation, mediating the moving body in a myriad of ways. In a stage collaboration with my fellow dance artist and friend Molly Heller, *Clouds Are for Flying*, we questioned these themes in one possible iteration: the performer’s body is captured live via a film camera, and then translated into various ghostly imprints using

techniques of time delay, filters, and multiplicity algorithms; in other words, we see multiple images of the dancer's "ghost," and see the dancer's projected image 10 to 15 seconds behind the actual motion. This work became a scored improvisation for us as dancers moving in dialogue with our own projected images, and our improvisations created different results for the media in dialogue with our motion. It was a game of spectral causality.

In several performances of this work, I would momentarily catch a glimpse of my shadow images on the scrim upstage, and I could see the traces of the motion that happened nearly 10 seconds in the past. These moments of temporal divergence could be described as "the spatial and temporal contrapuntal rhythms which are composed through the ever-changing, ephemeral motion of the images on the screen" (Rubidge, 2006, p. 112). Rubidge here is writing about an immersive and interactive video installation called *Sensuous Geographies*, and describes the temporal dynamics as something emerging from "underlying modes of consciousness" or "the undermind" (p. 113). At the moments when I saw my temporal shadows passing behind me, I became aware of this underlying consciousness – the subtle awareness of past and present that was imprinted in my body somewhere I hadn't yet discovered, it was as if I could sense temporal mergence. We were encouraged by this environment to move in explosive spurts, our limbs trailing behind the core on strict diagonals (a response to the positioning of the live-capture camera). After these kinetic outbursts we would pause, hesitantly, allowing time to feel our ghost images regain real time on the glowing otherworlds behind our real bodies. The movement vocabulary that emerged was entirely improvised and ephemeral; it was a

piece about lost traces and vanishing energies, and so these spurious improvisations were nearly impossible to recall after they had faded from immediate memory.

As a performer, it was a strange sense of past and present coming together for a fleeting second, and before I could fully understand the sensation, the motion-delayed image of my ghost wove its way against the white backdrop and synced back into my stillness. As quickly as that moment of convergence had arrived, it disappeared and I was brought back again into “normal” space and time. Each space was designed as a unique expression of our realities. Constructed as two consecutive solo dances, the image of my body was projected against deep red, with black blood-like drops slowly staining the image of ghost and crimson; Molly’s ghost, on the other hand, inhabited an otherworld of green clouds strafing against the horizon. In our first conceptions of the piece, we had discussed thoughts of our human traces, the energies we leave behind when we have gone – either in the physical/temporal absence of our body or the time following death. It was about imprints, and the persistence of our essence beyond corporeal presence.

The intensely surreal aspects of this piece became grounded in our physical bodies, without which the projected ghosts would not have existed. The blackbox theater we performed in was small, but audience members consistently commented on how huge the space looked with those technological elements. With the spiritual and perspectival depth of the projections, this tiny space had been reinvisioned as a metaphysical cavern filled with time, memory, and loss. At the end of the piece, we both came together to sit side by side – not looking at one another – but marveling at the humming green clouds in the technological distance. This cyber-reality had connected us, and though we had never

physically seen one another or even touched one another, our ghosts had occupied the same untethered horizon. In a way, we had danced together in a space that did not exist.

These alternative sensations of embodiment and identity formation are integrally linked to environment and space, and considering that the body is the encapsulating form through which our identities are constructed and performed, these digital spaces and spectral avatars reconstruct our sense of self. This reconstruction is accomplished through the imagery of the surreal space surrounding the body:

Such images are indeed able to usurp reality... [they are] an interpretation of the real; it is also a trace, something directly stenciled off the real...registering of an emanation (light waves reflected by objects) – a material vestige of its subject. (Sontag 1999, pp. 80-81)

Through these “traces” (what we had called “ghosts” in the creative process for this work), we were able to experience the construction of reality differently, effectively mutating our identity through these “emanations,” the “vestiges” of us. In *Clouds Are for Flying*, Molly and I projected ourselves into a netherspace where temporalities merge and a sense of personal and performative essence is instilled in the dancers. One vessel for this kind of sensorial transformation, then, is the creation of alternative spaces through technology. They are spaces that have usurped reality but remain “stenciled off the real,” and so maintain a kind of authentic gravitas for both performers and audience members. Essentially, by utilizing the potential of digital technology to subvert the laws of real space and time, with all the trappings of natural/societal rules, the dancing body itself can be reimagined. These digital spaces, existing outside the real but in direct relationship to it, are what Foucault might call ‘heterotopias’:

...something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted. Places of this kind are

outside of all places, even though it may be possible to indicate their location in reality. (Foucault, 1984, p. 1)

In this way, these “contested and inverted” spaces do exist outside of all real places, but inherently represent the real. Because these “counter-sites” are created by humans who cannot think beyond the boundaries of our own corporeal existence, they are thus bounded by our understanding of natural laws, but also subvert them because they are only simulacra of reality. In the case of a traditional screendance, we are seeing a representation of the real body and an event that has actually occurred, been recorded, and includes all the identifiers of a real body. And yet film technology allows us to invert that real thing, to deconstruct its identifiers, and create a new sense of embodiment and physical experience – natural laws like gravity, time, and spatial relationship can be altered, investigated, subverted, or simply broken.

In these “contested” spaces, the human body can transcend its limits of earthly bondage, and achieve (at least in illusion) freedom from death, self, and all of nature’s laws. This is not so different from the creation of dance for the proscenium stage, where we often use lighting and sets to achieve illusions of otherworldliness, and train the body constantly to transcend ourselves and rise above the limits of the physical form. This leads to a deconstruction, subversion, and augmentation of our concepts of virtuosity. Because these elements are often the measure of virtuosity, the skill with which the performing body can subvert our preconceptions of what is possible, and technology provides numerous outlets for subversion: a body in flight, skin that emanates fluorescent light, or an avatar of the performer that shifts its shape with a motion-capture camera.

With film technology, there is the potential for a kind of “digital virtuosity” created by the editing process, and the original virtuosity of the performer being filmed.

In interactive digital media and motion capture, we can see these two things immediately juxtaposed; for example, we see a dancer moving on stage while behind him a projection has split 10 mirror images of the movement into different parts of the screen. We see a dancer whose identity has been multiplied, his embodiment augmented, and the live creation of perfect unison between 11 dancers – a task that is, even with the most virtuosic performers of similar body type and strength, impossible for 11 real dancers on an actual stage. Here we see the subversive and transcendental potentiality of live performance media to completely change our experience of the moving body visually, kinesthetically, and symbolically.

Truly, at the heart of the cyber-revolution is also an inherent revolution in aesthetics, not just due to the change in the display mediums of screens and projections, but also due to the potentiality of mass-reproduction, artistic creation, and identity modulation that comes with large scale access to smartphones, apps, computers, and wireless broadcasting. What we perceive to be beautiful and ugly as a society changes by the minute, and any number of aesthetic choices are instantly available with our fingertips on a keyboard. Artistic gratification, the pleasure of viewing, the time it takes us to do it, and the communication of art itself, is changing drastically. For this reason, I have been pursuing all aspects of social media (websites, Facebook, Vimeo, YouTube, and blogs) as ways of storing and disseminating dance. These days, the stage has been extended into cyberspace, and I am interested in creatively questioning the many diverging ways that the moving body (and dance performances in general) can be experienced without ever setting foot in a theatre. Along these lines, I've been working with video blogs, telematics, live webstreams, and collocated performances to begin deconstructing the

complex array of technologies that can telecast the performance of dance outside of a traditional proscenium, thereby changing the audience's experience of the work.

It has never been my goal to forsake the proscenium, but rather to remake the proscenium. In the digital world, the politics of live performance have shifted further away from the traditional roles of audience and performer. There is no longer a single space for performance, and perhaps what many dance artists fear in the onset of the digital age is the gradual death of the theater. Live performance is threatened by technology, as its ephemeral nature becomes more and more integrated with the augmentations of video and light design. My response to this is, as it has always been, improvisation. The human body is the most advanced computer in existence, and our responsive intelligence lays low even the most advanced supercomputer. Improvisation is the act of constant interactivity, unending dynamic intelligence. If I am performing with technology and constantly in a dialogue with the cybernetic designs of my own construction, the ephemerality of live performance is not threatened, but rather augmented. These dialogues, I have been discovering, are much more aesthetically and conceptually complicated to implement in practice than in theory.

In the dead of the New York City winter I performed a 20-minute improvised solo in a Brooklyn studio loft called *16 Songs for Absolute Silence* (2014). It was an integrated video work that took place against a brick wall in a condensed space of approximately 10 square feet, and as I thrashed frantically (it was a dance of passion) in this condensed space, abstract projections and animations lit up the space behind me. The vibrating designs behind my body resembled that of a gay bar with lightshows and a dance floor, a mimesis of underground club culture, all set to a droning repetitive techno-electronica

soundscore. In this piece, the projected images existed only as a backdrop, a setting, upon which I would base my improvisational dialogue. It was only interactive in the sense that my movement was influenced by the randomized designs projected against the brick, rather than my movements influencing the projections themselves. Not only did they provide a texture that vibrated on top of the body itself, they energized the space into pockets of energy and shifting light that inherently influenced the pointed thrust of my limbs, the tiny sideways shifts of pelvis, and the development of a frenetic movement vocabulary unique to this surreal world. It was a one-way interaction, but nevertheless a duet between living body and digits, flesh and cybernetic brain.

In the process of digital spacemaking, interactivity is often a phenomenological trap for artists and audience members. I find that everyone often expects “interactivity” in the sense that the dancer’s movements are affecting the projected image, but that also is a one-way street. With strictly choreographed work, the goal of which being the same product, replicating similar images from performance to performance, the point of the process would be defeated. In this scenario the value of “interactivity” and causality is mitigated, since simply creating a static video and editing it to “match up” with the movement could create the same product. For *16 Songs*, the dialogue was created in a different way entirely, as the human brain was improvisationally responding to randomly itemized designs and projected spaces. By allowing the digital to make an imprint upon my performing body, I was able to create a work including technology but not dominated by it. Moreover, the concept of the work was far more important to me as an artist than the meta-concepts of interactivity and technological mediation. The piece used technology, but was not about technology. It was a dance about pointless vanity, self-

indulgence, and the hollow wildness of the many lonely spirits I had met on that trip to Brooklyn. Through improvisation, some level of interactivity is already created, the lack of choreography forcing a sensorial and visual imprint on the dancing body.

Among other things, I have been a contact improvisation practitioner for the better part of a decade, and its methodologies and philosophies were surprisingly relevant to this *pas de deux* of body and technology. Steve Paxton, contact improvisation's originator, said that "you improvise to study compositions. If you need an example of new compositions, you have to improvise to get there. I think when things become institutionalized, they absolutely lose the essence that we're talking about" (2009, p. 1). When dealing with a new form, like a dance that is integrated within a constantly shifting digital space, improvisation was my way of "getting there." The state of play that contact improvisation creates is truly a state of constant sensing and instinct, which has influenced not only the creation of my works but also the way in which the performers respond to these mediated spaces.

Using improvisation as a way of creating the final product that we see translated digitally creates a kind of double responsiveness between the moving body and the technology involved. Paxton refers to this as a process of "adaptation" and a constant practice of "getting lost": "the result may be a kind of unease and possible retreat from the unfamiliar system...with a few new systems, we discover we are oriented again, and can begin to use the cross pollination of one system with another to construct ways to move on" (Paxton, 2001, p. 425). In the mergence of dance and a computer-interfaced space, there is a collision between two unfamiliar systems: the organic body and the mechanized creation of technology, "and the 'dancers' may be images of humans,

human-like figures, or even non-human shapes and objects...with the ability to manipulate the viewer's experience of time and space" (De Spain, 2000, p. 5). Through improvisation with the emergent systems of technology, manipulated and transfigured into nonhumanity, Paxton's "cross pollination" becomes an overriding modality in a creative process between two seemingly opposed devices. Both the body and technology are constantly adapting, responding, and informing one another.

Perhaps the earliest example of this kind of technological adaptation with moving visual images comes from Alwin Nikolais, whose works used early slide projector technology to create surreal environments for the deconstruction of the human body. *Imago* (1963), for example, used three strips of multicolored light to delineate the space by texture and color, providing a fluorescent frame for the dancers' bodies as they ceremoniously lift tiny mobiles covered in semitransparent plastic. Other works, like *Crucible* (1985), used the dancers' bodies as textures upon which to project quasi-metallic abstract designs that seem almost like corporeal graffiti. As the bodies embrace and sway side to side, the effect is that of a single organism that no longer truly appears human. For Nikolais, the dialogue was not so much one of interactive computing, but rather an aesthetic paradox where body and projection existed in tandem to create modernist symmetries, frames, textures, and environments in which to house the human condition. This is a fascinating early approach to the union of body and technological interfaces, as these works by Nikolais seem to demonstrate the focus on creating an aesthetic work rather than a work about technology.

For the dance field, new examples of these "cross-pollinations" are emerging more and more frequently. A recent collaboration between the Australian-based dance

company Chunky Moves and Frieder Weiss (digital designer) produced works like *Glow* and *Mortal Engine*, which have since been seen as an aesthetic revelation for the emergence of dance and technology. In *Glow* (2006), we see a lone female dancer gliding across an ethereal lightscape, her body sliding across the floor as vibratory white animations glow in response to her movement. The body, almost entirely glued to the floor for the duration of the work, seems to be qualitatively creating the abstract spikes and tassels of light surrounding her white-clad form. As she convulses on the ground, the laser-like patterns convulse as well, shifting out and in like an organism attached to her own form.

