

PERFORMING POSTHUMAN SPECTATORSHIP:
CONTEMPORARY TECHNOGENESIS AND EXPERIENTIAL ARCHITECTURES OF
EXCHANGE

by

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ABSTRACT

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Performing Posthuman Spectatorship: Contemporary Technogenesis and Experiential Architectures of Exchange

Dissertation directed by Assistant Professor Marcos Steuernagel

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The project offers an analytical lens for use when studying the operations and aesthetics of contemporary spectatorship. This lens is informed by the ecological and relational methodology found in critical posthumanism and is useful when considering the relationships between spectatorship, contemporary performance, and digital media/technology under paradigms of deep mediatization. The form of spectatorship considered involves active participation and relational exchange between event and individual. The project argues for an interdisciplinary model for looking at the influence of digital technologies on the subjective condition of human beings who perform the role of spectator in various performative events. As a perpetually evolving form of embodied performativity, posthuman spectatorship develops at the convergence of media environments, communications technologies, and narratives and performance events and is conditioned by contemporary politics and ethics. Due to the deeply interactive nature of contemporary technologies, posthuman spectators become evolve to perform as co-producers of their own daily realities through their deeply enmeshed relationship with media and mediatization opening-up radical new opportunities for political and ethical response, activism, and world building. The foundation for a posthuman model of spectatorship extends the analytical scope beyond unidirectional modes of reception to encompass a multitude of relational activities undertaken by contemporary spectators.

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INTRODUCTION

In 2012, I attended an ATHE conference roundtable on new media and theatre focusing on the possibilities of approaching interdisciplinarity. This panel was formed to discuss how theatre departments should approach the integration of methodologies and pedagogical approaches from film, media studies, and digital culture. During the question-and-answer session, one attendee offered an anecdote illustrating a possible way of approaching a nearing future subsumed by digital culture. As someone who worked in the field of on-line learning, his educational position embraced changes in social structures influenced by digitalization. His story encouraged a novel outlook on the inclusion of both digital humanities methods in education and digital media in theatre, one where theatre practitioners, critics, and educators fluidly adapt to the pervasive nature of contemporary interactive digital technologies. He asked the room to make a gesture for how they would make something bigger. Nearly every person in the room raised their hands and widened their reach outward by roughly four feet. I made this gesture as well. Continuing, he then explained how his three-year-old niece responded when asked the same question: “She raised one hand slightly in a pinched gesture and moved her thumb and forefinger outward about two inches.”¹ Based on this response, it was clear that this child’s worldview and sense of being-in-the-world was deeply affected by the use of digital devices.

This child embodies the emergence of a new and growing wave of cultural perception,² which will inform the ways technologically embedded societies read, watch, and perform. Spectators belonging to this child’s generation perceive the world differently than those born

¹ My partner, who is an elementary school teacher, informally tested this response on 425 third through sixth graders she teaches during Spring of 2018. The response rate of those who made a similar gesture to the child in the anecdote was 35 percent for the oldest group and over 65 percent for the youngest group.

² This mode of cultural perception is one that develops in advanced technogenetic paradigms of deep mediatization and is not uniformly established across cultural boundaries.

before the mass adoption of the personal computer, internet, smartphone, and tablet. Spectators from generations before hers first experienced the world and developed their perceptual apparatus somewhat removed from the digital influences most are steeped in today. I am a member of one of these older generations.

Clay Shirky (2008) explains that the full social impact of technologies does not fully emerge until they have become commonplace: "It's when a technology becomes normal, then ubiquitous, and finally so pervasive as to be invisible, that the really profound changes happen, and for young people today, our new social tools have passed normal and are heading to ubiquitous, and invisible is coming" (105). As a member of Generation X, I grew up in an era where an explosion of communications technologies began to rapidly change the way the world around me worked. I could see these changes taking place because I lived through the process through which the internet, cellphone, and smartphones went from novelties to common place necessities. I was born into an era where these devices didn't help condition my subjective experience of the world. My childhood primarily consisted of play, learning, and exploration using my imagination connected to non-digital worlds. My childhood was not devoid of screens. Television was a dominant mode of mediation, but it was relegated to the living room setting and not the constant and pervasive presence it has become. This meant much of my early childhood was spent outside on my Huffy BMX bicycle, digging in the dirt with GI Joe action figures, lugging around backpacks full of heavy books, chalk dust on my hands after class, wandering in the woods trying to find the end of a stream, and chasing dogs in the neighborhoods in which I lived. While I regularly watched Saturday morning cartoons and the occasional Nickelodeon rerun, it wasn't until I was ten that I had the luxury of enjoying a videogame away from the arcade, and my first personal computer didn't arrive until age twenty. I list these childhood exploits, not to indulge in wistful nostalgia, but rather to show how different it was to grow up divorced from constant connection to digital realms.

The generations coming of age today were raised in digital cultures whose primary media source is the internet, delivered via multiple pervasive interfaces. To better understand how to bridge the cultural and subjective digital divide that primarily exists between established scholars and educators in the field of Theatre and Performance Studies (TaPS) and these future audience members, new lenses for understanding how contemporary spectators perform through their connections to technology is important. For members of the last three generational cohorts (Gen Y, iGen, and Gen Alpha),³ perception and thought process are increasingly altered by a chipping away at the capacity for deep contemplation. Instead, their ways of being-in-the-world and perceiving worlds have been replaced by constant connection and interaction with places, spaces, and identities that exist inside and through digitally-assisted technological devices and paradigms. As I'll argue throughout this project, when performing as spectators, these digitally-affected posthuman subjects desire constant interaction that matches their evolved ability to multitask with the media that has become commonplace. Their connection to contemporary interactive technologies is ushering forth cognitive, social, and cultural evolutions. Evolution, in this regard, refers to a constant and unending process of relational change and adaption to the social worlds in which they live. Understanding these evolutions helps TaPS scholars, educators, and practitioners continue to communicate with coming waves of spectators who have grown up in an era where digital technologies are seamlessly integrated into everyday life, and therefore are invisible. Throughout this project, I discuss the process of evolution using the term technogenesis: the co-evolution⁴ of the human perceptual apparatus with its technological environment. By better understanding technogenesis and its impact on spectatorship, TaPS gains a valuable tool in

³ While generational classification is an important part of the shift toward digital culture, I only focus on it briefly in Chapter 1 and in more depth in Chapter 4.

⁴ Evolution is a constant theme throughout this project as it relates to digital culture and technogenesis. The way my sources and myself use evolution requires understanding the term as simply change and adaptation to one's environment. There is no context of advance or forward momentum with the way it is used.

helping to bridge the gap between those who were not born into a paradigm of pervasive and invisible digital technologies and those who were. The analysis of the case studies I include helps to make visible the invisible operations of contemporary technologies through the staging effects of technologically informed spectatorship.

Methodology

N. Katherine Hayles (2012) defines technogenesis as a co-evolutionary process, where the interaction between machines/technologies and human beings fundamentally alter the way human beings think, perceive, and operate in the world. Similarly, Nick Couldry and Andreas Hepp (2017) offer an understanding of today's social world as one existing in a paradigm of deep mediatization. For them, mediatization is a process whereby relationships become mediated by a technological paradigm. Deep mediatization is both a condition and a "meta process involving, at every level of social formation, media-related dynamics coming together, conflicting with each other, and finding different expressions in the various domains of our social world" (215). Couldry and Hepp identify four waves of mediatization that include *mechanization*, *electrification*, *digitalization*, and *datafication* (34). They define each wave as "a fundamental qualitative change in media environments sufficiently decisive to constitute a distinct phase in the ongoing process of mediatization" (39). The primary waves of mediatization this project deals with include digitalization and datafication. Pairing Hayles' understanding of technogenesis with Couldry and Hepp's theories of media sociology and communication, I argue that technology's capacity to reshape human perception correlates with evolving modes of interactive performance becoming increasingly prevalent in societies that operate under deep mediatization. To argue this, I offer case studies that show differing modes of interactive spectatorship. Each case study connects to

various technologies and media as part of the interrelationship of technogenesis and human perception.