Gideon Obarzanek, the choreographer and artistic director of this work, spoke on a recent PopTech podcast about the hyperreal union of these forms and what interests him in this kind of research process: “often I find that my imaginative mind, my irrational world often doesn’t reconcile with the more tangible, recognizable world that I live in.” For Obarzanek, it seems that the dialogue between body and technology is more about bridging the gap between what might be called the “organic and the unconscious.” As Baudrillard (1988) puts it: “Why should simulation stop at the portals of the unconscious” (p. 167)? But Obarzanek is also concerned with the mechanisms by which these technologies interface with the body; essentially, for this work he was concerned with a real-time “synergy” between the dancing human and the responsive motion capture technologies involved. Speaking about Nikolais in particular, he says:

He (Nikolais) faced a kind of a problem, actually a similar problem that I was facing, which is that the images he was using were prerendered, both still and moving. That basically means that the performer has to be at the right at the right time for that kind of synergy to take place. Actually, it’s not really synergy it’s just rehearsing a lot, making sure they’re at the right place at the right time. (Obarzanek, 2009)

This issue, which Marlon Barrios Solano (another pioneer in the field of dance technology and multimedia, and founder of dance-tech.net) might call the opposition between “live” and “dead” media, is at the forefront of my mind as a dance artist in this ever-changing millennium of digital/creative integration. We might consider “dead” media as those projections or images that do not change in direct response to the human body’s movements. “Live” media, which Obarzanek’s *Glow* demonstrates, is where the multimedia elements of the work respond to or are in direct dialogue with the moving dancer. For the dance of live media, the *pas de deux* of dance and technology becomes even more apparent as the human organism and digital elements are linked by the poetics of causality.

But both of these modalities, the “live” media of motion capture in *Glow* and the “dead” media of slide projection in the work of Nikolais, present interesting compositional problems. For obvious reasons, the interaction between dancer and technology in images that are “prerendered” is limited due to the temporal functionality of a video playing or an image projected on stage. The dance could be choreographed to look interactive, but it is simply a process of taking two static objects (choreography and digital design) and placing them together in the same timeline. Neither is responding to or inherently affecting the other, but it can create the illusionary effect of causality. With live media, on the other hand, where the technological elements are responding to the direct input of a body in motion, this kind of “synergy” is possible; however, it seems striking to me that so many of these “interactive” works are so rigidly choreographed. For example, Obarzanek incorporates these stunning interactive elements into a choreographic structure that is rigidly adhered to. What, then, is the purpose of having

interactive media if the dance will look exactly the same for each performance? Wouldn't the same effect be produced by creating a "dead media" video and simply have it line up in time with the performance of the choreography? In a sense, we have the opposite dynamic at work: the human movement is influencing the technological effects, but the technology is making no imprint upon the human. In a New York Times review of *Glow*, Jennifer Dunning (2008) comments upon this one-way relationship: "the visuals are a marvel...but 'Glow' does not reveal any larger theme. (She) does not seem to be affected by her half-hour in this eerie though frequently handsome world. In that sense 'Glow' is a light show, though a provocative one" (p. 1). It seems that although the marvels of technology have allowed digital designs to be responsive, alive, and in immediate dialogue with the body, the affect of the dancer herself (and the choreography) is relatively unchanged. Suddenly the human has become the "dead media."

This question of interactivity and dialogue has been a crucial part of this research process, as I have been searching for methods through which these illusionary environments to both respond to and affect the creation of movement. I came upon the conclusion that performance improvisation was the most plausible research method available to me and the dancers involved. This methodology of weaving together the human and the virtual is highly dependent upon the improvisations and sensations of the performers, then, to create the work in constant dialogue with the technology. I have done this partially through the development of improvisational scores, both digital and physical, that allow the product to emerge from the heterotopic space created between the real and the virtual. This mergence of physical and digital is one that demands skills from the performers (kinesthetic awarenesses beyond traditional training) and computational (a

visceral awareness of the software at work). For a performer, there are several layers of understanding at work in a digitally constructed space. On the one hand, there is an intellectual or mental understanding of how the software functions; for example, if I move my hand here, the lights will shift, if I raise the volume of my voice, I know that the software will pick it up and repeat it on an endless loop etc. But there is also a deeper physical understanding that is hard to articulate; I feel the resonance of the light on my skin, the visual stimulus causing my neurons to fire, the shifting boundaries that delineate my sense of place in this topography. These sensations are deeply physical, soaking into the porous boundaries of the body itself, so that the image enters the semipermeable awareness of the physical form. Just like a “live media” event must be responsive and in dialogue to the moving body, the body itself can become sponge-like in its absorption of digital data as it reconstitutes space and time around the flesh. It is a completely new way of composing in space, and as such, it requires some hacking.

This state of constantly shifting essences is what digital spaces create, but they also present us with numerous compositional problems. Birringer (2003) writes about how this transfiguration complicates the act of choreography, when “space is dematerialized, movement is captured, commuted, transferred, and rematerialized elsewhere... the programming of interfaces between dancers and the computer implies the creation of an unstable system” (p. 94). Things like masking transitions, layering, and aesthetic formalism become very difficult to accomplish in spaces like these, perhaps because there are simply more possibilities available in terms of temporality, spatiality, and movement elements. In these spaces, according to Birringer, “‘Choreography’ more closely resembles the ‘live mix’ we experience in techno culture” (2003, p. 94). It is this

idea of a “live mix” that led me to work with software like a contact duet, both partners (corporeal and virtual) contributing to the sense of awareness and intimacy being created across time and the often-vast spatial separation in performance. It is like hacking space and time, but in an intimate sort of way.

These words, “improvisation,” “hacking,” and “live mix” are all philologically crucial to a new understanding of what digital choreography can become. “Hacking, as an experimental, free-form research activity, has been responsible for many of the most progressive developments in software” (Ross, 1991, p. 12); it is also an improvisational state. With so many boundaries of traditional choreography in flux, it was my goal to find (for myself and the dancers) a state of digital and physical play that allowed me to hack into the shifting modalities and relationships being created, both visual and conceptual. Ross describes “hacking” as a “guerilla know-how” and integrally tied to “cultural resistance” (p. 13), the purest form of digital improvisation that represents a countercultural modality against institutionalized formalism. This kind of “free-form research” is what has informed my work with digitally mediated spaces, from my beginnings as a contact improviser to a digital media artist. Many scholars have even noted the physical correlation between performance improvisation and digital practices:

Shifting attention to touch, weight, and energy transfers in partnering, as it is practiced in contact improvisation, is a good preparation for working with physically motivated sensor interfaces, especially wearable sensors. (Birringer, 2003, p. 91)

In a way, there can be no interactivity without improvisation, whether that is between two people or between a human and a “sensor interface” (a computerized human). In this way, digital performance is a methodology as well as an aesthetic, a practice as much as it is a research process.

In terms of spatiality, this “dance hacking” also has tremendous political relevance to the dance field at large. According to Ross, hacking presents us with a form of experimental, cultural resistance that leads to innovation and creation, much as contact improvisation did when it was conceived in the early 1970s, but resistance to what? These alternative spaces created by digital technology, in installation works, or the filmic spaces of screendance, all subvert the proscenium stage and traditional dance performance practices. Birringer, with much conviction, puts it this way:

The proscenium and conventional production processes have become inadequate. New dance, involving technologies and interactive designs from the conceptual starting point, requires a different environment for its evolution. (2003, p. 89)

With these comments on the limited usefulness of traditional training practices and vocabularies, that do not explore the “integration of recipient behaviors and feedbacks” (p. 90), Birringer seems to be suggesting that varying performance spaces demand varying techniques of performance practice. In essence, training for the proscenium stage does not facilitate the “interaction with mediated and unstable environments” (p. 91), like the unstable terrain of a screendance film shoot or the constantly shifting ground in a projected media environment. Steve Paxton famously called improvisation “a word for something which can’t keep a name” (2001, p. 426), so it seems only appropriate that improvisation would be the solution to digital spaces that cannot keep a form.

From my own experience, I remember performing in a digitally-integrated proscenium work by Yannis Adoniou entitled *naïveté in minor* (2012), with media designs I created in collaboration with the choreographer. I worked with him to create abstract floor designs that would be projected onto the entire dancing surface of the work. Structurally, the work was then divided into vignettes that corresponded with these

different mediated environments; as I have found in this creative work, the structuring of a piece must also be integrated with the technological elements to create a cohesive whole. Much like flipping channels on a television, each station must have its own place and weight in the chaotic broadcast of choreo-digital information. The final work was performed on a proscenium stage, and I remember distinctly performing one sectional vignette that was a particularly sensitive adagio section, with rapid green billowing designs projected on the floor. They moved at an inhuman speed, with an undulating, sliding velocity that made it seem like the earth was falling in. I could not keep my balance, or get a grasp of my own spatial position. It was like dancing on top of a moving impressionist lake covered in slippery green ice. This was an inherent “unstable environment” for dancing, and I remember thinking that my sensorial awareness was in no way prepared for that kind of deprivation, or rather, reorientation. It was surreal, or at least far enough removed from the real that my body was almost unaware of what was happening beneath my feet, and my motion through space somehow felt static in a world of flickering light.

When Birringer (2003) works with these practices of “moving bodies and changing light, along with the crucial experience of the resonating body with a reverberating sonic environment,” he describes the “notion of a resonating environment...a plastic process of ‘designing’ fluid space that allows for integration of ‘nervous’ or sensitive media presences” (p. 91). Performing that adagio on a shifting proscenium floor was in many ways my first encounter with a “sensitive media presence” in a “fluid space,” and one in which the “resonating environment” nearly overwhelmed my kinesthetic senses. In a formal way, this work was full of tiny subversions of the

senses that appeared and reappeared based on the elements of design that were projected on the floor. In one section, a trapezoid revealed bouncing blue lines against a white background as the dancers one by one plummeted across the stage sliding on their sides. Another revealed a static image of a half-moon upon which a folk dance emerged, and yet another brought the vibrancy of rapidly flickering sequins that reflected upon the dancers faces as they, standing in near-stillness, sung Barbara Streisand's "My Man" to the crowd. Each space was wedded to the choreographic elements, each "resonant environment" inextricably linked to the performances occurring within them.

Though intense and sometimes overwhelming, one of my goals in the creation of digitally infused dance works has been to find a more immediate experience of digital/environmental embodiment so that the interaction between performer and technology is egalitarian: the moving body influences the digital translation, the experience of that representation then influences the moving body in return. This is not always possible, but the simplest way to a responsive embodied experience is through alteration of the space surrounding the dancer, to create what Sontag might call a live and responsive "image-world." But she also notes that "contemporary expressions of concern that an image-world is replacing the real one continue to echo, as Feuerbach did, the Platonic depreciation of the image: true insofar as it resembles something real, sham because it is no more than a resemblance" (Sontag, 1999, p. 81). I would argue that these creations are more than just pale resemblances and simulacrum of the real world, as my experiences in avatars in video games and digital-dance installations has shown. The body can still feel the motion of a digital body, still be moved by a work of art that exists only on screen (after all, would Hollywood have survived if filmic techniques produced no

responsive effect?). Perhaps most tellingly, when there is an actual body on stage performing in the midst of a metaphorical cybernetic storm (as in my performance of the adagio in *naïveté in minor*), we can still witness and be moved by the mergence of corporeality and digital space in the moment of performance. The performers themselves can be kinesthetically re-oriented in space, and feel real effect from these image-worlds.

More specific to the act of live performance is a relationship conceived in a more purely “interactive” way, using software to either trigger events through the dancer’s spatial position, or to immediately create soundscores that are responding to an improvisation or choreographic dynamics in the moment. This has the potential of creating work that is randomized, multiplicitous, and dramatically different for every performance. I have tested several designs that push the limits of randomization and the creation of surreal spaces through real-time digitally modulating environments; aesthetically, there is the potential here for the “controlled anarchy” of the digital, as a cyber-brain effectively becomes another performer, another choreographic mind with its own programmed agenda, reacting only to the confines of digits and information streams. But these designs have never turned into creative works, or full-length pieces. On the conceptual level, these designs often make the piece “about interactivity” rather than focusing on the power of the movement and the inherent wisdom of the human body. The dancers become ancillary to the computational dance taking place, and so it becomes aesthetically problematic for me to present them.

But there are other ways to translate motion into the surreal (or hyperreal) spaces of the digital. My work in the field of screendance has had a great influence on my research into the issues of real bodies in unreal space, as cinematographic and editing

technologies allow the performing body to exist outside of time and space. Essentially, the digital eye allows us to experience the motion of the body in completely new ways, and to deconstruct “the performance” by bringing contemporary dance into new venues (deserts, caverns, underwater, surreal otherworlds) and deconstruct the audience’s gaze through shifts in perspective, motion, and overall relation to the dance.

But it is more than just a body in various environmental spaces, as Gretchen Schiller notes, it is also the “differential and relational play of movement tensions occurring between them” (2006, p. 101). The spatial relativities created by these technologies (either filmic or live-installation) create a dialogue between human and environment: “a film inscribes sensations into the seemingly passive seated audience member. The public is transported physically to alternative physical spaces without travelling or dancing physically themselves” (Schiller, 2006, p. 107). This vicarious physical transportation, which is crucial to the viewing of traditional proscenium dances, is enhanced further by the transporting properties of film: through screendance, the audience can be moved not just physically, but geographically as well. It is a dance of technological translocation, where place and time become unclear in the act of performance.

Muck and a Film Camera: Dancing Alternative Spaces

“When we walk blood earth, the silence is a roar. Aurora, Aurora, will bring us safe to pastures. And red, red dirt, will wrap us up in dust. And when everything is done, will jump this sinking ark. To stretch our limbs of mud, and walk this earth of blood...”
(Hardwig, from we walk blood earth, 2012)

We camped underneath sheer cliffs on the banks of a dry riverbed, in the scrub-brush by a solitary patch of trees clinging to life in the sand. There were eight of us

camped there: myself, my tech crew, and the dancers who performed in the film *we walk blood earth*. It was a 3-day film shoot in the rocky deserts of southern Utah, where the earth seemed to be painted gold and red from eons of geological construction. The space brought to my mind a quasi-biblical backdrop of people set against an unforgiving landscape, an inner and outer wilderness. As we slept in tents and cooked over an open fire, scavenged for firewood on the edges of the river, I began writing the hymn that would later appear in the film. “The silence is a roar,” I thought, in the echoing desert where the only sounds were coyotes howling and the occasional drip of water from dying aquifers. These sounds become the soundscore for the film, and a large part of the interactive dialogue between performers and environment.