These case studies come from a range of theatrical and performative events. Events that straddle the liminal mark between virtuality and actuality such as the Void's *Ghostbusters Dimension* (2016), the PlayStation video game *Farpoint* (2017), Punchdrunk/MIT's embodied/digital performance of *Sleep No More* (2012), and Complicité's audio augmented theatrical production *The Encounter* (2016), serve as platforms for spectatorship performed within the architecture of *Immersion*. The use of Twitter and Livestream as a mode of engaging with the Occupy Movement protests, the part live cabaret / part YouTube re-performance of The Civilians' documentary verbatim performance *Occupy Your Mind* (2011/2012), and a reenactment of a live town hall in the Foundry's *How Much is Enough? Our Values in Question* (2011) serve as the settings for models of spectatorship in the architecture of *Participation*. Niantic's augmented-reality smartphone app *Pokémon Go* (2016), the smartphone game *Phone Story* (2011) from Yes Lab and Molleindustria, and Coney's alternate-reality game *Adventure One*, played out in the London Financial district, are analyzed to show how smartphone culture is transforming spectatorship and everyday life into a ludic occurrence inside the architecture of *Game Play*. Amazon's artificial intelligence software Alexa is then discussed alongside a documentation of Blast Theory's app-based durational performance *Karen* (2015) to show how the architecture of *Role Play* allows posthuman spectators new modes of performativity in relationships and feedback loops with data-centered technologies. By analyzing these case studies, new knowledge emerges concerning the way our connections and relationships with technologies change the way spectatorship operates in the twenty-first century. I propose that a better understanding of these connections and relationships leads to an analytical framework for discussing contemporary spectatorship practices that are interactive and operate in networks of reciprocal action.

Spectatorship is often considered a form of reading, in that reading is a form of interpretation, and interpretation is a crucial operation in how people perform. Technologies change the way people read and interpret their environment in similar ways to the way they read literature and performance.⁵ In societies embedded in deep mediatization, modes of reading and interpretation are becoming increasingly interactive and relational ushering forth a new way of thinking about spectatorship outside of the unidirectional model of reception studies presented in previous scholarship on theatrical audiences (Bennett 1997; Freshwater 2009; Wilson 2008; Holub 1984). After all, to receive indicates a one-way mode of information transfer. Posthuman spectatorship is reciprocal and constantly in motion. Likewise, a posthuman sense of being is forever in flux. Contemporary technologies urge people to play in the liminal spaces of the actual and the virtual simultaneously, potentially ushering forth the elimination of the mark between the two (Causey 2006, 2016), Couldry and Hepp (2017), Farman (2012), and Hayles (1999, 2001). This leads me to the primary question I present and work through in this project: How does the operation of spectatorship in various architectures of interactive performance correlate with changes in subjectivity, communication, and sociality brought about by digital culture and technogenesis?

To help answer this question, I build off previous scholarship on intermedial performance that looks at the relationships between technologies and performance. Without this scholarship, I could not form my own argument concerning technogenesis and spectatorship. The groundwork laid by the historical surveys of technological implementation in performance from Chris Salter (2010) and Steve Dixon (2007) informs my approach to the interconnection between technology

⁵ I discuss spectatorship as a form of reading throughout this project but must highlight that reading not only refers to textual information. One can read an environment through processes beyond text-based meaning making. The human body often operates as the primary medium through which “reading” happens, and therefore, refers to a process of perception as interpretation.

and performance. Likewise, the theoretical application of connections between media and performance from Philip Auslander (1999, 2008), Sarah Bay-Cheng (2007, 2009, 2012, 2014, 2016, 2017), Sarah Bay-Cheng, Jennifer Parker-Starbuck, and David Saltz (2015), Johannes Birringer (2000, 2008, 1998, 2006), Steve Benford and Gabriella Giannachi (2011), Susan Broadhurst (2007), Susan Broadhurst and Josephine Machon (2006), Matthew Causey (1999, 2006; 2015), Susan Kozel (2008), Andy Lavender (2016), and John McKenzie (2001) help solidify the importance of technology to contemporary spectatorship. Foundational to the formation of my approach to technology in performance were the members of the Intermediality Working Group for the International Federation of Theatre Research and the book *Mapping Intermediality* (2010) published as a collection by the group and edited by Sarah Bay-Cheng, Andy Lavender, and Robin Nelson. This project takes up all the theoretical and practical foundations set by this generous assemblage of scholars and practitioners and extends their contributions to look at the relationship between media, technology, performance, and society to better understand contemporary spectators.

The project draws from multiple fields: Theatre and Performance Studies, Sociology, Media and Communication Studies, Technology Studies, Literary Studies, and Philosophy. The foundation of critical posthumanism has been developed from each of these fields in some manner. This heart of the project lies at the intersection where Theatre Studies, Performance Studies, and Media Studies meet and hopes to promote a way of merging the three. The ideal audience are those that are using interdisciplinary methods to think of each specialization as part of a larger field I would like to call performative media studies. I offer this audience a broad scale approach to better understand the reciprocal relationships between technology and human beings who then utilize performance practices and spectatorship as an exhibition stage. This approach draws upon previous theatre and performance scholarship that looks at the relationships among technology, performance (theatrical and non-theatrical), reception studies, and spectatorship. It

also draws from the other fields mentioned to explore the reciprocal relationship among the digital technologies those in deeply mediatized social systems use daily, the performance of every-day life in those systems, selfhood informed by those systems, embodied interpretation, and the increasing prevalence of participatory and interactive forms of performance. The framework I introduce allows for analyzing spectatorship and performance where they intersect with(in) technological paradigms of mediatized sociality. I include research on the sociological constructions of human life in digitally mediatized society, critical theories from TaPS, alongside histories of technology to show how contemporary technologies shape us just as much as we shape them. For example, the use of smartphones allows a user the ability to connect to any place and any time at any moment. That connection changes how that user understands space, place, and time as an individual subject prior to the act of spectatorship.

I frame my analysis using critical posthumanism and specifically a technologically informed mode of posthuman philosophy that serves as a guidepost for technologically influenced subjectivity. This philosophy operates on three different levels that are useful to TaPS scholars and practitioners: as a condition, a form of subjectivity, and as a critical perspective. I use each level throughout the project. When discussing large scale changes to social systems, I apply level one, the posthuman condition. When looking at individual response to performances as a spectator and to technologies I apply level two, posthuman subjectivity. When discussing the overall impact of a performance event and the spectators place in that event, I apply level three, a posthuman critical lens.

The posthuman condition that informs this project helps to explain how twenty-first-century technologies and mediatization begin to influence the overall makeup of social systems to fit a specific form of relationality divorced from the human centered epistemology of earlier unidirectional sender/receiver based forms of media. Interactive technologies in the twenty-first century encourage a relational condition in society that makes more visible the interconnections

between all elements in the social sphere. The scholarly influences that help me unpack this social condition are those from Katherine Hayles, Stephan Herbrechter, and Mark Hansen. TaPS scholars and practitioners can harness the capacity of the posthuman condition explained by these authors to better understand the social implications of deep mediatization on the broad field of performance.

At the level of individual subjectivity, posthumanism works through the process of technogenesis to impact the subjective position human beings perform. This augmentation and integration of technologies with human perception urges people to seek enhanced and more engaged forms of interaction that model the use of contemporary technologies. The theories of phenomenology and technological intersubjectivity from Nick Couldry and Andreas Hepp, Jason Farman, and Matthew Causey serve as the models for understanding techno-subjectivity. As this subjectivity is connected to the posthuman condition described above, interaction becomes more complex through the increased visibility of the multitude of simultaneous interconnections brought about by the invisibility of integrated technologies. Through a posthuman subjectivity the invisible agency of technology becomes recognizable and crucial to discuss. In a posthuman mode of relational and interactive subjectivity, new agential elements are folded in that upend the historical binary of performer and spectator creating a complex relational configuration between technologies and human beings. TaPS scholars may apply this posthuman understanding of subjectivity to look at spectators as something other than receivers of information, and instead as performers in intricate networks of social conditions, performance frameworks, and technological augmentation. TaPS practitioners and educators can apply this understanding to develop new models of practice and pedagogy that directly speaks to audiences impacted by the posthuman condition.

By adopting these previous levels into a critical lens, the act of spectatorship can then be viewed through a technogenetically influenced posthuman critical perspective. This perspective

looks at the overall condition of mediatization on social systems, how technogenesis works on individuals to change their perceptive capacities with(in) performance configurations, and the ethical considerations of posthuman relationality. Using this critical perspective allows TaPS scholars the ability to rethink what spectatorship is and how it operates in the twenty-first century. It allows TaPS practitioners the ability to develop performance practices that connect and speak to future generations of audiences who increasingly perform these active modes of spectatorship. It also allows the field an ability to open up the aperture for performance practices it makes and studies to incorporate those that are purely mediated through multiple forms of technology. In this model, the institutionalized barriers between Theatre Studies, Performance Studies, Cultural Studies, and Media Studies begin to breakdown allowing increased overlaps and blending among the fields. This model expands upon the work of those studying and making intermedial performance to reconsider all contemporary spectatorship practices as intermedial whether technologically augmented or not.

This project offers the field of TaPS an interdisciplinary analytical framework informed by the relational perspective of posthumanism useful for the study of twenty-first century spectatorship operating in societies produced through deep mediatization. The case studies in this project are described through this lens and serve as examples of how spectatorship is changing in the twenty first century to suit the needs of audience members conditioned by contemporary technologies. The use of critical posthumanism in this project is a necessary step taken to better understand how technogenesis operates as a co-evolutionary process embedded in the very fabric of human social systems, and is fundamentally a relational process between human beings, technologies, and the environments (social, political, ethical, moral, etc.) that both contain, interact, and inform humans and technologies. Understanding the process of technogenesis in a relational manner informed by posthumanism helps to deconstruct the often-held notion of evolution as a process based in linear causality. Instead, technogenesis operates

as a form of evolutionary adaptation that is continually in flux based on the technological environments that humans operate with(in). To understand the relationship between contemporary spectatorship and technogenesis it is helpful to adopt the relational perspective found at the core of posthumanist philosophy.

The final goal of the project is to introduce a new analytical viewpoint for better understanding the relationship between human beings and the social constructs they create; technologies and the technical paradigms they influence; and performance's predilection towards active spectators in the twenty-first century. This will prove helpful for TaPS scholars and practitioners interested in the way spectatorship reflects changes in performance, identity, and politics related to digital culture. To achieve this goal, I begin by explaining the relationship of human beings to mediatized culture and how this relationship brings about changes in human perception. I then move on to laying a basis for understanding how contemporary technogenesis leads to the formation of a posthuman construct of human beings. Once this groundwork is laid, I then construct the posthuman framework for interactive spectatorship by identifying and analyzing its architectures, operations, and aesthetics. The model I present offers a lens for better understanding how contemporary spectatorship is connected to social changes spurred on by technological interfaces in contemporary cultures. By understanding these changes, both the analysis of performance events and the making of performance events becomes opened up to new possibilities geared toward addressing the needs of a changing demographic of audiences.

Moving Toward a Posthuman Model for Discussing Spectatorship

The model for posthuman spectatorship I argue for in this project combines multiple interactive processes that are informed by current techno-social paradigms of deep mediatization. These processes interconnect and weave together in a multitude of combinations that can be

understood and analyzed on their own. The project is structured in a way that dissects these individual practices and processes to allow readers their own method of negotiating the ways they interpret the connections. I describe these processes as *architectures of exchange*. The architectures I describe are: *Immersion, Participation, Game Play, and Role Play*. I use the term architecture as a way of describing a system that encompasses particular sets of practices and processes. This architecture serves as both a framing mechanism (or structure) in and through which the practices unfold, but also acts as the rule sets contained within the frame. These rule sets inform the way the frame operates on spectators along with higher order systems. I adopt the language of architectures here from the established terminology of system or process architectures, which are often applied and used within computer systems, business structures, and political processes. An architecture, in this mode, is a conceptual model used to help frame a complex set of processes divided up into relational actions of the infrastructure (the inside of the architecture, its individual components and the interactions made by these components), the suprastructure (outer world that governs the architecture itself and which allows the architecture to become a component of a larger infrastructure), and the superstructure (or the mediating structure marking the limen between infra and supra). In a process- or system-based architecture, the inside, the outside, and the mediator are constantly in flux, allowing for change and interaction in multiple directions at once. Using this language allows me to create conceptual models where one can focus on the flux of the infrastructure while still understanding the unending impact of the suprastructure.

Couldry and Hepp (2017) describe how social systems are constructed similarly to my use of architectures. They explain how the social world exists and can be understood in three levels of abstraction (17-21). At the suprastructure level, the social world is one that operates intersubjectively. It is a world that exists both in relation to actors with agency and also outside of these actors. Considering a human being as one of these actors, the social world is both

dependent and independent of that actor at the same time. Its independence comes from the fact that even without the individual actor, it still exists, however, its dependence comes from the fact that without the actor there could be no perception (and hence meaning) of the social world. At the level of superstructure, change occurs in the social world. Couldry and Hepp explain that it is through the bodies of human beings and the mediating function of technologies that this change can occur. The bodies allow the technologies to exist and the technologies allow the bodies to act in the world (19). At the infrastructure level, the authors divide up the social world into “internally differentiated domains” (19). These domains serve as the individuated spheres through which communication operates, which, in turn, influence the construction of social reality. However, these domains are not solely independent. They exist in a constant state of friction and overlap with other domains, individual actors, and the entirety of the social world structure. The authors argue that the social world is “differentiated into many domains of meaning, even though it is bound together by multiple relations of interdependence and constraint” (20). The entire suprastructure of posthuman spectatorship operates in the same way social worlds do. The individual architectures offered are simply the most readily visible examples of interlocking domains in the ecology of contemporary performance society. I define the four architectures of exchange (*Immersion*, *Participation*, *Game Play*, and *Role Play*) in the following manner.

Immersion is a spectatorial architecture that operates through a mode of exchange which allows a spectator to be thrown into a fictive world, giving this spectator the impression of being a member of that world and allowing heightened levels of perceived agency based on a sense of being-ness with(in) that world. For example, in Punchdrunk’s *Sleep No More*, an immersant submerges themselves in a free-flowing narrative experience by navigating scenographic space and feels a sense of agency through their ability to navigate at will. The degree of perceived agency is a crucial element to the architecture and experience of immersion. Gareth White (2013) explains, “Agency changes the quality of all action taken” (64). Agency is felt as a byproduct of

the relationship between a spectator's perceptual apparatus, the environment, the narrative, and the rules that dictate the aesthetic components of the immersive effect. I differentiate immersion from participation through the perception of agency in the spectatorial process. When simply immersed, a spectator has no tangible recourse to see or make change within the event beyond that of personal interpretation.

Participation is an architecture and an interactive process with(in) an event that allows for modification of the event that could be witnessed by others or documented. Participants can interact in a manner creating moments of rupture in the narrative telling or world, though this rupture may or may not impact the final outcomes of that telling or world. In *How Much is Enough?* participants gain agency to create dialogue that impacts the feelings, knowledge, and understandings of the other participants contributing inside the narrative framework. Like immersion, participation is often used as an umbrella term but should be considered part of a larger whole. In the mode that I approach participation, it often takes on some form of political or ethical nuance that differentiates it from immersion.