We had spent the previous week creating movement in a studio with Marley flooring, four walls, and a mirror. Movement created in the studio rarely works in the actual environment of the film shoot, but I often used choreographed material as a basis for a score. Our first morning on the set was breathtaking, miles and miles of yellow sand dunes stretched out before us, and behind us lay a massive red rock cliff stretching up into the sky (appropriately called Wild Horse Mesa). It was emblazoned with strips of red, white, and gold, towering above the dancers as they moved through the open desert. The solitary landscape created the impetus for the ultimate structure of the piece: beginning with shots of each dancer alone in the wilderness, looking off into the distance. They were costumed in fine dresses, suits, and button-up shirts, like guests to a business meeting in starkly civilized contrast to the bleak and barren environment. As we began to “restage” the choreographed movement on caking, soft sand, each dancer’s improvisational score emerged as a response to their immediate surroundings.

As I filmed each dancer performing in this vast and visually transcendent space, their bodies were pushed to the limit. The heat was exhausting, the ground was merciless and hot, and the many crevasses formed by dead rivers formed ravines and pits just inches from where the dancers moved with wild abandon. This geographic transmigration was more than just a restaging, but a statement of dancing bodies against the elements:

Screendance culture is an expanded culture, a site-specific practice that, if true to form, moves beyond the simple migration of dance from the stage... and re-sites bodies in motion in a filmic or scenic space. Such spaces have specificity that is often at odds with choreographic logic, which has been conceptualized in an *actual* three-dimensional space. Screenic, cinematic, or filmic spaces are two-dimensional spaces, *illusionary* spaces, and as such are spaces of secondary witnessing. (Rosenberg, 2012, p. 155)

These spaces are, as Rosenberg suggests, somewhat contradictory to a traditional choreographic process. The movement of bodies takes place in a real space (i.e., the deserts of southern Utah) but are then secondarily seen in a fictional or “illusionary” space, the frame of the film camera. This was my first encounter with the illusory nature of digital performance: we are performing in the midst of nature, and our only audience at that moment in time is the environment itself. But also implanted in this digital performance is the awareness of film audiences crowded in a dark theater, witnessing this event out of its temporal and spatial context. There are two performances here, happening simultaneously: one of raw, visceral realness, and one of transportation, of illusion.

The resultant film, *we walk blood earth*, became a representation of this isolation and symbolic disconnection, imagistically semi-apocalyptic as each dancer moved with their shins deep in the sand. Through superimposition, I introduced sections of “ghosting” where images of the moving body were doubled, tripled, and delayed in slight opacity. As they moved, their bodies became mere traces of motion through the desolate space.

Through retiming, the motion of the sand kicking up from their feet could be reversed, resulting in the appearance of the earth itself rising up against the body. The title and aesthetic implications of the editing created something of an environmentalist undercurrent, and after its premier at the 9th International Screendance Festival in Salt Lake City, UT, I had several audience members ask me if it was a piece about the onset of global warming. I answered that this certainly hadn't been intended, but that it was a valid interpretation of the work. With film technology, this abstract movement piece had taken on a multitude of sociopolitical and religious allegories all on its own. The simple act of transplanting the human body dancing alone, against the backdrop of a crimson and yellow desert, had stirred up the mediated images of cataclysm, loss, and impending desolation that haunt our current global consciousness. This has not been the first or last time my creative work has been called "environmentalist."

The common question, asked to me by many of my colleagues in the dance field, is one of language. After showing a screendance work at a recent festival, someone asked me: "I just don't know: how do we talk about works like this?" In many ways, these 2-dimensional illusionary spaces also defy the conventions of dance criticism, and contribute to a different kind of analytical narrative. Rosenberg (2012) puts it this way:

The bodies that we view on the screen are also illusions. We, the viewers, repatriate them to the locales, sites, and venues in which they appear to be "performing" and simultaneously project histories and other narratives upon those bodies. (p. 155)

For a screendance, space and interpretation are inherently linked, and subvert the proscenium. I've begun to realize that the contemporary dance field has been built upon the preconceptions of stage construction and the fourth-wall (either broken or intact), and digital technologies have presented dance audiences with a quandary: a fifth wall. This

process of physical “repatriation” has created the possibility for new histories and new narratives in the field of dance, but the discourse must shift away from the conventional methods of association. Time, space, energy, and body are subverted in these illusionary spaces, and perhaps the only way to talk about them is to take them within their new spatial contexts. Through the digital eye, the performers and the environments they inhabit create their own worlds.

In the introduction to her book, *Making Video Dances*, Katrina McPherson (2006) says that the challenge is to “invent a new language for the screen. What we are creating is not a dance, nor is it a video of dance, or even for that matter simply a video (p. xxx).” It is this invention of a “new language” that presents the many paradoxes of digital technology, which in many ways contradict the traditional methodologies of dance choreography. This point was made evidently clear to me recently, when I went on another week-long film shoot on the Aquarius Plateau of southern Utah. It is a wet and ancient place, filled with alpine meadows and endless dark pine forests stretching off into the distance. Our crew was smaller this time, only seven people including dancers and crew, camping on the edges of an alpine lake named Cyclone Lake. While there, enduring the bitter cold of a plateau nearing 11,500 ft. in elevation, we formed a community centered on the filming of a dance.

We had come with choreography, but the space dictated something more radical. After immersing ourselves in the waist-deep alpine lake, and its many feet of muck suctioning our legs downward, it became clear that this was a space of improvisation. Our limitations were environmental, and so we moved in and out of the water allowing momentum to drag us down. It was a duet performance between myself and my close

collaborator and friend Laquimah VanDunk; I chose to perform in this work partially because I felt ethically obligated to require of myself the physical rigor and danger of this performance, rather than ask another dancer to experience it for me. The lake was frigid, murky, and unknowable, which contributed to the elemental aspects of the resulting dance: *our drowned pastures*.

It was a dance filmed entirely with a wide-angle lens camera, and for the first time I began to artistically experience what Walter Benjamin (1969) calls “the revolutionary functions of the film” and the “hidden details” of the familiar, subverting the “commonplace milieu under the ingenious guidance of the camera” (p. 236). Experimenting heavily with slow motion effects and color correction, I began to see that “with the close-up, space expands, with slow motion, movement is extended...it reveals entirely new structural formations of the subject (Benjamin, 1969, p. 236).” This duet became a comment upon these themes, a relationship between two people of different races, creeds, and backgrounds, in an environment both lush and unforgiving. With numerous close ups that bordered on voyeuristic intimacy and copious slowing of time, a floating and lush duet emerged. In reality, the performance felt much like drowning as we sank and fell and splashed around in waist-deep mud, but through the lens of technology it became silent and ritualistic.

The use of the wide-angle lens created the illusion of millions of reeds and rain-filled clouds blossoming out from the camera’s center, while at its heart the two of us moved in tandem. I created a low humming soundscore, almost like a dirge that wailed over the sounds of splashing water as our bodies fell in and out of the heavily-curvated earth and burgeoning horizon of the lake (another fish-eye effect, with no irony lost in its

name). In the end, this piece was poetic, sad, and discernably site-specific. After premiering the film at an informal showing, I was again asked about its environmentalist undertones, racial implications, and even romantic statements. The audience had begun, in the migration of spaces, to “project narratives” in a wide array of interpretive directions. There is also a sense of topographic radicalism to this statement, that dance can (and perhaps should) be performed outside, in different spaces: in the secondary witnessing, the performers and the space itself have both been digitally transmigrated to an audience even thousands of miles away.

There is a kind of political and aesthetic horizontality to this process, almost anti-hierarchal. Filmic technologies have provided an access to information and an availability of performances in a wide variety of geographic locations and socioeconomic backgrounds, whereas the proscenium is relegated to the donors and institutions that finance them. The Internet, however, has created new possibilities across geographic and aesthetic boundaries:

The most influential new communications technologies have reduced the price of entry into a cultural field, creating openings for actors... who were previously unable to get their work to the public. (Benzecry & Klinenberg, 2005, p. 10)

When Benzecry and Klinenberg write about the kinds of radical politics that information technologies (and all digital technologies for that matter) provide, there is a sense of anti-verticality to the notion that even the most obscure or geographically isolated artist can share a performance with audiences half the world away. This has shaken the very foundation of the performing arts, and spawned a slew of what Benzecry and Klinenberg (2005) call “cyber-skeptics” who see “digitization as... threatening the integrity of creative fields or the relative autonomy of artists and intellectuals” (p. 14). These might

be Walter Benjamin's "auraists" who believe that the reproduction of an artwork (either industrially or digitally) inherently destroys the essence of the original work.

The very idea of an artwork's aura, that "a work's uniqueness depends on its one use value and on its complete absence of exchange value," or the supposition that "its 'authenticity' is founded in the ritual in which its use value resided initially" (McCarren, 2003, p. 173) seems to be supportive of a hierarchal model of art-making and nonreproduction. Walter Benjamin suggests that the mass-reproduction techniques of the mechanical age (enhanced even further by digital technologies and the internet) inherently destroy the unique quality of an artwork, turning what was once a sacred art object into a pale reproduction attainable by all. But why shouldn't beauty be shared? The live event of performance dance, now reproducible in some fashion through technologies of video documentation, is perhaps one of the least accessible artistic forms without direct contact with the artists themselves. Like a great dragon hoarding its golden relics, the dance field is the last bastion of antireproduction in the arts. Nevertheless, all of the arts have been impacted by digital technologies, with free streaming videos, podcasts, and audio all available on the internet (many for free), beginning the process of degrading hierarchies and moving towards open access to the arts in the digital age.

In the case of John Berger's spectator-buyer, digital reproduction has certainly shaped the delineation of power and wealth through association with a given art-object. Berger (1972) asks: "How is its unique existence evaluated and defined our present culture?... upon its rarity. But because it is nevertheless 'a work of art' – and art is thought to be greater than commerce – its market price is said to be a reflection of its spiritual value" (p. 21). Authenticity, then, is merely a commercial construction to be

used by the capitalist machine to draw hierarchies between those who have the buying power to consume it. For Berger, all lenses of power are held in the eyes of the spectator, which are a direct representation of social hierarchies – those with power see, those without power are seen. Internet videos and open access to creative works may serve to level the playing field in terms of access and social capital, allow more eyes to witness and consume, and perhaps the internet itself as a medium heralds the end of many social hierarchies we have long assumed to be unassailable. As an artist and a philosopher, perhaps I stray closer to Berger’s Marxist inclinations to throw down the “bogus religiosity” that surrounds the cult of “authenticity” that has arisen since the advent of reproduction technologies like the printing press, photography, and video. What if all the dance works ever made were readily available to watch online? What would the dance field look like if all presumptions of “high art” and “rarity” were shattered in the wake of the freedom for mass viewing?

When Walter Benjamin discusses the problem of reproducibility, albeit in a pre-digital context, he describes this “crisis” of reproduction in the following way: “Even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be... The presence of the original is the prerequisite to the concept of authenticity” (1969, p. 220). But what has become of authenticity in an age of YouTube, Cable TV, and advanced videography? The stage has become muddled, where Hollywood films are made starring CGI actors and green screens transport human bodies into digitally rendered spaces that do not exist in reality. If Walter Benjamin could see the numerous tweets and Facebook posts of Photoshop-edited Da Vinci classics, he might have indeed concluded that authenticity is

dead. But even if we are to consider that context and authenticity go hand-in-hand, we may problematize the idea of “unique existence” even further.

When I was in my late teens, I visited the Louvre in Paris where I saw *Venus de Milo*. I was awed by its craft, mastery, history, and general presence in the space – it was like an altar to a long dead era. It was not until several years later that I, while doing environmental volunteer work off the coast of Greece, visited the island of Milos where the statue was initially discovered. On an empty flat patch of ground overlooking a massive cliff above the Aegean was a tiny information plaque reading “This is where Venus de Milo once stood.” As I looked out across the aquamarine sea, and stood on this “original” context, I suddenly realized that this was the statue’s true place. The aura I had experienced in the museum was a carefully crafted illusion, the museum just another constructed frame separate from the work’s true aura, if such a thing even existed. From that moment on, my crusade of irreverence against established artistic frames began.

This winter I visited the New York City MOMA, where museum-goers are now allowed to take photos of the artworks on their phones. With photos attached, I tweeted and Facebooked my experience of the Pollocks, Warhols, and Monets in the Modernist exhibit with several people over the course of an hour, effectively destroying the aura of these masterpieces. But in this process of art-essence destruction I found that something new was created: those individuals who received an iPhone-mediated experience of these paintings were able to experience in some way the essence of my experience at the MOMA. Space was compressed to allow for geographic and socioeconomic accessibility, as Benjamin notes that all mechanical reproduction of artworks stem from “the desire of contemporary masses to bring things ‘closer’ spatially and humanly (1969, p. 223).”

Some might argue that the very act of taking a photograph defeats the individual's own experience of the work, or even more extreme as an affront to the authenticity of the artist and the art-object itself. In the MoMA, I stared at Monet's *Reflections of Clouds on the Water-Lily* for nearly 20 minutes, I absorbed it and experienced its essence. Then I decided to take a photograph and message it to my friends (#Monet), in my mind an act of sharing and horizontality.