In *Game-Play*, a spectator becomes a more active member of the world they participate and/or are immersed in due to a structuring of rules. Rules dictate story as well as the way a spectator creates meaning in many instances of game-play and rules are what separate games from other forms of play. These rules ask the player to impact outcomes of either the narrative or the experience to reach a specific goal. Participatory play often takes on the model of games in performance. In *Adventure One*, by becoming a player tasked with achieving a specific goal in the performance, the spectator learns to critically observe, use, evaluate, and relate to real-world places of London and spaces of international finance. The game-play experienced gives them the ability to create meaning at the threshold between the game-world and the real-world. Game play introduces a liminal nature to all aspects of daily life where the playing spectator has an ability to

create new perspectives based on the in-betweenness of game structures. In games and game play, spectators frequently gain potential for creative agency and self-determination.

Extending beyond *Game Play*, is a specific form of play that frees up some of the rulesets and allows spectators to further enter liminal spaces with enhanced agency. In the architecture of *Role Play*, a spectator can engage in a constant negotiation with reality through imaginative authorship and unlimited potentiality. In *Karen*, by Blast Theory, a spectator performs as an author of its own persona by interacting with a digital avatar who serves as a friend and mentor. As an author, this spectator is given the agency to dictate, reconfigure, and reassign an understanding of their identity and also the experience they undertake via interactive exchange. Under this architecture, all reality has the potential to become a constant game of performativity with(in) ecologies of relationality. When the author, as role-playing spectator, gains the knowledge of their agency, they can reshape and manipulate constructions of identity and social reality.

A Relational Model for Analyzing Spectators

As a posthuman spectator, the emphasis of analysis becomes less situated on a relationship between seeing and being seen, and instead on a coequal relationship between inputs and outputs of interactivity. Individual technologies and the overarching technics that inform cultural and social milieus influence the shape and agency of these inputs and outputs. Due to the current technics of digitalization—which help define our current techno-social environment—posthuman spectators have begun to expect constant interaction with and feedback from both narrative and spectacle. This feedback informs modes of perception and the ways we process our individual and social realities. Previous modes of social communication were often explained through constructions of in-person face to face communication and our media simply transferred information in one direction: from the media to the person (Couldry and Hepp 2017).

Contemporary media platforms are increasingly becoming more interactive, promoting heightened levels of reactivity and relationality that humans must further develop to perform effectively. In terms of performance events, the trend towards relationality has slowly been building strength over the twentieth- and twenty-first century as interactive technologies have become more embedded in society. At the end of the twentieth-century this trend became an important area of scholarship and practical exploration.

With the English translation of Nicholas Bourriaud's *Relational Aesthetics* (2002) along with the publication of Jacques Rancière's *Emancipated Spectator*⁶ speech in *Artforum* (2007), performance and theatre scholarship on the nature of spectatorship has flourished in the early part of the twenty-first century. As of the writing of this project, Rancière's writing on spectatorship (both the 2007 speech and the subsequent 2009 manuscript) has a citation count of over two thousand, and Bourriaud's (2002) over three thousand (Google Scholar). Alongside the rise in investigation into interactive and participatory modes of theatre and performance art, inquiry about spectatorship has grown. These theorists have been further explored within the realm of theatrical spectatorship and reception studies in Clair Bishop's (2012) *Artificial Hells*, Gareth White's (2013) *Audience Participation in Theatre*, Jen Harvie's (2013) *Fair Play: Art, Performance and Neoliberalism*, Josephine Machon's (2013) *Immersive Theatres*, Andy Lavender's (2016) *Performance in the 21st Century*, and most recently Adam Alston's (2016) *Beyond Immersive Theatre*. Bourriaud's (2002) critique and theorization about the reception of relational art is grounded in the sociological theory of Pierre Bourdieu, and Rancière's primary inquiry questions

⁶ The first version of "The Emancipated Spectator" was originally given as a conference presentation at the 5th International Summer Academy, Frankfurt on August 20, 2004. It was subsequently published in *Artforum* in 2007 and as an expanded monograph translated into English in 2009. The original 2004 speech is available on YouTube in six separate video uploads. <https://www.youtube.com/watch?v=OLIZ-l8FZh0>, <https://www.youtube.com/watch?v=eqPxabhnHM>, <https://www.youtube.com/watch?v=jMI-tc0Xjng>, <https://www.youtube.com/watch?v=6k2nXNZ93a0>, <https://www.youtube.com/watch?v=CutYuYA16E4>, <https://www.youtube.com/watch?v=bMux7OuTpnE>.

the political and aesthetic effects of relational and participatory performance to better understand the potential of individual spectators. Each theorist outlines the impact of such works, but neither fully considers the posthuman turn and technogenesis as part of its rise. With Rancière and Bourriaud, the focus of analysis on the performance of spectatorship and audiencing began to reconfigure the relationship to be one of co-work.

Bourriaud (2002) foretold the current era of techno-sociability through the digital as a coming fundamental shift in the ways of operating in the world, warning of “epistemological upheavals (concerning new perceptual structures), stemming from the appearance of technologies” (66). His writing is concerned with a shift towards relationality (social interaction) in the art world beginning in the early part of the twentieth-century and culminating in the late 1990’s. He lists the precursors of relational artwork as the projects of Dada, the Surrealists, the Situationists, and the Fluxus Movement. Bourriaud’s work defines a new era of sociality through relational art with communicative social implications. He argues that the role of art in the late 1990’s was to model “possible universes” and to enact “ways of living and models of action within the existing real” (13). He offers a model of *relational aesthetics* that is underpinned by a “materialism of encounter” in which the “essence of humankind is purely trans-individual, made up of bonds that link individuals together in social forms which are invariably historical” (18). The framework for relational aesthetics offers a way of better understanding participatory and interactive forms of art, but also a changing world view and sense of sociality. This contribution was more concerned with form over content. In the aesthetic objects he documents and theorizes about, all encounters within the “sphere of inter-human relations” (28) can become a form for the production of art; as such, any relational act has its spectators who enter into a process of exchange. He argues that the Art world was responding to a new phase of social configuration based on participation, interactivity, and relationality. Like in posthumanism, an interactive and relational form is most concerned with states of becoming and beingness in flux. These states

require reciprocity from another agent or interactor to continue being and affecting. Spectators of these forms of art become part of the art form through their individualized and communal agency to interact. Meaning emerges from this enactment of agency. The relational form of artwork relies on the spectator to act as “joint creator of the work” (99). Like many of the authors cited in this project, Bourriaud’s theories are deeply influenced by the philosophy of Gilles Deleuze and Felix Guattari. While Bourriaud’s contribution to the field of reception and audience studies is significant, the importance of his work has been overshadowed by Rancière’s.

After the publication of Rancière’s 2007 speech, the annual output of published scholarship on the subject of spectatorship nearly doubled.⁷ Rancière’s reclamation of the spectator as an active participant with political capacity ushered in a new emphasis on audience and reception studies in theatre, film, and performance. Rancière’s theory calls into question the political efficacy of theatrical and art experiments aimed at energizing a passive audience into new modes of political agency. Rancière argues that because the ontology of spectating is already an active function spectatorial participation in theatrical performance is unnecessary. Part of his argument explains how the binary of watcher and performer was constructed to establish modernist models more firmly established to advance consumerism and commodification. From this basis, he argues that for emancipation (or freeing the spectator from the grips of the commodity fetish) to occur there is a necessity for the performance medium to operate as an equal contributor in knowledge creation with the spectator. Thinking in this manner allows knowledge and meaning making to emerge as a form of co-work, where both the spectator and the spectacle have emancipatory potential. By emancipating the spectator, they become free from the bonds of thinking about their performance of spectatorship as a passive consumption of art.

⁷ Worldcat.org keywords search for Spectatorship, Spectator, and Audience with the qualifiers performing arts or art/architecture.

Emancipation starts “when we realize that looking is also an action that confirms or modifies that distribution, and that ‘interpreting the world’ is already a means of transforming it, of reconfiguring it” (2007, 278, quotations in original). I agree with the foundation of Rancière’s argument, that the act of spectating is not necessarily a passive function. Following both recent discussions of neurological analysis and spectatorship (Cook 2008; McCutcheon and Sellers-Young 2013; Damasio 2005, 2010; McConachie 2015) as well as theories of media readership (Wilson 2008; Jenkins 2006), the process of watching is never passive as it is always relational. Spectating engages a watcher in specific conscious and unconscious processes that can bring them into the event and/or allow critical evaluation of the event. Watching also always involves some form of interpretation, either at the conscious or unconscious level.⁸ Spectating engages a watcher’s perceptual apparatus in active processes that can bring them into the event and/or allow them to evaluate the event critically and sensually.

Posthuman spectatorship moves beyond the primacy of watching and instead focuses on concepts of being-in-the-event and interacting with the event; concepts that are more easily understood when put into conversation with twenty-first century media and technologies. Rancière’s primary objects of analysis were the performance practices and theories of Brecht and Artaud, who were active in the mid-twentieth century, well before the advent of interactive media such as the personal computer, the internet, the smartphone, and social media via Web 2.0 resources. Twenty-first century spectators are already active and participatory in the ways they interpret and consume information as part of digital culture and mediatized society. With each of the communications technologies mentioned above, human sociality in deeply mediatized cultures has increasingly become more involved and interactive in the stories digested, not simply

⁸ The concept of perception is further discussed in a section of Chapter 1 on the function of the posthuman perceptual apparatus and embodied cognition and in Chapter 5 on the process of non-conscious cognition.

through spectating, but more so through the personal sculpting of the production, dissemination, and consumption of both narrative and event (Hepp 2013; Couldry and Hepp 2017; Jenkins 2006; Jenkins, Ford, and Green 2013). Due to this conditioning of contemporary spectators through technogenesis, the binary of passive and active is less helpful when thinking about acts of technologically informed interactive spectatorship. Instead, it is more helpful for TaPS to think in terms of relationality.

Recent attempts to expand the analytical lens to include relationality include Andy Lavender's (2016) *Performance in the 21st Century*. Though he delves deeply into the arguments of Rancière, he makes an effort to expand his scope outward to the relationship of spectators and their societal frames. Lavender describes a shift in societal and cultural milieus in the early part of the twenty-first century, leading to what he names *theatres of engagement*. These theatres of engagement are prompted by a shift from a "society of the spectacle to a society of involved spectation" (29-30). He explains that contemporary spectators no longer simply watch; they interact and engage with their social surroundings. Lavender argues that theatrical performance at the end of the twentieth century became "something other than an encounter between actors, or between actor and audience," it was evolving into a form where the "separation between the space of the performance and that of spectatorship" was quickly closing (9). Similarities exist between Lavender's engaged spectators and the posthuman model proposed in this project. The connections come from a necessity for understanding constant interaction with and feedback from the spectacle that is postdigital life.⁹ Lavender (2016) explains that an evolution towards

⁹ Matthew Causey's 2016 article in *Theatre Journal* also addresses the reality-shaping capacity of media as part of a "postdigital condition" with traits including "the pervasive presence of the digital in everyday life, new conceptual maps figured on the language of new media and digitization, hybridity between the digital and the analog, and accelerationism. This assemblage of ideas revolves on the hegemony of the digital as the primary model of conceptualizing and engaging the world, rethinking the analog and the real in terms of the digital and the virtual and back again" (Causey 2016, 431). He further explains that this condition brings about "postdigital culture," which is a "social system fully familiarized and embedded in electronic communications and virtual representations, wherein the biological and the mechanical, the virtual and the real, and the organic and the inorganic approach indistinction." (432)

relationality and engagement has encouraged “a sharpened enjoyment of co-presence, corporeality and embodied sensation” (15). In previous paradigms and definitions of spectatorship, the spectator acts as a receiver of information, primarily through sight and sound, but construction of a posthuman spectator asks one to think of spectatorship as a fully embodied practice undertaken by a posthuman perceptual apparatus. This apparatus is uniquely linked to the fluctuations in the technological environment and the technics that construct that environment. As Lavender notes, “we experience culture differently because we do so with our minds and expectations adjusted to the speeds and shapes, flows and frames of the expressive apparatus with which we live” (19). Through technogenesis, contemporary media and technologies condition individual subjectivity and impact the expectations one has with the way they interact with performance and narrative.

Based on the way Lavender moves past the model offered by Rancière to enter a landscape for considering interaction as a prevailing mode of contemporary spectatorship, a new way of looking at spectatorship outside of reception studies becomes helpful. Different from the way reception studies looks at spectatorship, literature on the relationship between media/technology and performance often includes logic of feedback loops between technology and human beings. Feedback refers to the disruption of a signal based on duplicated inputs from an original source. We colloquially use the term to refer to the noise (signal) delivered from a speaker, which is picked up by an electronic mic that then feeds that same signal back to the speaker via amplification. When the original sound feeds back to the speaker, it becomes distorted as unintelligible noise. A feedback loop, then, is the constant cycle of inputs and outputs that creates change (distortion). Erika Fisher-Lichte (2008) discusses the autopoietic feedback loop that exists in (and defines) performance in her work *The Transformative Power of Performance*. She explains that a performative gesture/act from a performer serves as an output signal, which a spectator reads/interprets and then returns to the actor. This then affects how they

both continue to perform in some manner. There is a mutual interaction between the two: a feedback loop. Michael Dorrach (2010) explains this process from the perspective of the performer as one where the action of the audience initiates the loop. He argues that with the introduction of sophisticated stage lighting and the engulfment of the audience in darkness, the feedback loop created by visual spectatorship was interrupted. No longer could the actors see the audience, and likewise the audience could no longer see their fellow spectators (186). The trajectory towards separating the audience from the spectacle in theatre was a long process that began emerging over the course of the seventeenth and eighteenth centuries. This process of change created a dynamic where the spectacle on stage became the central agent in ways similar to *the human* in liberal humanism. I argue in Chapter 1 that a better understanding of *the posthuman* and posthumanism offers new ways to think about feedback between spectators and performance architectures.

Through feedback loops, a self, operating under a posthuman mode, has the potential to cooperatively create itself through a process of autopoiesis. Autopoiesis refers to self-formation and self-regulation based on environmental input. The concept of the autopoietic feedback loop was introduced during the first wave of cybernetics theory by Norbert Wiener (1948) and was used to define the reflexivity inherent in the dual-directional flow of information that makes up any body inside a system. The human body, as perceptual apparatus, exists as part of the information system made up of the environment (ecological, cultural, material, technological) it resides in. According to critical posthumanist Pramod Nayar (2014), the formation of an individual posthuman subject is an embodied process as it concerns “the flow of information from environment through the body into the brain, which then processes it, that constitutes intelligence or consciousness” (39). For a posthuman spectator, the feedback loop is inherent in their subjective conditioning due to the way information travels not only between the spectacle (environment) and the spectator,

but *through* and *within* both, creating not only their exterior view but also their inner makeup or being (39).