In this debate of mediated authenticity, I choose the road of the "cyber revolutionist" and "emphasize the egalitarian feature of decentralized and deregulated informational networks" (Benzecry & Klinenberg, 2005, 14). Technology has allowed us to compress and translocate the space of performance, bring space and body to more audiences via the internet or film screenings. It has also brought dancers out of the four-walled enclosures of the studio and challenged us to bring our craft away from the proscenium and into the wider world. For those who question the validity of these spaces as appropriate spaces for the performance of "high art," Kent De Spain (2000) writes:

Must dance exist within what we might call a "real" space? Well, in many ways throughout history, performances of dance have occurred in a special space, a magical, sociocultural space we might call the "dance space," where representation and reality freely mingle and transform. Will we extend the "dance space" into the representative spaces of computing? (p. 6)

As De Spain mentions here, dance has already begun allowing for the blurring of "representation and reality," from the very construction of a proscenium stage to the cinematic work of Lumière and Fuller. Certainly, this extension of the human body into digital space challenges the corporeality of a dancer, and the aura of the original, ephemeral work. But it is also a process of sharing, a condensation of space and time, a political statement, and an aesthetic statement. For *we walk blood earth* and *our drowned*

pastures, I was able to bring improvised kinesthetic performances in two staggering spaces to a wide array of audiences. In the sharing of the work, whether in a theatre with dimmed lights or on the lawless reaches of the internet, I am also sharing the spaces that we performed in. I can bring, even if imperfectly, the audience to the barren sandscapes of southern Utah, to the heather-strewn fields of the Aquarius Plateau, or to stand in front of Warhol's last work. From an aesthetic standpoint, the filmic technologies in screendance allowed me to create a multitude of meanings at once: sociopolitical, aesthetic, environmental, and kinesthetic. Meaning, symbol, space, identity, geography, and body have all been transfigured, collocated, and expanded. All of this from the dancing body, muck and a film camera.

CHAPTER 2

ELECTROPHYSICALITY

*a life I could not have imagined, the amber
of electric through the body, I have seen*
(Smith, 2009, p. 40)

At the heart of this research, perhaps most important of all, is the new kinesthetic experience of the body itself for the performer. Within the seemingly endless bounds of digital space as the site for active translation of the human body, there seems to be an underlying atmosphere of fear and distrust within the dance community of these new forms of embodiment. The idea that the body can exist beyond its corporeal boundaries in an art form traditionally limited to raw physicality as a means of expression could be seen as undermining the fundamental tenets of dance itself. The ability to “manipulate, extend, distort, and deform information as well as the experience of the body...offers a way to augment and extend possibilities creatively, experientially, spatially, visually, sonically, and cognitively” (Gromala & Sharir, 1996, p. 283). It is this extension of physicality and sensorial possibilities that creates a sensation, almost impossible to describe, what I have called here *electrophysicality*. It is a feeling state that can only be described in poetry and art, like Smith’s “amber of electric through the body.”

It is a sensation separate from physical body-presence, a way to “experience immersion in the simulation” and “lose the sense of being grounded in physical

space...the sensation of disembodiment” (Gromala & Sharir, 1996, p. 284). It is precisely this sensation of heightened disembodiment that creates the otherworldly sensation of digital embodiment. As Rachel Fensham (2000) writes in her article on mediation and the body: “Debates about technologically mediated bodies in relation to dance have been dominated by the fear of disembodiment (p. 229).” Perhaps compounding this fear is the potential of a digital body to perform inhuman feats, like avatars resurrecting from death or virtual reality simulations that allow us the experience of leaping over buildings, flying, or translocating the body between digitally constructed environments in seconds. Digital technologies like motion capture, avatarial video games, and virtual reality simulations allow us to physically experience the impossible, and this is a truly disembodied experience. This question of disembodiment (or rather, hyperreal embodiment) seems to be the proverbial stone in the rudder, a blockage that prevents digital technology from entering the proprioceptive and philological spheres of many dance artists.

For a dancer, it is often assumed that anything digital is inherently “unnatural” or “not real,” that somewhere in the mess of ones and zeroes that creates a projected image or a virtual avatar, something of the visceral self has been lost. Truly, the “use of computers in art practice is not a convergence but a battleground. Art working becomes ephemeralized [through computers] and the connection to bodily action is broken” (Penny, 1997, p. 37). For dance, this seems to be a particular source of strife among traditionalists who believe that dance work is done in a studio, perfected for years, and performed on a proscenium. The presiding question for traditionalists is this: if most of the work is done at a computer, and the movement can be repatriated digitally and

reproduced as whatever the media artist wishes it to be, what is the point of being a “dance artist”? The use of digital technology is seen as a replacement for the physical act of dancing, further “ephemeralizing” a deeply physical live performance act. Digital technology, in this way, has subverted the traditional notion of what it means to be a dancer in our society, creating fear along the way.

Moreover, these new spaces of cyber-reality or hyper-reality can be the site of dangerous new modicums of human interaction and representation (as we see in Susan Kozel’s experiences in *Telematic Dreaming*). And these gray spaces of embodiment are certainly present, as the human body is transported, translated, and redefined in the infinite void of the digital world. But if the art form of dance is about honing and transforming the body into an expressive mediator, aren’t the techniques of digital embodiment just an extension of these principles? Can the body not co-exist with the spirit in other realms of existence? In a sense, even digital technology could be seen as natural if we consider that all of these mechanisms evolved from the human mind in conjunction with our biological impulses. Computers, these powerful extensions of the human cerebrum, are much like the steam engine that once amplified the power of our physical bodies, revolutionizing the way we experience our natural world. If we can somehow merge the schism created by the fear of disembodiment in dance and digital technology, perhaps our spiritual and physical experience of movement can be heightened or extended, in order to experience not disembodiment, but rather a new kind of embodiment – perhaps we can move towards what N. K. Hayles called “the posthuman.”

When Hayles writes of the mergence of “flesh and metal” (2003, p.11) in a virtual space, she frames all the possibilities of these new “posthuman” spaces as infinite and surreal. They are places without the limits of physics on the body, or all the laws of physical spaces, spaces that are limited only by the imagination of the programmer or creator. In some way, they allow the human mind to play God and create New Edens, and new creatures to inhabit them. Within these hyperrealities, the human body can be re-envisioned without the inevitabilities of death, suffering, or age. Within these staggering possibilities of new technology, there is a potential crisis of epistemology and representation; that is to say, how we view the body, its aesthetics, its experiences, and the discourse surrounding our attitudes towards it, is now up for interpretation and conflict. For a dancer existing in this realm, Fensham writes of how her newly created dance avatar “rematerializes the human” (2000, p. 235), illuminating the digital world as a surreal extension of our own. This is a dancer that does not exist in the world as we know it, and is not limited by fatigue, flexibility, strength, or even gravity. This dramatically changes the ways we define a “dancer,” if previously thought of as a flesh-and-blood mover, we are forced to conceptualize the moving body in a new way.

The digital dancer is described as “a dream of escape for the choreographer, an excited journey away from the endless repetitive strain placed upon dancer’s bodies in the company structure towards the machinic reproduction of loss and immortality” (Fensham, 2000, p. 236). Fensham describes this digital body as a “dream of escape,” a new world for choreography – in many ways, this could be a horrifying prospect for the professional dancer: digital outsourcing. And soon questions arise about the identity of a performer – is it really dancing? is it even human? or is it a more perfect human? After

all, it is as Fensham states, a representation of immortality. It is a dancer that does not die, grow tired, get injured, or sore, or have any physical limitations at all. However, it is also a mute vessel of computer programming, it has no artistic voice or agency, no element of humanity other than the representation of its form. It is a digital puppet, controlled through the medium of cyber-tools. And here the equilibrium between the real and the hyperreal is broken, the balance between visceral humanity and digital embodiment is taken to the extreme in the direction of pure separation from the visceral, flesh-and-blood human.

This redirection of physicality into virtual realms is epitomized by motion capture technologies, which read body heat from the human form and translate this directly into numbers that can then be reconstituted in animation programs like Maya. I recently experienced dancing in a motion capture suit with the University of Utah EAE Games Program, with video game designers who were interested in capturing body movements for use in the creation of video game avatars. As I moved in the suit, watching my blocky, sexless, smooth-skinned digital self move on the monitor, I was taken by a wave of electric self-recognition. Suddenly I had the sensation of having a second set of nerves, a connection to this androgynous abstract self that was being created by the movement of my joints in space. This avatar was a representation of my body stripped of context and sociocultural signifiers (it contained nothing of my sex, race, height, weight, or class), it was me distilled. Through only my movement, I was able to see myself abstracted, where my essence as simply a body in space was made primal once again in that void of software and gyroscopic sensors.

Working with the video game designers, and with different dancers in the body suit, I was struck by the difference in interest between our fields. For the technicians and designers, the question was always focused on the creation of the most “realistic” body motion possible. They wanted to create avatars with as much verisimilitude as possible to the actual moving body, what they call “good data.” For the dancers involved, myself included, there was always a joy in experiencing moments of deconstruction: when a sensor jiggled loose or stopped working, and the parts of the body suddenly moved with a mind of their own. A leg might suddenly lift off the ground of its own accord, the pelvis might wobble to the side in inhuman contortion, and even once a dancer’s head sensor came off and he immediately began manipulating it with his hands. Suddenly, he was imagistically decapitated and his head was literally in his hand. Even from the improvisation of this kind of creative play, our designers were interested in creating the most human-like movement possible – “Later,” they described to us, “we will go in and fix it all to look super clean with the animation software. We’ll make the jumps higher, the falls smoother, and paint the body with whatever model we need.” We, the living humans, would be remade and perfected in the digital image.

These interests in the avatar as a more perfect “digital dancer” are certainly not baseless, and they represent a very real desire within human beings and artists to transcend the limitations of the corporeal world. As Fensham writes, it is an expression of “exertion of the human organism wanting to be released from the pull of gravity, the weight of the body” (2000, p. 237). And what she means by this is that in some way we all crave to move beyond the physical form, to alter ourselves on the most basic level, to become shapeshifters. It is not only the culmination of artistic visual endeavors in the

dance field, but also a mode of creating the perfect dancer; after all, so much of physical training in dance (particularly in ballet) is aimed at creating perfection. The goal of virtuosity is, on the fundamental level, to make the body in some way better, stronger, faster, and more agile, with greater flexibility, grace, and agility. Never was this more apparent than in the work of Merce Cunningham, with the high modernist ideology of stripping the human identity down to its most basic level: lines, shapes, motion. Writing on Merce Cunningham's *Biped*, Ann Dils (2002) points out this disconnection between the virtual and physical dancers on stage:

In the real world, dancers never completely become abstractions- never exist as just motion or just line – because they can't shed skin color and sexual characteristics, not the thousand of nuances of body, face, and motion that suggest personality. (p. 95)

Truly, digital technology has given us the possibility to disconnect form from person, to ascribe any number of identities to a moving body without the markers of its humanity. In this way, digital dancers can in many ways rival the potential of a real dancer to complete a certain aesthetic task; in this case, the distillation of body into its base elements of form.

Physical, mental and sensorial virtuosity, on the other hand, are much more difficult to replicate. In many dance circles, it is assumed that the more extreme the physical virtuosity, the better the work that is produced. Digital technology may provide backroads into this kind of physical perfectibility by bringing the body digitally into a world with rules that we can control, and suddenly all things are possible. It is possible that this is a new kind of virtuosity, digital virtuosity, quite unlike the original model of time-tested training that creates a philosophy of the “perfectible” human form. The electrophysical model is, instead, one of combination, of mixing, and one without the limitations of time:

The body in cyberculture is a body that combines the virtual and the real, the avatar and the actual. In this sense we move away from a definition that establishes the limits of the body as those that are created “by nature.” (Garoian & Gaudelius, 2001, p. 335)

Much like video games or the filmic techniques of screendance, “cyberculture” does create a seemingly “unnatural” body; this may be the cause of some resistance to the consideration of a virtual body as an actual representation of a human form. Does an avatar dancing around on a screen constitute a dance, if the dance had occurred hours prior in a motion-capture suit? Many might argue that the migration of body into the digital has somehow destroyed the physical act of dancing, but we may simply be witnessing an ephemeral act transcribed and mutated into another form of embodiment.

This kind of digital-physical mixing is an apprehensive road for some, as it subverts the many years of physical training required for the kind of raw physical virtuosity that is respected in the contemporary dance field. But Garoian and Gaudelius also note that this transmigration of body influences how we construct the identity of a body, describing this metamorphosis into the digital as one of “inscription.” They posit that “identity is not created within a cultural vacuum, neither is art or information technology,” and “we perform inscription... as a critical process to re-form our epistemological understanding of art, technology, and the body” (2001, p. 333). Thus, the avatarial dancer is doing more than just perfecting on virtuosity, it has a much deeper purpose. Digital dance investigates that cultural environment which constructs both our identities and our technologies, allowing for the reinterpretation of what it means to have a body moving in space. Just as the digital inscribes upon the physical, the physical also informs and comments upon the digital.

There is also a feeling state produced by this kind of physical/digital mixing, a process that speaks to more than just the product created. It is also about the constant exchange between physical body and digital body, and the somatic experience of having one's whole being translated by a computer or camera. Fensham mentions this in context, saying that "there is no equilibrium between technology and the body, only an endless oscillation of vibrations and modalities of dancing or thinking. Thus, technology reframes the poetics of dance, so that it is no longer confined to the materiality of the body..." (Fensham, 2000, p. 230). It is this "oscillation" between modalities that provides the subtle conversation (if this relationship can be defined as "conversant") between the human and the digital. It is about more than just the dance itself, but about the dance artist's involvement within new realms of thinking about the dance itself, "...letting them think corporeally into new spaces of movement" (Fensham, 2000, p. 231). It is this constant conversation that my research will focus on, and the formation of a deeper discourse between the physical and the virtual. It is this potential of modification, equilibrium, and vibration between the human being and its digital traces that can create new experiences of embodiment.

Shroud: Digital Sensation and Distillation

*You of all should know fear of the monster
is a kind of desire, a way of loving without
the difficulty of touch.*

(Smith, 2009, p. 41)

As his body snaked across the floor, the rippling black grid beneath him created a shimmer as though he was dancing on water. A young man, nearly naked but for the loins, moves against this oozing black substance created by live-controlled animations

projected on a 10 by 10 foot square on the floor. The substance has the resemblance of oil or some other fluidic particle that sticks to the body and nearly makes it disappear in the projected darkness of the floor. This was the spatial context of a recent work I created for a site-specific installation show in Salt Lake City. The piece was called *Shroud* due to the semiliteral imagistic allegories of obscuration and revelation created by the animation designs. It was also, in many ways, about the slow death of a single person, and through this image of a dying man in his own fluidic purgatory, about the gradual decimation of a community afflicted by disease.

The entire beginning of this solo was performed on the ground, his body glued to the floor in contortions and back arches, limbs alive in taut muscularity flying akimbo against the undulating surface beneath him. The physical context of the work was inherently affected by the spatial design, but also by the “amber of electric through the body” (Smith, 2009, p. 40). This was the image we used to design the improvisational score of this piece, as though something was slowly eating away at the body’s organs and arteries, indelibly soft and insidious. It was a venomous electricity, inspired partially by the infinitely spiraling ebony grid I had created through Adrien Mondot’s live animation software eMotion, and partially by the discussions I had with my dancer about the terror and sadness we held in our hearts for our community that had been ravaged, and is still being ravaged, by HIV/AIDS. It was not just a feeling of victimization, we decided, but of ongoing self-destruction and the heaviness of guilt and shame that remained for our people (if we could be called a “people”). Our identities were secret and unknowable, and just as the swirling endlessness black on the floor seemed to make the earth drop away, such is the indescribable feeling of loss that lingers under our naked skin.

The goal for the work was to respond not just to the performer's internal environment, his thoughts, desires, and fears, but also to the digital environment that had been created around him. I asked him to feel the motion of the ground, illusory in its construction, but very real in the sense that he perceived it, the audience perceived it, and the visceral response to its incalculable motion was real for the body immersed in it. We began with subtle improvisations, lying on the floor and feeling the ground "move" around the body, allowing for its "chaos...quill, and the mark of my skin" (Smith, 2009, p. 41). As we worked on the movement score for this piece, I saw the dance begin to mold in response to the animations (which I was controlling remotely from a computer). A mergence began to occur between us, resulting in "physical/virtual distinction [that] is *not* mind/body distinction... not a disembodied thinking thing, but rather a different way of conceptualizing a *relationship* to the human body" (Stone, 1996, p. 40). Like this, the relationship between the physical and the virtual was not a representation of dualism or black-and-white "mind/body distinction," but rather a coexistence of different distinguishable signs. It was a contact duet between us, dancer with physical body, and dancer with cybernetic body. In a sense, I was projecting an avatarial self onto the floor to dance with him, and the dialogue we created was a mergence of digital and physical.

During one rehearsal, we sat back and watched the projections move on their own so the dancer could see the aesthetic tumult taking place beneath him during the dance. He could certainly sense it, but he could not necessarily see its quantity or scale. "Wow...I don't have to do anything, this is mesmerizing on its own," he said, and so we decided that less was more in the choreographic elements of the piece. The combination of rich digital environment, the immaculately crafted poetics by Lytton Smith, and the

droning soundscore already created heavy undertones for the work. For this type of work, I have begun to realize that sometimes the movement must get out of its own way. But it was not a sense of abandoning choreographic identity, quite the opposite. As the roiling patterns on the floor obscured and revealed the body, a choreographic design of pausing and oozing emerged. As the piece opened, I wanted to see just his seminude body lying on the floor completely motionless, staring up at the ceiling; the animations created concentric circles around his prone form. With tiny rolling phrases, almost completely flat against the floor, he improvised on a score of oozing and pausing, the liquidity of the body and choreographic structure mimicking the incalculable silky patterns beneath his body. In this structure, nothing was repeated as he explored variations of fetal curling and amorphous shoulder balances, and after pausing for a moment to allow the animated black sea to settle, he would cut the space once again with his sliding lizard-like crawls. What emerged was a symbolically tragic duet between the lone human body and his environment, this depthless ebony shroud.

At the end of the work, I designed a bright strobe of lights and that oscillated every few milliseconds to cut through the drone of this isolated floor-bound structure. At this moment, I instructed the soloist to stand up and move in response to the strobe itself – he contorted his body in almost inhuman speed, with tiny twitches and ticks of musculature that compounded the final frenetic moments of the piece. This kind of choreographic structure, relatively open-ended in an improvisational sense yet extremely specific in a qualitative sense, was necessary to allow the animated designs and movements to exist in tandem and in dialogue. In this otherworld of digital construction, the movement was distilled and clarified: it was as if technology had forced us to look at

physicality in its truest sensations and emotive power. This electrophysical “shroud” was reminding us that the barest, simplest, and most raw movements of the human body could be the most telling, and the most touching.

The Words We Missed: Losing One Another

I am here. In this empty room, with green walls and hardwood floors...empty except for the bed that I just finished rebuilding. And I'm wondering, when, and if, and who might share that bed with me. (Nathan Dryden, from the words we missed, 2013)

The channeling of the second self that exists within this estuarial space of the digital and the real involves every part of us as human beings, from our emotions to our movements, our gendered bodies, and our culturally based societal assumptions. We see this demonstrated to the extreme in Susan Kozel's *Telematic Dreaming* experiences, a piece in which the performer was placed in a separate room from the audience, but both rooms had identical beds in the center. The projected image of the dancer would be seen by the audience member interacting with her in one room, while the projected image of the audience member would be seen by the performer on the bed next to her. In the context of this work, we see the strength of cultural influences, as Kozel describes them, a code of behavior predetermined by the inherent knowledge about the space (a bedroom) and the mimetic projection of the bodies involved. With the use of live capture, the images projected are unadulterated 2-D copies of the human body involved; on the surface are some basic assumptions about women, bedrooms, and intimacy. As Kozel notes, this provides a physical and cultural backdrop for all of the metaphysical questions that start to emerge.

There are questions about identity, self, and projected self, about human intimacy and the transference of emotion over distances. Is a projection of the body the same as the body? Can it experience sensations and transfer them to the living body? Does the mere image of oneself inspire sensation in one's visceral form? Some might assume that a captured video or projected image of the body is less real than its fleshy counterpart, and that these interactions mediated by technological translation would be inherently less meaningful than a face-to-face interaction. But Kozel's experience seems to contradict this, as she describes how a "real face-to-face" meeting with one of her virtual partners fell drastically short of the intimacy in their digital encounters:

The difference between our ages and cultures lost significance, but *not* because our bodies were digitalized and abandoned. It was just the opposite. Our virtual rapport had a greater physicality and intimacy than our real engagement. (Kozel, 1998, p. 85)

In this singular experience, Kozel is describing the power of digital technology to strip down the barriers between people, barriers like age, gender, sexuality, race, and politics, and bring forth a new kind of human interaction and intimacy. What she describes may be what Hayles would call a "posthuman interaction." And perhaps the most striking part of this experience is that when Kozel meets her digital partner in person, they have no way to connect, and that their "real engagement" fell drastically short of the physicality and intimacy of their virtual interaction. The common assumption, particularly among dancers, is that these kinds of virtual realities and the interactions that take place within their borders are not real, and have no basis within physical interaction and embodiment. But what Kozel suggests is that the very process of stripping away the rules of the physical world, the surpassing of "ages and cultures," is what makes interaction in these spaces often more real than the real.

The concept of hyper-reality was central to my thesis quartet *the words we missed*, a site-specific digital installation work that represented a theoretical and aesthetic culmination of my research. The piece begins with floor-projection, and three distinct solos in interactively animated worlds. Human-sized text fades in on the floor as a lone dancer emerges to sit in the midst of text reading: “I am here. In this room, with green walls and hardwood floors.” As he is speaking, telling us of a time when he was most lonely in his life, the text fades in on the floor around him as the words emerge from his mouth. It was a piece about longing and missed moments between people, not because of any particular human failing, but more from the many universal accidents to which we are all subjected. As this man sat in stillness, speaking of the absences in his life, the shifting words became not just an echo of his voice, but a digital concretization of his inner longings painted onto the floor itself. One of my colleagues noted, “this is a very lonely world you have created.”

This interpretation of a “lonely world” was perhaps influenced by the structural elements of the piece, as it took the form of a series of solos in unique projected environments. Part of this came from the practical limitations of the hardware I was working with during this process: my laptop computer only has two external video outputs, meaning that I could only have two projectors hooked up at one time, though they could project different environments. I had one projector hung from the ceiling, but only on a relatively small section of the floor. The limitations created by this spatial design provided a unique choreographic challenge, and the question of whether or not to have the entire dance occur within the confines of this box of light barely large enough for two dancers. From practical concerns, I decided to have a large portion of the piece

occur as a series of solo vignettes, creating the theme of these four people existing within the same space but in their own imagistic worlds. It became a desolate and constrictive space, metaphorically representing a certain mode of existence, much like the various lives of lonely people in a city divided by apartment blocks, each individual living in their own tiny boxes and dancing out their lives in isolation from one another. All of this gradually became clear to me from the sheer practicality of the technology at work, and in a way, the choreographic structure of the work emerged in direct dialogue with the technological elements at play in the space.

There was a time during the creation of this work that I hit a creative wall in terms of how to proceed choreographically, how to move the work forward in terms of its narrative arc. This block came in the form of transitions; essentially, I was unable to conceive of a formal way for these dancers to exchange places in the space, and how to digitally transition between these scenes without the shift feeling aesthetically abrupt or jarring. These changes also had to feel like they made sense within the trajectory of the work. For example, after the first soloist spoke to the audience about absence, and the many gaps in his life, he slowly began to curl his weight and shift between moments of physically condensed grief. Gradually coming to standing, he begins to slowly paint the space with languidly hollow gestures and shift his weight as the floor beneath him shifts to a swimming mess of red lines and blinking eyes, as if the floor itself were looking up at his glacial form. As the solo came to an end, I decided to shift the projection to three solid rectangles (much like copies of the empty bed he spoke of earlier), and he gradually crumbles down to lie in one of them. This was a moment of transition I was unable to reconcile in my choreographic brain: I know that the next section will be a woman

performing in a vibrating wilderness of white lines and whispers, but how to get there? Upon the advice of my creative colleagues, I decided to have her enter slowly, looking forward, and lie down in one of the beds near him. This formal element, emerging from the structure of isolation being created from the idea of “boxes” or “separate areas,” created an imagistic transition that furthered the theme of people existing in the same space, but not connecting on any human level with one another.

I also used darkness as a functional element to mask the transition of bodies between environments (a trope I have used frequently in my screendance works), which works to obscure that which does not reveal a certain vision of humanity that furthers the content of the work. In the darkness, somewhere behind this ever-changing luminous box, I had placed a microphone for the other dancers (who were not performing) to sing and provide a live soundscape for each of these live projected environments. It was also a mechanism for metaphorically connecting each of these people despite their isolation in each of these unique performative worlds. In this way, sound became another part of the connective tissue that strung the formal elements of this work together. The third soloist, emerging from the darkness and screaming in French as tiny textural words cover his body from above, presented a kind of subdued rage into his environment. I took this improvisational information and translated it into a reactive digital environment where the words on the floor would dynamically respond to the volume of his voice and the speed of his movement.

As the shouting man twitched and convulsed with his joints and jagged edges jabbing out from his core, I constructed his score based around the similarly jolting movements of the paragraphs beneath his feet. As the white text flitted around the space,

it painted his body with words, creating both text and texture on the human body. To enhance this effect, I instructed him to find stillness whenever the text was moving, and to move whenever the text was still. In stillness, the design could coat his body with this unintelligible verbal texture, and in motion, his body could move in and out of the darkness created by the gaps in words. To an American audience, even the words he was speaking would seem alien and unintelligible, like a hollowness and absence that was simultaneously real, voluminous, and present. To understand these many layers of perception, how we hear the words he is shouting and see them beneath him, and see them physically coating his body, I return to Baudrillard (1988): “the simulacrum is never that which conceals the truth – it is the truth which conceals that there is none” (p. 166). The words and blocks of text I used in the creation of this work were meant as a “simulacrum” that “masks and perverts a basic reality” but also “masks the absence of a basic reality” (Baudrillard, 1988, p. 167). Concepts of speaking the truth, or speaking our own truth through words has always seemed to me like a strange frequency – there is something inherently unintelligible about these symbols: words. We speak them, and yet we do not become them physically. Words are both subject and object, much like the body itself, and to see them concretized on a flailing human form brings to bear the many perversions of understanding that happen through the speaking, shouting, and whispering of these absent syllables.

The inherent disconnection between words and body then became about this “absence of a basic reality,” and the inability for us to reconcile our social and physical boundaries – words became representations of our hollowness. Inspired in part by Nick

Bantock's multidisciplinary telegraph compilation, *Griffin & Sabine: An Extraordinary Correspondence*, I felt that my dancers were embodying space but not occupying it:

Sometimes willpower alone cannot make things happen... What I see is not staleness, it's change. I feel you moving to your dark side. Give your shadow a chance to unveil itself... Island magic works on island souls. You and I will heal each other. (Bantock, 1991, in Sabine's response)

With the absence of any sense of a will to "make things happen," or a "willpower" to change, I designed tiny microcosms of human events to exist within tiny projected environments, and set my dancers inside these spaces. It was not a piece about stage presence, about filling space in the traditional performance sense, but about embodying the space itself. The digital worlds each of my dancers inhabited began to represent islands of consciousness, and the impossibility of human will to force connections into being. After the moments of shouting subsided and all that was left was the shifting textures upon the dancer's body, he continued to move in the space as the final soloist passed by him to inhabit a new and more expansive space. But she passes by him without a glance, only a brief moment of cohabitation in her slow, determined walk forward. The moment of connection was lost, and the irony of the initial phrase "I am here" is revealed to be only a statement of illusory identity that can never be fulfilled in its staleness, or its constant change.

At some point in the process of composing this work, I realized that the space needed to drastically shift to provide an alternative environment to this lonely, isolated world. To do this, I used my other video output (again, form emerging through the limitations of technology) to focus another projector on a massive wall space nearby – as it shimmers to life, the tiny confines of the box on the floor disappear and the construction of the space shifts to a much larger, more optimistic environment of full

light. In a way, the piece itself revealed to me this moment of opening. We do not always exist within our separate and isolated boxes, I knew that these humans had to come into connection at some point and share a communal space. After numerous experimentations and improvisation with projectors at various different angles in different spaces, I realized that the simplest solution made the most sense: from the dark confines of their individual hollow places, they needed to enter a larger world full of light. This is perhaps the most ancient aesthetic arc in existence, almost Biblical in its simplicity: from darkness, there was light. Strangely, the limitations of technology and the arc of this work led me back to the oldest narrative arc in human history. Perhaps these trajectories resonant with us because we are acculturated to understand them through our literature, movies, and cultural mythologies, or because they offer spiritual fulfillment in a world that often does feel more akin to boxes of shifting darkness than primordial light. For this work, I chose to follow this impulse and shift into a vaster imagistic world – both the light-filled and the confined dark spaces were beautiful to me, but in terms of formal arc the piece needed to keep moving forward, and I opted to move forward on the road of imagistic optimism.