Through pervasive and ubiquitous connections with digital systems, *the posthuman* has evolved into a technologically augmented informational being that subconsciously insists on mediating the inputs and outputs and regulates the feedback loop that informs its very existence. Posthumanist media scholar Stefan Herbrechter (2013) explains, “New media technologies thus allow for new forms of decentralized dialogue and create new assemblages of human, media and (search) engines and thus also provide new forms of political agency, cultural production and sociality” (184). As contemporary performance spectatorship is deeply tied to mediatized constructions of social worlds, a new model that considers these assemblages is helpful when discussing how individual spectators perceive and interact with these worlds outside of performance paradigms before considering the act of spectatorship within performance paradigms. The project questions the ways in which the pervasive connections to digital technologies are changing the notion of contemporary spectatorship by thinking about the ways various technologies are reconstructing our understanding of social reality and selfhood. These questions and descriptions are offered to help build a better understanding of how rapidly evolving technologies, and the cultures and epistemologies they propagate in ways of perceiving, have given rise to a posthuman mode of spectatorship made up of multiple forms of exchange.

The terminology of *exchange* is fundamental to my use of a posthuman framework for spectatorship as it helps to better explain relationships. Due to posthumanism’s political and philosophical project of decentralizing human beings as the sole agents of exchange in mediatized models of social life, I argue it is helpful to have a framework for analyzing the relationship between spectators and events as one that is interactive and co-directional. Posthuman spectatorship then involves multiple agencies: that of the spectator (its perceptual apparatus), the architecture the spectator performs with(in), as well as the technological and

cultural objects that inform the modes of spectatorial perception with/in/through performance. In previous understandings of agency and communication, human beings were understood as the primary objects/subjects. In a posthuman model, agency is distributed across the entire ecology in which human beings, non-animate objects, and social processes operate. Technologies are a crucial part of this ecology and have agency that is inseparable from the human agents involved. This study offers a more thorough understanding of how structures of twenty-first century performance—and subsequently the performance of spectatorship—are related to changes in perception as informed by technogenesis and critical posthumanism.

Structure of the Project

A posthuman spectator is one who is constantly in flux and navigating multiple relational actions informed by the specific constraints of the architectural system with(in) which it operates. This mode of spectatorship relies on an embodied phenomenological subjectivity. A posthuman spectator could be thought of as an interactor, a relationist, or as what Robin Nelson (2010) calls an experiencer. For Nelson, the spectator as experiencer,

serves where audience or even “spect-actor” (Boal) prove inadequate. It suggests a more immersive engagement in which the principles of composition of the piece create an environment designed to elicit a broadly visceral, sensual encounter, as distinct from conventional theatrical, concert or art gallery architectures which are constructed to draw primarily upon one of the sense organs – eyes (spectator) or ears (audience) (45).

In each individual chapter, I further break down this interactive, relational, and experiencing spectator into distinct sub-spectators based on the *architecture of exchange* they perform with(in). These include the *immersant*, the *participant*, the *player*, and the *author*. In each, an emphasis on perception, agency, exchange, bodily affectivity, and interconnectedness between multiple senses, critical faculties, and objects requires further exploration of multiple architectures of exchange that relate to and inform how a posthuman spectator performs. The

posthuman model of spectatorship also relies in part on an ethical ecological perspective, as it is not only informed by technology but also formed by the changes in cultural politics that interaction with technologies as social actors allows. Increased interactivity in terms of dialogue, political action, and ethical introspection is part and parcel with the posthumanist paradigm. As such, the case studies discussed have a connection to social, ethical, cultural, and/ or political change.

The architectures I describe and the conceptual model I present exists as one potentiality based on current practices I see becoming prevalent in the second decade of the twenty-first century. When these architectures are put into relationship and conversation with each other, they allow for the construction of a conceptual framework, one I define as *Posthuman Spectatorship*. To construct this framework, I first explain what it means to be posthuman and what conditions allow a performance of posthuman selfhood to arise. This is the primary purpose of Chapter 1. The chapter focuses on the conditions that urge forth a performance of posthuman spectatorship and operates as the primary theoretical bedrock of the rest of the project. I begin with the concept of mediatization and its relationship to perception and sociality.

Chapter 1, “The Intersubjective and Relational Constructions of a Posthuman Spectator,” begins by presenting the reader with a condensed understanding of the process of mediatization and the impact of media as a communicative link in contemporary society (Couldry and Hepp 2017). Following their concept of mediatized social environments, media of various modes cannot decouple from the communication process. Whereas previous models of social constructions relied on a model of personal human-to-human communication, those models are less useful due to the pervasive presence of digital media as an intermediary between human beings and the entirety of the world. Couldry and Hepp are quick to qualify that this level of pervasiveness is not uniform across the planet, but by describing waves of mediatization and technological change, they persuasively argue that we have entered an era of human sociality that can no longer operate without these media. Couldry and Hepp’s model for sociality informs the spine of the entire project

and therefore is revisited in part throughout the remaining chapters. After laying the groundwork concerning mediatization, the chapter further refines the argument about technology and human perception through an introduction to technogenesis and technics.

The process of technogenesis is the formal theoretical apparatus applied throughout the project to better understand human evolution based on relationships with technology. Understanding the impact of technogenesis helps bridge the gap in understanding spectatorship before and after the advent of deep mediatization. To better explain technogenesis, I describe changes in perception informed by evolutions in the way people read from printed text to hypertext. This description is informed by Hayles' (2012) book *How We Think*, which connects to her other work on posthumanism (1999; 2014), technoculture (2005), and digitally augmented cognition (2014, 2017). Hayles corpus of scholarship considers the relationship of human beings and technology as a way of redefining the way humanists approach literary analysis. I introduce and define the concept of the posthuman perceptual apparatus, which is a fluid and in-flux amalgamation of a human being's body, mind, and technological environment. This apparatus is a machinelike construct that operates alongside the process of technogenesis through embodied cognition (McCutcheon and Sellers-Young 2013) and is used to describe a materialist phenomenological approach to posthuman conceptions of perception and reality formation. This interacting and interfacing machine appears throughout the project as the posthuman spectator's mediator between technologies and the world.

I include a literature review on new materialism, agential realism, posthumanism, and transhumanism from scholars whose work on performance and performativity opens the door toward considering a posthuman mode of performance and subsequently spectatorship. This is then followed by theory in the vein of technologically-informed posthuman philosophy from Hayles (1999), Stefen Herbrechter (2013), Rosi Braidotti (2013), Cary Wolfe (2008), and Pramod Nayer (2012). Their contributions help set a baseline crucial to this project's overall argument. It is

through a melding of mediatization as a social process and technogenesis as a process of anthropological change that the conceptual framework of the posthuman becomes most helpful when discussing contemporary practices of spectatorship. Through the posthuman paradigm, the relationship between humans and technology offers an entry-point into interactivity and relationality that serve as the primary operations of the four architectures of exchange discussed.

The focus of Chapter 2, “The Feeling Spectator and the Affect Economy of Immersivity,” is the architecture of *Immersion* and its relationship to the act of spectatorship between two different forms of reality: one that exists in a material world that often called actuality and the other a realm of the not quite real or virtual that becomes actual through its potentiality. This potentiality is analyzed through its relationship to immersion as an architectural process connecting spectators to virtuality through bodily affect. I argue the primary mode of exchange that emerges in immersion is sensual affectivity, a mode of information transfer and communication that relies on the feeling body of the spectator.

The chapter begins with a retelling of my experience with the Virtual Reality (VR) event *Ghostbuster’s Dimension* (2016) housed within the interactive Ghostbusters exhibit at Madam Tausaud’s wax museum in New York City. I then introduce theoretical and historical conceptions of virtuality and simulation by authors such as Brian Massumi (2002), Hayles (1999, 2001), Jay David Bolter and Richard Grusin (1999), Janet Murray (J. Murray 2014), Pierre Lévy (2001) and Jean Baudrillard (1995a, 2014) to develop a groundwork for how technologies of virtuality operate through immersion as part of the technogenetic relationship between spectators and virtual reality games and events. This is followed by another first-person account of VR experience of playing the PlayStation shooter game *Farpoint* (2017), which further defines the relationship between immersion, the spectator’s body, and affect. Next is an analytical breakdown of the theatrical performance *The Encounter* (2016) by the London-based performance company Complicité. The production employs immersive audio to augment the experiential quality of a proscenium style

one-person play. By describing the way this production uses binaural audio, I lay out an argument for how immersion operates with and on a posthuman spectator's perceptual apparatus in performance events and how immersion is a product of virtuality in daily life. As questions about spectatorship often rely on conceptions of visibility, this case study offers a better understanding of virtuality and immersion accessed through other aspects of a person's feeling body.