This creative process was probably the most difficult I have ever undergone, due to the multitude of images and spatial transformation that demanded so much of the performers themselves. They were asked to inhabit worlds of shifting emotive qualities, as well as the literal transformations of the space around them. After moving in an ever-mutating space of linear angles, one dancer was suddenly enveloped in strobing white splotches (that looked a bit like radioactive shellfish) that flashed across her body and all over the ground every few milliseconds. “It’s nauseating,” she said, “I feel like I’m

moving even when I'm not." In this way, the illusions of digital technology create a visceral sensation for the performers, while simultaneously creating numerous problems in the experience of viewers. At this precise moment in the work, as well as other moments throughout the piece, there was a strange temporal anomaly in my own visual perception of the work. Originally, I had this transition between lines and strobing shellfish occur in a matter of seconds, much to the chagrin of my audiences in early showings. It was abrupt, jolting, a drastic change in scene and mood and visual information, which I was unable to discern clearly as both choreographer and media operator/designer.

Eventually, I realized that the movement needed to take more time within the shifting qualities of the digital designs, to allow the eye to register the monumental shift in aesthetic worlds that was taking place. The result was a much more resonant image, giving the eye time to consume these moments that cut the body and the space itself into sections. Imagistically, we see a woman looking up at a constantly modulating stream of white shellfish, barely able to stay on her feet: the performance quality, its physicality and sensation, was inhabited by technology as the digital space itself was inhabited. Formal, almost painterly questions began to emerge: is she still as the white lines move over her body, or is she moving in the midst of still white lines? Should the body paint the space, or should space paint the body? What resulted was a choreographically and kinesthetically unique set of questions definitively bound to the space being created digitally.

As the body moves against a still image of a white grid projected on the floor, the body seems to be wiped by it, her frenetic score (also based on lines, with bladed hands

spoking into space and knees buckling into quick permutations of inward and wide outward rotation) seemed to cut through the digital data surrounding her body. When the projection itself was moving, there seemed to be very little need for physical motion at all, as the body itself becomes the canvas for motion. Traditionally, dance artists think of space as the canvas and the body as the paintbrush, but in digitally created spaces, this modality can be subverted, or even reversed. There is no handbook for choreographers on how to create movement in a space that is oscillating between 10 distinct abstract designs of shellfish, lines, abstract eyes, and what relationship this body should take to these spaces, but I have found that the simplest methods of choreography and structuring allow each design and each body to emerge organically. We had to sit with a space for days, improvise based on feeling-states that emerged from physically experiencing the light on the skin, the abstract texture of emotion that each unstable space was offering to the dancers' bodies. From that, a settling and allowing for experience to imprint upon us, dynamics and timings and structures began to emerge of their own accord. I, as the choreographer, only had to make room for those organic happenings to take place.

In the end of the piece, when the last soloist approached the bare white wall, I crafted the shift into openness in direct dialogue with the technological elements at work. As she folded into the ground and swung her arms with liquidity, her shadow followed, as did a multicolored version of her body. This solo, in its world of vibrant light, became a trio from the motion of her body, one of shadow and one of bright oscillating lines in neon green and red. A KINECT camera was capturing her movement in the space and transfiguring the shape of the body into a ghost-image of vibration and effervescent color. This was interactivity in the other extreme, where the body is entirely affecting the digital

composition of the space; through improvisation, this trio was different for every performance, and the dancer was also in constant dialogue with her own image. It was an interdisciplinary questioning of self and existence, much in the same way that Bantock uses Griffin and Sabine to imagistically and textually poke into existentialism. In the end, *the words we missed* closes with a massive wall-projection of human bodies outlined and filled up with words. We do not see the bodies themselves in space, but rather their infrared ghost images (captured by KINECT) and projected back as bodies of text. It's almost as if we are nothing more than the words we say, the thoughts we have, the interactions with others that define us. It is an existential, political, and aesthetic statement to have four dancers moving in complete darkness, their motion revealed only by the words that they themselves reveal.

It is worth noting that the kind of political body-transcendence that becomes possible in these spaces can also be a dangerous one, as Kozel's experiences of cyber-sexual violence show us. To completely obscure the body creates anonymity, and within obscurity comes disembodiment and the many cultural signifiers we have created to bind the body and make it knowable. Truly, the rule of law in our society and cultural barriers therein are in place for a reason, and any moment when these manmade laws are stripped away and human impulse is left unbridled can be a terrifyingly elucidating one. But even this demonstrates the power of the digital to extend everything that is human, both the intimate and the dangerous, and make it more extreme. It makes communication between people more unintelligible and more obscure, each face glued to a metaphysical screen of digital existence. The tiny image-worlds of *the words we missed* were in a way microcosms of this psychosocial possession: "to possess the world in the form of images

is, precisely, to re-experience the unreality and remoteness of the real” (Sontag, 1999, p. 85). Each world was possessed unto itself, and each performer was remote from the other due to the distinction of their unique environment, symbolized through various projected images. It was a work about missing reality, one of indiscernible translation between the spaces of our own minds and the unreal spaces of others. “We are here,” but we cannot see past the image of one another.

These paradoxes of technologically integrated identity seem to stem from the fact that these image-worlds “fundamentally alter the relation of signified to signifier. Carrying the instabilities implicit in Lacanian floating signifiers one step further, information technologies create...*flickering signifiers*, characterized by their tendency toward unexpected metamorphosis, attenuations, and dispersions” (Hayles, 1999, p. 30). It is a difficult thing to envision the human identity as a “flickering signifier” in the digital age, implicitly unstable, dispersible, and always morphing between states. Our anonymity and distance from one another in our cybermediated forms is certainly confusing without the traditional signifiers of corporeality, constant space or solid identity. But for a performer, believed to be grounded in physical presence, doesn’t the advent of unhinged identities provide a plethora of new opportunities for expression? In a way, the “flickering” identity of the digital age offers a freedom from physical signifiers like race, gender, class, and ability, a freedom from identity. This paradox of technological translation can then be called a mode of augmentation or amplification, rather than a replacement, of our consciousness. But along with this comes the dreaded “power of erasure” that digital technology in particular can create – an immediate deletion or departure from all earthly laws of physics and space. The body can literally

disappear, and reappear, vanish into the darkness and then return from it. How can we imagine the sensations of this experience within the performing body? It is a new form of channeled energy, bordering on the spiritual, and inherently shamanic.

CHAPTER 3

CYBERSHAMANISM

As video realities become more and more felt and further merge the human senses into an illusionary space, the field seems to be moving more and more towards a completely embodied avatar – a more perfect digital-sensual experience. For dance performance, works have emerged in the last 20 years that push the boundaries of what is real and what is illusion, but these virtual embodiments in illusionary spaces create more than just a sensation and an aesthetic product. There is channeling at work, reorienting the performer's sense of self, to the point of spiritual momentum. When Diane Gromala describes her experiences with virtual reality and the chronic pain of her physical body in the Art and Virtual Environments Project, she described the “ability to reach a transcendent or disembodied state at will, related perhaps to the experience of a dervish...representing less a denial of my body than a reconfigured inhabitation” (Gromala & Sharir, 1996, p. 281). Like the mystic Dervishes, who use ritual dancing, howling, and chanting to reach an “ecstatic state,” the technologically mediated body appears to be a site of shamanic channeling. Many spiritual beliefs hold similar ideals, that through ritual and induced disembodied states, the human spirit can come into contact with something larger. It is this “reconfigured inhabitation” of the body that lends digital performance its spiritual essence.

When Bill T. Jones created “Ghostcatching” in 1999, we see a performance artifact that defies the boundaries of performance ephemerality, corporeality, and spirituality. The abstract avatar of a dancer moves in a void space, its body constructed by spindled fibers or marks of pencil – its limbs appear to scratch chalk against invisible walls, a spiderlike body encased in darkness. Yet somehow, this strange human-like form is distinctly recognizable as Bill T. Jones himself improvising through space. Set against these disembodied yet deeply embodied avatars, we hear the faint sound of a hymn (sung by Jones himself): “Sail away, oh honey, sail away.” The piece becomes a spiritual self-portrait beyond the constraints of body or corporeal association: we see Jones and yet we don’t, or perhaps we see him in a distilled essence of spirit that borders on hymnal purity. The words “sail away” seem to symbolize a human consciousness washing away from the constraints of its body, which in traditional allegory might lead us to interpret images of death, but in the illusionary spaces of the digital age merely speaks to the somatic split of body and consciousness that the avatar’s existence creates.

When Ann Dils writes about Jones’ performance in this work, she notes that even though we cannot see the performer, we get a sense of his essence. Perhaps the lack of corporeality itself, “without his well-known face and the cultural moorings of race and sexuality that mix into his public image, provides a sense of intimacy” (Dils, 2002, p. 100). It’s as if by doing away with all of the politics of body, somehow we see into something deeper and drastically different. Dils (2002) says that by witnessing the movement, “beautifully enhanced by the media artists, I’m aware that some of the energy of the movement is supplied by my own memory” (p. 100). The avatarial dancer, then, brings us into a psychological space as well, one of memory, where our mind has to fill in

the gaps that our traditional body-witnessing cannot. But it is clear that “black identity and politics emerge, even through a skinless medium that does not tolerate sweat” (Goldman, 2003, p. 69). But how can our identities and politics emerge without the body? It seems that even with words, the subtextual implications of an avatarial body, and a virtual space, dance can still speak in this “skinless medium.”

Dils also notes that the mood of his “ghosts” seems to change, shift like the many moods of a real body but without their social markers. But within that, many reviewers have noted that some of the “animus” is lost in the disconnection from the actual body of Jones. The choice of that word alone, “animus,” is a telling one: the Latin word for spirit. Many scholars have noted the loss of this essence, this primordial thing, in the translation of the human being into the virtual realms of digital performance. It may not be completely recaptured in an entirely digital world, but what does happen to the human spirit when it crosses into these super-real digital spaces? Are we witnessing the emergence of something beyond spirit, or does something of humanity die in the translation? In “Ghostcatching,” we see Jones stripped of his sociocultural identifiers, but we still get a sense of his life and experiences, even his unique ways of moving. The dark void of digital technology could then be seen as a place of spectral animation, or reanimation, allowing us to see a barer form of the human spirit.

Films like *The Matrix* and *Avatar* have speculated on the possibility of this idea of complete immersion into a virtual world, where one experiences all aspects of reality through a projected body. It seems no surprise that these movies, video games, and motion capture technologies, which offer the possibility of avatarial existence, are so wildly popular. Their acclaim speaks to a silent desire to imagine a more perfect world, to

inhabit a superhuman body, to transform the spirit, to become something more than what the world has given us. In dance, it allows for the possibility of hyper-states of physical sensation and out of body awareness, with the power to challenge the performer's most basic perceptions of space, time, and sensorial landscape. It is like stepping into a mythic world of surreal, or antireal, or hyper-real possibilities. These possibilities are worlds for mythological meaning-making, allegories, symbols, and spiritual insights:

Mythology has been interpreted by the modern intellect as a primitive, fumbling effort to explain the world of nature (Frazer); as a production of poetical fantasy from prehistoric times, misunderstood by succeeding ages (Muller)... as a group dream, symptomatic of archetypal urges within the depths of the human psyche (Jung); as the traditional vehicle of man's profoundest metaphysical insights (Coomaraswamy); and as God's Revelation to His children (the Church).
Mythology is all of these. (Campbell, 1972, p. 330)

In many ways, technologically created worlds on the internet and in virtual reality are Jung's "group dream" and they represent the archetypal urges of self-perfection, to bring the human into what Hayles calls the "posthuman." These are places of metaphysical insight, places of revelation, and productions of poetical fantasy. They are Frazer's "fumbling efforts" not only to explain the world of nature, but to offer an alternative one. All of the societal constructions of heaven, the afterlife, the fifth dimension, have been made real. Technological advancements into virtual reality and virtual bodies have provided us a way of not just believing in hyper-real alternative spaces like these, but the actuality of experiencing them within a computer in another, self-selected body.

The avatar is both an escape and a vessel for realization, for building and creating self-esteem, for envisioning the self as something other than what it is. Had avatar technology or video games existed within the ancient culture of Sumer, would the citizens of Ur have opted to inhabit the bodies of Enkidu or Gilgamesh? In many ways, the adventurers slaying the great dragon in the mountains are writing a modern-day

Beowulf - becoming the hero in their own tale. It is a modern twist on an ancient model of narrative, one that brings us closer to an ideal, to a sense of agency and perfection that seems so necessary for human beings to feel. But do these worlds ultimately inform and bring us closer to improving reality, as McGonigal suggests, or do they disembody and fragment our sense of self as Hayles' pernicious aspect of the posthuman, or some combination of both? Are these virtual worlds escapes from reality, or simply different realities? Or perhaps they are mere hallucinations, vessels that allow us to explore and satiate our longing for meaning and self-worth.

But there is something greater at work in the constantly evolving relationship between man and machine. It may change our thinking about what it means to be human, and what it means to have a body, a mind, and in particular, a spirit. "Because they stand on the line between mind and not-mind, between life and not-life...they provoke us to think about who we are" (Turkle, 2005, p. 280). Turkle goes on to describe this relationship as a "mirror," that computers "hold up a new mirror in which mind is reflected as machine." This presents a set of troubling philosophical questions regarding the constant quest of mankind to evolve and remake the body through technological advancement. If computers represent the vast multiplication of our mental powers, do they also offer the potential of a perfected body-mind through virtual existence? On the one hand, this creates the impossibility of intimacy when a machine has come to replace the processes of the human brain, with its potential of complete anonymity and freedom from corporeal associations. On the other hand, what does this freedom from corporeality provide, what different modes of existence emerge from these virtual processes?