This understanding of bodily affectivity is then discussed as the primary mode of agency through an analysis of an experiment with computer-assisted virtual immersion in Punchdrunk's 2012 collaboration with MIT on the show *Sleep No More*. I finish the chapter with a brief argument about the pervasive presence of immersion in recent scholarship and its relationship to posthumanism as an ethically and politically motivated way of being. This chapter also offers an opportunity to better understand the full scope of posthuman spectatorship. The term immersive is often used as an overarching structure for many forms of interactive performance. I find it necessary to pick apart the pervasive idea that immersion is an umbrella term for the many architectures of posthuman spectatorship and instead argue that immersion is primarily an aesthetic that works as a type of spectatorial glue to hold spectators transfixed with(in) virtuality. Because the perceptual apparatus is prone to develop sensual fatigue, other operations must come into play, namely *Participation*, *Game Play*, and *Role Play* that both enhance and keep immersive experience intact.

In Chapter 3, "The Democratic Spectator: Ethico-Political Values in Participatory Performance," I discuss the architecture of *Participation* to explain how Web 2.0 and specifically digital platforms for social media, promote ethical and communal exchange as an aspect of posthuman spectatorship. I ground this explanation through an analysis of discursive participatory politics in the theatrical productions *Occupy your Mind* (2011/2012) by the Civilians and *How Much is Enough? Our Values in Question* (2011) by The Foundry. I approach participation from an active register in the sense that a spectator gains a form of tangible agency rather than simply

the affective agency described in Chapter 2. To be tangible, the spectator has the potential to make a material impact in the event. I argue that the connection people have become accustomed to through the Web 2.0 tools—a connection that allows agency to exercise one’s own opinion daily via digital participation—has encouraged a form of democratic agency expressed in participatory performance.

The chapter begins with a retelling of my own brief participation in the Occupy protest movement of 2011, and how social media gave me the ability to take part in the revolutionary action without ever actually being present in the locations where physical protest took place. This introduction highlights but also problematizes the capacity of social media to activate political agency for participants in digital culture. The chapter engages in questions of political efficacy related to the practice of spectatorship in postdramatic forms of theatre that rely on audience participation. I explore these questions by comparing the social actions of spectators in ancient Greek theatre with contemporary forms of theatre that rely on audiences who either fill in or supply text to performance events. Hans Thies Lehmann’s (2006) conception of the postdramatic is a crucial theoretical framework that underpins the argument in the chapter as it introduces models for political and ethical agency given to spectators through a relinquishing of authorial control of dramaturgy.

To better understand this relinquishing of control, I break down the way The Civilians use material participation in both live and digital forms to activate their contributing audiences. Their performance *Occupy Your Mind* (2011/2012) staged and continues to restage the rhetoric and actions of the 2011 Occupy Movement using verbatim dialogue and material participation in the form of audience (re)performance via YouTube. I follow this analysis with a survey of sociological and media studies scholars who briefly explain how Web 2.0 has spurred forth a participatory condition in societies deeply emerged in digital culture. *Participation*, as an architecture of exchange, offers spectators tangible agency to make change through a form of posthumanist

relations with the social world in flux. I argue that the participating spectator has a unique capacity to engage with ethical and communal concerns to create a form of exchange with social and political capacity. Participation as an architecture of exchange offers spectators tangible agency to make change using a form of posthumanist relationality with the social world in flux.

Chapter 4, “iPerformance and Ludic Criticality in the Hyper-Connected User,” focuses on the architecture of *Game Play* as a process and structure that marks a shift from concerns of larger technics found in the realms of virtuality and the participatory web to focus on specific technological devices. Mobile technologies, which I discuss as iDevices,¹⁰ are highlighted as technological appendages whose technogenetic relationship to the posthuman perceptual apparatus allows for a dynamic where a posthuman spectator enters into a game-like, liminal state of techno-embodied perception and operation with the world. Posthuman spectators augmented by mobile media gain access to place, space, and time in a manner that transcends conventional modes of watching and even participating to develop a perceptual function that is more akin to being forever suspended in bounded, yet liminal play.

I begin the chapter through a personal encounter with the smartphone augmented reality game *Pokémon Go* (2016). This reflection allows the reader a better understanding of how iDevices interrupt conventional understandings of space and place when their locative capacities are used in game-play. I argue that once iDevices became commonplace and pervasively connect their users to an endless world at their fingertips, disconnecting becomes nearly impossible without considerable negative consequences to perception and a conception of one’s sense of self. Since the device is always present, I argue it transforms a spectator into both player and user who engages in a form of ludic criticality with the world as they try to both navigate and define

¹⁰ For my purposes, an iDevice is a mobile and locative based portable technology such as a smartphone, tablet, or internet connected e-reader. These devices create an uninterrupted link between posthuman users and the rest of the world through a dual connection to the data cloud and the human animal’s perceptive apparatus.

the worlds they have gained access to.

To show how game-play is a spectatorial practice that adopts the logic of the iDevice, I introduce the UK company Coney's performance/game *Adventure One* (2015). The performance uses mobile devices as a figurative prosthesis for playing spectators, bringing them into the narrative while also serving as a tool to frame a critique of location-based politics. These players must use the tool to straddle two different realities (actuality and fiction) coinciding with digital and corporeal space, place, and time. My explanation of game-play combines the affective and tangible registers of experience in *Immersion* and *Participation* with the possibility of a meta-agency of critically reflexive choice with respect to a structural understanding of the game-world. In the architecture of *Game Play*, the spectator's experience of exchange is based on becoming a critically activated member of the world navigated, due to an established set of rules. I argue that it is in *Game Play* that a posthuman spectator has increased potential for consequential agency and self-determination with(in) and beyond the performance event, creating what posthumanist theorist Stefan Herbrechter (2013) describes as new "possibilities of interactivity, self-representation, communication and 'identity work,'" producing "new forms of subjectivity ... dissociated from material forms of embodiment" (25). I end the chapter with a brief play-through of the smartphone app-based game *Phone Story* (2011) to better explain the framework of ludic critical exchange that I argue is part of the performance of posthuman spectatorship in gamified play.

Chapter 5, "Authoring Posthuman Experience via Ludic Creativity: Avatars, Algorithms, Identity," focuses on the architecture of *Role Play* to explain how recent technogenetic processes of *datafication* are turning the act of spectatorship into a daily performative act of creative identification. Couldry and Hepp (2017) define datafication as a wave of mediatization where all media is filtered through the auspices of surveillance, capture, computation, and redeployment of data. I explore datafication to better understand strategies in and of performance that highlight

role-play embedded in digital and postdigital culture. My argument presents a necessity for understanding how data increasingly shapes social reality through the architecture of *Role Play* and acts of ludic creative exchange. In the previous chapters, the technologies discussed operate more as objects or artifacts that “humans [use to] typify (abstract from) their world” (Couldry and Hepp, 131). Under datafication, data surpasses the realm of mere object(s) (artifact(s)) to become subject(s) that typify humans through complex systems of surveillance, information processing, and information creation. Relying on the work of Couldry and Hepp, Hayles (2014, 2017), Mark Hansen (2015), and Tobias Matzner (2016, 2018), I explain how algorithms and artificial intelligence are defining a new era of technogenesis that highlights the power of role-play as a performative mode of spectatorship and life.