Hacker culture may offer a new vision of this proto-digital spirituality, as Turkle (2005) notes, because they are the artists and creators of the digital age: “the hackers find soul in the machine – they lose themselves in the idea of mind building mind and in the sense of merging their minds with a universal system” (p. 280). This is the unending paradox of digital creation, and a deeply philosophical and spiritual one: our minds create the extension of our minds, which further enhance our minds. This idea of “soul” within a digital environment is similarly a dangerous one, because it brings new spiritual connotations into what might be dismissed as harmless cyber-tech. When Turkle (2005) discusses the impact of the cyberspirituality, she writes that “the effect is subversive. It calls into question our ways of thinking about ourselves: most dramatically, if mind is machine, who is the actor? Where is responsibility, spirit soul?” (p. 280). This has been my overriding question in the creation of technologically integrated dance work. How can I maintain the human spirit within these technologically created atmospheres? My answer to this question, as a dance artist, is the process of making work that speaks to other conceptual ideas than the highlights that technology provides. Like the great artists and stories of the past, my work questions the human existence, life, death, love, and the many strange energies that are channeled through our bodies and spirits every day. I don’t make work “about” technology, but rather use it as another expressive element within a larger symbolic design.

I grew up in the upper rung of the Bible Belt, hearing about brimstone and fire and the persistence of the Holy Spirit; in the end, dance has been my baptism. The artist circles I inhabit have become my congregation. Sontag, writing about imagistic iconography, reminds us that Feuerbach “called religion ‘the dream of the human mind’

and dismissed theological ideas as psychological projections” (Sontag, 1999, p. 84). But through these duplicitous worlds of images, she also notes that technology plays a role in “turning the tables on reality... turning *it* into a shadow” creating “an ecology not only of real things but of images as well” (Sontag, 1999, p. 93). In these realms of ecological images and post-reality, it seems logical to assume that the realms of spirituality have similarly been duplicated. Technology, rather than replacing God, in fact creates Feuerbach’s “dream of the human mind” in its limitless projections of space, self, and “reality’s shadows.” It fulfills the Jungian archetype, Muller’s poetic fantasy, and the revelation all in one. These digital spaces provide an even further avenue for “psychological projection” and hyper-realism, which may in fact create space for a different kind of imagistic religion, a new God called up from the collective mind of the human race.

For a dance artist, questions begin to emerge about the nature of what a dance means in these psychologically and mythically projected spaces, what we might call the dream spaces of humankind’s subconscious. Kent de Spain (2000) offers similar questions about the nature of performance in a digital age:

Must dance involve humans? Are the dances of birds and bees merely metaphorical? Can imagined creatures dance? Haven’t humans, through the transformative power of dancing, become both animals and imagined creatures, gods and tricksters and spirits? Real or imagined, must dances be danced by creatures, or will we accept and attempt to interpret a computer-based dance of shapes and colors? (p. 6)

In a way, de Spain is suggesting that the entire purpose of dance since the beginning of human mythology has hinged on the representation of spiritual life. From the Sioux “ghost dances” to the aboriginal dances of Australia, “dancing is a form of knowing, a feeling kind of knowing, a transcendence through other into full self-realization” (Gill,

2012, p. 200). Both Gill and de Spain note the connection between this “self-othering” process, where the performer becomes other or transcends the corporeal self (becoming a mythic creature, “gods and tricksters and spirits,” etc.) and the development of religion in society. Technology, by extension, enhances these “real or imagined” projections and transfigures them into another kind of embodiment, and allows the human to exist in ghostly, or spiritual, forms.

I believe it is my upbringing that causes me to resist the complete divorce of human “animus” from body, and led me to create works that attempt to distill the essence of the human spirit through mediation. If these projected environments and second-selves create a visceral response in the body, and perhaps replace “reality” by turning “*it* into a shadow,” I see the terrifying potential for corporeal replacement: a world of digits and electricity that renders the flesh paler in its wake. It is my hope that in the transmigration of corporeal to virtual that these avatarial spaces may provide as well a habitation for the human spirit, our conviction, and our faith. It may be that I am one of Turkle’s “hackers,” trying to find “soul in the machine.”

anathema: Channeling the Shadow Self

I celebrate myself. I celebrate myself with the words of dead white men.
(Hardwig, from *anathema*, 2013)

I had reached a stage in my research when I knew that sooner or later I had to transfer these ideas to the proscenium, so I embarked upon the creation of a proscenium solo work called *anathema*. The proscenium stage, with its depth, elevation, three-walled construction (plus the fourth barrier between audience and performer), and theatrical lighting, already has its own context. To perform in such an amphitheatric space carries

the connotations of Greco-Roman theatre, Romantic ballets, and all the permutations of postmodernism that have already deconstructed the stage space for conceptual reasons. Already the stage has precluded numerous possibilities of reconfiguration in its heavy-handed history, and there are many methods of technological integration that are simply not workable in the context of a proscenium show. It was difficult, if not impossible, to alter the space, so I decided that in order to form this dialogue of body and technology I instead had to alter my own inner landscape. I looked for the places within me that were the most alien and bizarre, darkest in their disconnection from reality: my shadow self.

I began sourcing image material and psychological states from Jung's *The Red Book: Liber Novus*, drawing from the pictorial symmetry and mosaic psychosis of the many illuminations within. Written during a time in Jung's life when his mental faculties were most unstable, it provided me with an artistic insight into a different kind of "unstable environment," the human mind. It was a process of delving deep into the mind of someone who was losing his tether to reality, and so I began the process of untethering myself from the bedrock of identity. I began creating a meta-saga of dead white men, poet-philosophers who had reconfigured their identities and voices much in the same way that digital technology has stripped us of our individual markers in the cyber age. Walt Whitman came to mind, and I listened to his words and existential questionings. "A child said, What is the grass? fetching it to me with full hands; How could I answer the child?....I do not know what it is any more than he" (Whitman, 1855, p. 18). These questions of identity, the loss of meaning in all things, and the untethering of symbolic markers became the basis for this dance work. What is the grass? What is self? Who am I when my body is gone?

With my KINECT in hand, I designed a black-and-white backdrop to be projected on the upstage scrim, a multiplicitous layering of my ghost images that would appear behind my moving body even in darkness. The piece opened with just these images moving against the backdrop, seemingly of their own accord, but it was my body creating them in the darkness. These ghosts, reappearing throughout the work, were the Jungian representations of my alter-selves. Birringer describes a similar work with artificially produced images that are still tethered to a real body in space:

The images generated during the performance, in real-time, have a memory as part of their behavior, as well as the power of anticipation. These are not properties we generally associate with the photographic or filmic notion of the image. How are we to understand the idea of such "creatures" in a theatre work? Are you suggesting that there is a new dimension of "artificial life" acting upon the performance? (Birringer, 2008, p. 19)

The question of understanding is a pertinent one, as it relates to a sense of artificial life and a new dimension of intelligence at work in a performance. These digital “creatures,” as Birringer calls them, were crucial to the sense of mystical *gestalt* in my thesis work. They were delayed, existing out of time with my physical movement, but as my body was obscured by darkness, they appeared to come from a nether space outside of corporeality and time. They mirrored the words I spoke in front of a podium, into a microphone enhanced live by filter delay and reverberation effects, about Friedrich Nietzsche and the sexual allure of his philosophies, the existential and social crisis of his “*tolle Mensch*.” I spoke words from Whitman, histories from my life, from an internal landscape untethered by logic or narrative sense. All of this was aimed to pull from places deeper than the superficial, from the same shadows of self and society that the digital ghost images reified in the obscuration of physical body.

The Jungian shadow, or the part of the ego that is the least embodied in a person's conscious life, is the harbor of what Jung (1966) calls the "primitive and inferior" part of the psyche. He says that "only by a considerable effort" can we "detach ourselves from this burden" (p. 93), and that this "primitive" part of the psyche is present in all of our conscious and unconscious actions. In the split between my corporeal body and my ephemeral, digital, ghost bodies, I was also searching for a kind of performance that would tap into the parts of my identity that I least wanted to experience, the parts I had buried. "Everyone carries a shadow," says Jung, "and the less it is embodied in the individual's conscious life, the blacker and denser it is" (1966, p. 93). And so in the textual prelude to this work, *anathema*, I describe in visceral terms some vile moments of animal instinct: "Friedrich Nietzsche fucked me...while Walt Whitman was quietly masturbating in the corner." I decided to bark and moan into the microphone, to smear lipstick on my body, and effectively queer the verbal and physical representations of several well-respected Western philosophers. There was great risk in a performance like this, the risk of alienating the audience with language and images like these, but I was committed to embodying a shade of myself onstage – it was not me speaking, but rather a split of myself that separated mind and body. In this Jungian shadow space, I quoted Nietzsche, Whitman, and incorporated text of my own into an indulgent monologue of grandiose iconography. And all the while, the digitally created ghosts of my body loped across the screen behind me, the unconscious parts of my ego made real.

After speaking into the microphone, I ceremoniously turned as the lights went completely dark, revealing my digital facsimiles (captured through infrared data) projected manifold on the screen behind me. They were following my movement

imperfectly, like Rorschach ghosts slicing and swiveling with arms and wrists. Every so often one of my legs might streak out from the center, a thwacked cutting of space like the bliss of Nietzsche's madman: "What were we doing when we unchained this earth from its sun?...away from all suns? Are we not plunging continually?" (Nietzsche, 1974, p. 181). The dance itself, or my embodiment of it, was at times a characterization of Nietzsche's madman, who "lit a lantern in the bright morning hours, running through the marketplace...provoking much laughter," with his rambling and "plunging" into "divine decomposition" (1974, p. 181). I walked towards the diagonal and out of the range of my infrared simulacrum, and began a solo of plunges and provocation. The movements would wander from indulgent flourishes of the wrists to swift crumples down into deep grand plies, knees spread for the torso to plunge towards the earth. It was a jarring dance of unfolding and swiftly closing, a luscious flick of the wrist cutting down into a deep lunge while the pelvis and navel convulse electrically.

After many convulsions and bladed sweeps of the limbs, I would gather myself and sprint in a vast circle across the stage – the ghost images would catch me on a part of this circle, creating the time-delayed illusion that my shadow selves were following me through the trajectory of this "sacred game." At the end of the run, I would gather myself and leap across stage to a folded roll, where I could feel my bones clanking against one another in the compression. Nietzsche's madman speaks of "festivals of atonement" and asks "- who will wipe this blood off of us?" (1974, p. 181), and in truth the massive physicality of this work was my own festival of atonement, covered in the metaphorical and literal (my face and bare chest were smeared with lipstick from the opening monologue) blood of my confused passions. The sprinting and indulgent convulsions

were a physical purgatory to push my body into mad exhaustion, and after launching myself through the air and crashing to the ground, I would then repeat. Improvisationally, I cycled back through ideas of the opening sections in Bauschian repetition that sculpted the form of this improvisational work into a theme of recurrence.

With every return to a movement idea, I would slightly tweak or vary the original moment, but still preserve the original movement idea: I swivel my wrists with more conviction, I sink to a squat with more fanaticism, I place a hand on my cheek and silently scream with slightly more contortion in the face. With the extreme physicality of these gestures, drops, crumbles, and rolls, I was also able to test my own emotive power within the movement. Investigating these portions of my psyche, the parts of me that were inherently unstable, began to create an environment of chaotic logic. The constructions of the movements themselves, in a similar vein, were integrally connected to the use of the anarchic digital mind. Using random number generators to design actions (i.e., swiping, arcing, crumbling, jabbing) in combination with isolated parts of the body (pelvis, head, wrist, knee, toe), I developed antilogical movement material that pushed my boundaries as a performer and an artist. For example, each body part was connected to a number (1. Pelvis 2. Head 3. Wrist) which was then connected to a series of actions (1. Swiping 2. Arcing 3. Convulsing 4. Crumbling), and so I would roll the digital dice to place them together. What resulted was a unique and illogical movement vocabulary that oscillated between multiple planes of anatomical information at once:

Mouth: Crumple – L. Shoulder: Break – L. Ribs: Crumple – L. Wrist: Shoot – Top of Head: Arc – Navel: Sink – R. Ankle: Shoot – Navel: Break – Chin: Replace – Navel: Arrest – Anus: Jiggle – Mouth: Jiggle. (rehearsal notes, *anathema*)

This randomly generated movement vocabulary was intended to be a chaotic and new

way of creating movement vocabulary, to take the creation of choreographic ideas out of my own brain and into another unintelligible mind at work. In some ways, it was successful. Choreographically there was a sense of nonrelationship from this creative process, a sense of cyber nonsense that brought me further from my own sense of reality. But within the randomization, I found patterns, much like the appearance of Fibonacci spirals in nature or the wild beauty of a stone arch carved by millennia of erosive forces. Number patterns would reappear, repeat, and create structures despite my best efforts to create chaos.

Over the span of a 10-minute solo, created entirely with random number generation and moments of performance improvisation, I found myself repeating certain movements over and over again. It was a window that had opened for me, an invitation into what Nietzsche called “eternal recurrence” in *The Will to Power* (1880-1890):

If the world may be thought of as a certain definite quantity of force and as a certain definite number of centers of force – and every other representation remains indefinite and therefore useless – it follows that, in the great dice game of existence, it must pass through a calculable number of combinations. In infinite time, every possible combination would at some time or another be realized; more: it would be realized an infinite number of times. And since between every combination its next recurrence all other possible combinations would have to take place, and each of these combinations conditions the entire sequence of combinations in the same series, a circular movement of absolutely identical series is thus demonstrated: the world as a circular movement that has already repeated itself infinitely often and plays its game *ad infinitum*. (pp. 548-549)

I embraced repetition in this solo as a representation of the incalculable “dice game of existence,” but also as a structural element that is crucial to creating a narrative arc in an abstract dance work. Recurring “combinations,” or even repeated intentions, are not just recognizable but crucial to the way we understand the world and ourselves. This idea of “circular movement that has already repeated itself infinitely” was the basis for the

sprinted runs, and as the shadows follow the body in its circular trajectory, we see time and movement and identity collapse in on itself – it is the realization that all of these movements have happened before, and will happen again. On the literal level, I was even using many tropes of postmodern dance that were infinitely recognizable (smearing the face with lipstick, wearing a tie with no dress shirt, screaming into a microphone, incorporating ironies about “celebrating myself at Whole Foods, doing sun salutations”), combining into an effect that was simultaneously about mathematical/natural recurrence, aesthetic recurrence in the dance field, and the spiritual recurrence of past self.

In the beginning of the work, I recited that “God is dead,” and the words of Nietzsche’s *Der Tolle Mensch* became a constant German rumbling beneath the screaming aria of a looped soundscore that I had sung into the microphone. The recurrence of soundscape was also crucial to the central idea of repetition, combining with the visual shadow-selves that repeated my movement: the soundscore for the work was a continual loop of the real sound of my voice singing into the microphone. There seemed to be no connection between these elements when I started making the piece, but I soon realized that the shadow creator (a part of me of which I was unaware) had chosen all of these elements for a very specific purpose unbeknownst to my conscious mind. A great irony emerged, that within the randomization of my digital choreographic process, celestial order had reemerged through the unknowable strings of digits, upon which my movements were based. And so I returned to Whitman, creating an ending to the work that was a bare accumulation of randomized movements set to his words:

This grass is very dark to be from the white heads of old mothers, Darker than the colorless beards of old men, Dark to come from under the faint red roofs of mouths. O I perceive after all so many uttering tongues! And I perceive they do not come from the roofs of mouths for nothing. (Whitman, 1855, p. 19)

As I accumulated gestures in a downstage light pool, sweeping my arms out to the side in slight *passé*, crumbling again into the recognizable squat, wrapping around myself in circular moment, I danced to Whitman's wisdom in the midst of this philosophically chaotic landscape. And there it was, celestial revelation. What is grass? It is everyone and everything, from the white heads of old mothers who are buried there, to the tongues that speak their name. Grass, and words, and movement, it is all eternal recurrence and the coalescence of body and thought.

Technology has offered us what Whitman prophesied: the conflation and collocation of identity and object, all existing together, all drawing closer, and not existing "for nothing." Nietzsche also describes this "Dionysian world of the eternally self-creating, the eternally self-destroying, this mystery world of the twofold voluptuous delight, my 'beyond good and evil,' without goal, unless the joy of the circle is itself a goal" (1968, p. 550). Through my physicality, and the "voluptuous delight" of indulgence mixed with the "self-destroying" power of plunging my body through the space in agonizing ecstasy, I had recreated my own "Dionysian world," full of memory, recurrence, and resonance – I did not so much shape this piece as it shaped me. Perhaps, in the lack of conscious will to change and create, these "eternal worlds" begin to emerge. At the end of the piece, I walked very slowly in darkness back towards the microphone. My shadow-selves emerged and followed me, though slightly behind in time, and I simply stood to breathe into the microphone. As the stage went dark, the echoing delay of my breaths pierced the darkness. Formally speaking, I had ended exactly the way I began in "this mystery world... without goal, unless the joy of the circle is itself a goal" (Nietzsche, 1968, p. 550).

Using technology in the creation of a work is, in essence, about the study of a new kind of structure. The use of repetition in *anathema* symbolized more than just a reiteration, but rather a mechanized reinscription. Heidi Gilpin (1996) describes how “movement performance looks at the longing to control experience and reinscribes over and over the failure to achieve it” (p. 110). The entire piece, for me, was about disappearing while still being alive. It was an exercise in failure, or rather, the failure of the mind to comprehend philosophical inscription. Through technological mediation I was searching for the obscuration of a mind losing its body (in truth, I rarely thought about my body in the performance of this work), and these lengthy repetitions mirrored the unintelligibility of my own shadow self. Gilpin discusses this exact existential condition and posits that performance is the inherent resistance of ephemerality and impermanence: “if disappearance is a condition of performance, repetition is a crucial strategy that calls attention to the very fact of disappearance, that manifests the absent presences of that which has disappeared” (1996, p. 110). But it is about more than ephemerality; it is also about memory, as Freud describes “*the patient [who] abandons himself to the compulsion to repeat*, which is now replacing the impulse to *remember*” (Freud, 1914 as cited in Gilpin, 1996, p. 111). All of *anathema*’s imagery, repetition and reinscription was flirting with these ideas of resisting the disappearance of self (in the digital, or otherwise) and the compulsion to repeat replacing memory and all other thoughts.

It became very clear to me then that technology, with all its powers reconfiguration and identity reconstruction, is not the end of what we know to be human. Nor is it the end of spiritual existence, but rather a new way for us to experience the

transcendent. On the proscenium stage, I was offered the possibility to exist simultaneously as my multitude shadow selves, the ghosts of my infrared body heat. I was split into an uncountable number of parts, my body, memory, psyche, and spirit were all etched into the sensation of disappearance, of untethering. The digitally looped wailing of my own voice out of time accompanied me into “randomized” choreography of my own digital design, created from a sequence of numbers that were intended to be random but instead created inherent patterns. Rather than bringing me further from reality, mediation instead offered me a vision of the patterns in nature. I was dancing digits, and I was dancing the vast numerological tapestry of existence.

CONCLUSION

For the dance world, it is clear that digital technology is increasingly being incorporated into major companies, festivals, colloquiums, and professional performances across the world. Technology has allowed for new ways to reconfigure the dancing body in space: what Nikolais began decades ago with projections and visual illusions has now become easier, more efficient, and more multifaceted. The same, I believe, will be true for digital technology in decades to come: dance and the digital spaces of video, projection, and virtual reality will continue to be explored. I believe that in 20 years, we will look back on the history of the arts and consider this to be the proverbial stone age of digital technology. To ignore this trend would ignore the most complex evolutionary relationship the dancing body has ever seen.

But there are many counter-points to this way of thinking, and to proceed in this kind of artistic work without first researching all the challenges and issues that are created would be similarly naïve. Sherry Turkle warns us to be cautious of rapid digiphysical advancement from a psychological perspective. But she does have this to say about the how we conceive of our bodies and ourselves in the digital age:

Before the computer, the animals, mortal though not sentient, seemed our nearest neighbors in the known universe. Computers, with their interactivity, their psychology, with whatever fragments of intelligence they have, now bid for this place... where we once were rational animals, now we are feeling computers, emotional machines. (Turkle, 2005, p. 285)

It is certainly a frightening sociocultural place, to be moving away from the animal and

towards the machine. If the human race is indeed becoming more like “feeling computers,” then what are the multitude of feeling states that are possible through these extensions of our bodies and minds? Also, if our nearest neighbors are not “mortal” as animals are, does that mean that human identity is moving towards something immortal? My goal has been to explore all the complexities, challenges, dangers, and vast potentials of these “emotional machines” we are becoming, this relationship between our physical and virtual techniques. It is not a cut-and-dry issue – (i.e., “technology = good, body = obsolete or technology = problematic for the dancer, body = so much better”) but rather a beehive of questions that involve our performing bodies, our sociocultural selves, our sensualities, political sensibilities, and spirits.

My own viewpoint, albeit biased, is that these alternate realities do not represent a “disembodied escape” from “real” reality, but rather a different experience of it: through the use of digital technology to deconstruct and reconstruct the body, we have the ability to experience embodiment in new ways, and also to comment upon the larger trends of the cyber-age. I return to Whitman, and his wisdom of the predigital age: “I think I could turn and live with animals. They are so placid and self-contain’d. I stand and look at them long and long” (Whitman, 1855, pp. 34-35). Even within the mechanized world, there is still the body, and the simplicity of our animal selves. Can’t we exist both as “rational animals” and “emotional machines?” Can the dancing body, in all its fascinating animal corporeality, come to terms with the continually expanding technological aspects of its societal context? McCarren writes that both sides of the spectrum have been colonized by constructed duality of animal primitivism and mechanization, but speculates that “dancers have represented both the capabilities of a highly mechanized body and the pre-

technological [“primitive”] body whose powerful naturalness is imitated by machinery” (McCarren, 2003, p. 4). Both sides of this duality, with all of their constructed discourses, stem completely and utterly from the body itself. The body is the source of our instinctual responses, but it is also the source of our machines. Technology can be seen as an extension of the body, and yet there is a trend among dancers to completely eschew technology for fear that it will bring them farther away from the body, and their craft. I would suggest the opposite, that this kind of work can actually heighten our craft and create visual worlds beyond anything we’ve ever seen, and bring our animal sensations to new depths of technological embodiment.

Perhaps more pertinent to the field of dance is the pursuant question: What are the effective ways of formatting a piece that merges technology with live performance? It cannot be structured or conceptualized in the same way as a traditional modern dance piece – dreams do not exist in formalist ABAB structure, and movement vocabulary cannot be simply “generated” oblivious of and separate from the technology. I am still wrapping my choreographic mind around these issues. Similarly, there is the issue of precisely what the role of technology is within the work. Am I using technology merely to set a backdrop, or to comment on the distance between us in the cyber-age, or to transform the body into abstract shapes? Essentially, what is it for? How does the work expand on the dialogue of body-technology-body-technology in a way that is meaningful and not trite, self-serving, or pretentious? There is a very real risk of failure here, that either the technology is so under-considered that it becomes superfluous, or on the opposite extreme, that the technology is so overpowering that the moving body on stage becomes obsolete in the merge. Both of these risks are philosophically disturbing, so

the challenge is to create the equilibrium between the human and our technological creations in order to explore alternate aspects of our bodies and ourselves.

From an aesthetic and structural standpoint, I have come to discover that even the simplest combinations of elements can be enough to produce a powerful effect. For the soloist in *shroud*, this was a process of distilling each choreographic idea to its essence: roll, curl into a ball, find serpentine contortion, and return to stillness. Simply a body lying in stillness on the ground can be enough to communicate a deep experience of humanness and resonance; this allowed the humanity of the dancer to emerge from within the tempest of visual information created by the interactive animations. In *the words we missed*, I was forced to reconceptualize my own experience of time and aesthetic voracity to allow the human experience to emerge from each of the projected digital environments. Moments, transitions and individual movements simply had to take longer to cut through the visual data, allowing audiences to process this information on a more human level. The soundscape of a space has also been a crucial part of this research, as I have often opted for more of a droning atmospheric sound to compound with the other environmental elements and not draw too much attention to itself. Similar to the simplification of choreographic structures and adherence to a sense of improvisational responsiveness, this distillation of soundscape allows room for revelation. It allows the human being to be revealed through the experience of these elements, rather than the cacophony of combined elements dominating the human experience.

As dance begins to incorporate these ideas into its vocabulary of the human body, we begin to tread upon spiritual and metaphysical ground. Our race's corporeality is challenged by these technologies, as the human body begins to traverse the gap between

existence and nonexistence. These metaphysical gaps are the energetic oscillation that is consciousness, like the shifts in our experience of time in a digital environment or the distance between my flesh-and-blood body and the androgynous unacculturated representation from the motion capture body suit. Like the gap between my experience gazing at the mountaintops of the Himalayas and those of a fantasy wilderness on a screen, the distance between fiction and reality is closing, giving way to hyperreality, immortality, and omnipresence. Even in the context of a dance improvisation, Nancy Stark Smith (2008) writes about the concept of “Gap” (which she writes hieroglyphically as []) in her work on the development of the Underscore:

[] GAP: Gaps are moments in the improvisation where you experience a temporary absence of reference, a feeling of being between forms and not sure what’s happening or what to do. This can even occur inside known forms (inside a Contact Improvisation duet, for instance). These moments of *gap* can last fractions of a second or longer... eventually organizing into a discernable form. Hang out in the gap and see what happens. (Koteen & Smith, 2008, p. 96)

Just as improvisation provides these moments “absent of reference,” the sense of disorganization within cyber-embodiment creates a similar “feeling of being between forms.” It is a disorientation of time, space, and human energy that begins to indelibly rip apart the fabric of our bodies, selves, and realities. These gaps of consciousness also serve as a larger metaphor for the persistence of human consciousness, the gap between existence and nonexistence. I have seen Facebook profiles of people who have long since died, their presence, photos, previous posts, and all aspects of their digital identity remain despite the death of their physical body. Their friends still write messages to them, as if sending that text into the void. Even the technological process of sending these data traverses the gap between web servers, pages, and binary code, which is no more than a series of presences and absences: 10100011100001.

The entire structure of our existence is written in the gaps between words, between webpages, between bodies, life, and death. It is all represented, actualized, and augmented in these technological realms, mirroring our humanity. Perhaps it does change what it means to be human, or gives us a channel through which to project our truer natures. And much more than that, it gives us a glimpse into the unchanneled realms of nothingness, places of digital geography created by humans but as yet with largely untested effects upon our body and mind, best labeled “where there be dragons” on our social and psychological maps. In these new worlds, we who use the body can shift our shapes and presence, change elemental states at the click of a button, to walk the void previously trodden only by great monks and spirit travelers. Places like these remind us most of our mortality, by providing us a new frame of physical and cerebral existence, one that does not end.

The more research into this field the better, to use the creation of art as a staging ground for inquiry about our ongoing and potentially earthshattering dialogue between the physical body and the surreal spaces of the digital. As Walter Benjamin puts it, these technologies allow us “to burst this prison-world asunder by the dynamite of the tenth of a second, so that now, in the midst of its far-flung ruins and debris, we calmly and adventurously go traveling” (Benjamin, 1969, p. 236). For dance artists, this technological bursting forth from the “prison-world” has yielded so many avenues of “adventurous traveling”: spatial, physical, and spiritual. This digitalization of the human race is not the end of our body-minds, nor the reification of Cartesian dualism, but rather an extension of our biomechanical sensors into a metaphysical realm. For performers, dancers and artists who step into this role, who research the body’s new technological

tentacles, who test their physicality and spiritual selves in the antilands of ones and zeroes, are poised to become the shamans of the cyber-age.

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