I begin by discussing how digital assistants such as Amazon’s Alexa work to transform humans into databodies. These digitally constrained entities then act upon their embodied counterparts as a way of limiting the possibilities and potentialities a person can perform. Juxtaposed against these digital assistants, Blast Theory’s project *Karen* (2015) is discussed as an attempt to deconstruct and make visible the structures of power and control involved in operations of surveillance, both corporeal and machine. *Karen* is an app (Mobile/Tablet Application) delivered interactive game/performance that requires its user to input physical data through its screen-based interface as an interaction with the avatar Karen. I include this project for its ability to show how the spectator is complicit in the action of data collection while also critiquing systems that collect and process that information. *Karen* questions the ethics of profiling that occurs within systems of dataveillance and is uniquely posthumanist in its capacity to ask a spectator to rethink their place within systems of self-formation and data. This is precisely where the architecture of *Role Play* becomes socially relevant and applicable to new understandings of performativity. Role-play adopts aspects of immersion, participation, and game-play, while introducing ludic-creative operations where spectators use their imagination to actualize

potentialities concerning identity and the creation of multiple selves. The way role-play is encountered in digital culture is explained to show how the liminal position the other first three architectures offer allows for possibilities of fluid expressions of identity and selfhood.

I offer these chapters to explore the relationship between technogenesis and spectatorship. By questioning, exploring, and analyzing the nature of interactive spectatorship in digital culture, through the concepts of posthumanism and technogenesis, I show how thinking in a posthuman manner—that is relationally and non-linearly—TaPS scholars, artists, and educators may begin to rethink the relationships between performance, society, people, and digital culture. Thinking both in a technological and critical posthumanist manner helps to rethink spectatorship as a relational process. To think about spectatorship in a posthuman mode, one considers relationships between individual spectators and spectacles as those without an originary direction and without primary agency attributed to one individual element. Using the individual architectures as signposts for the various substructures of posthuman spectatorship allows a reader the building blocks to assemble and reassemble networks of interaction as modes of performance. Doing so may allow us to find new ways of connecting with future generations of spectators through performance events.

CHAPTER 1: THE INTERSUBJECTIVE AND RELATIONAL CONSTRUCTIONS OF A POSTHUMAN SPECTATOR

Considering media as "middles", that is, as mediating environments that actively perform relations that in turn create complex social connections rather than solely as vehicles of information, means conceiving mediation as the complex of activities and forces through which the elements composing the media environment, be they social, technical, or spatial, find common actualization.

– Frederica Timeto, "Locating Media, Performing Spaciality: A Non-Representations Approach to Locative Media"

In this chapter, I lay out the foundation for posthuman spectatorship by connecting the terms mediatization, technogenesis, and posthumanism to explain how a different subjectivity based on relationality introduces new ways to think of spectatorship through adaptations in the perceptual apparatus. As was briefly explained in the Introduction, the social make-up of all perceived realities is influenced by technologies and communication media. Media studies scholar Frederica Timeto explains above how these technologies act as the mediators of all forms of communication that shape life. In the age of digitalization, they mediatize all social systems and become more than just middles; they act to expand the concept of mediation to both frame communication as well as act as conduits of communication. In the twenty-first century, digital media and digital technology are both tools and processes dictating the very nature of our perceived social realities. As a process, digitalization is a form of mediatization changing human beings through the actions of technogenesis. This process is made up of the interactions between the social environment, a human being's perceptual apparatus, and individual technics and technologies. The interrelations between these individual elements informs how a human being perceives and operates in today's digitally augmented social world.

To understand the many ways in which the contemporary spectator performs its role with and in performance events, it is crucial to first understand how they, as human beings, operate

as social actors with and in today's contemporary social world. Nick Couldry and Andreas Hepp (2017) explain that today's social world is one that fundamentally constructs the reality we perceive and experience, and that this social world is itself constructed through a combination of mediated processes which they refer to as mediatization. Mediatization is a two-fold process that "involves a progressive increase in the complexity of social change that derives from the increasing prevalence [...] of factors related to the underlying infrastructures of communication" (38). Mediatization is a process whereby social and cultural relationships become mediated by a techno-social paradigm. Another way to think of it is, if technogenesis is a co-evolutionary process between technology/media and human beings, then mediatization is the co-evolutionary process between technology/media and the entire social system of reality that contains those human beings. The multiple forms of media performing in the operation of mediatization are referred to "both as technologies, including infrastructures, and as processes of sense-making" that form the social reality of the current world (5). Couldry and Hepp explain, "The fundamentally *mediated* nature of the social – our necessarily mediated interdependence as human beings – is therefore based not in some internal mental reality, but rather on the material process (objects, linkages, infrastructures, platforms) through which communication, and the construction of meaning, take place" (3, quotes in original). Therefore, the nature of the social is one in which the interrelated processes and actions between all media mold reality as we know it. This reality is configurable and in flux based on the inputs of the various actors adding to the fabric of the social via communication. For the authors, the "social" is "material, a materiality that is not a 'pre-given' stratum into which human beings are inserted, but a product of human interaction itself, with all its power-relations and inequalities" (21, quotations in original). The social only exists through the actions of communication that both humans and technologies enact. The social is made up of human interactions and communication, and in the current era, all interactions are informed by a

combination of digital and analog media. In the past twenty-years digital media have begun to supplant the dominance of analog media.

Couldry and Hepp use the term mediatization to explain the relationship between changes in media and communication and the changes between culture and society. They explain this inter-related process as having a dialectic relationship versus a cause and effect structure. The idea of it being a dialectic is necessary because media and communication are inseparable from culture or society as an external force. They are integral to both the internal and external structuring of social worlds and the realities defined by those worlds (35). Once a social world has reached a point where mediatization can no longer be removed from the social and the social can no longer be understood divorced from mediatization, we enter a paradigm of deep mediatization. Deep mediatization is both a condition and a “meta process involving, at every level of social formation, media-related dynamics coming together, conflicting with each other, and finding different expressions in the various domains of our social world” (215). Because of the meta-capacity of deep mediatization, the analytical frame offered in this project is helpful to understand the complexity of mediatized social worlds. Couldry and Hepp explain,

The social world is the intersubjective sphere of the social relations that we as human beings experience. Those relations are rooted in everyday reality, a reality nowadays always interwoven with media to some degree. The social world is, in turn, differentiated into many domains of meaning, even though it is bound together by multiple relations of interdependence and constraint. (20)

The social world is a both a material object and a process-based force that must be understood as something that is not given but which is made by the interrelation between human beings and all other elements that involve communication. Taking the posthumanist position that all elements in the natural and man-made world have the potential for agency, this means that all these elements are integral to communication structuring the social world. Couldry and Hepp argue the social world is grounded “not in ideas, but in *everyday action*, that is, *in practice*: the reality in which we as human beings act and that we articulate by our interaction” (21, italics in original).

The formation of social worlds is a performance of actions between the entirety of elements existing in the spheres of reality.

To better understand the history of the social as perceived and interacted with by human beings, the authors describe the recent history of humanity as one that can be divided into waves of mediatization. They define these waves as a “fundamental qualitative change in media environments sufficiently decisive to constitute a *distinct phase* in the ongoing process of mediatization” (39, italics in original). The waves are large scale societal forces that are experienced in various levels or strength based on contextual information such as cultural, political, geographical, and economic determinates. Each individual wave marks an origin for social reconfigurations based on changes in media ecologies, but unlike medium theory, which posits that individual media/technology (the printing press, the telephone, the television, etc.) dictate change as a quick paradigm shift, waves of mediatization take on a more broad-scale approach and evolve over time with visible overlaps.

Couldry and Hepp identify four distinct historical waves of mediatization beginning roughly 600 years ago that have helped form the constraints of reality via the social. These include, *mechanization, electrification, digitalization, and datafication*. *Mechanization* began with the printing press and includes all the technological adaptations that allow simple machines to replace human operated modes of communication. While the printing press became a dominate technology that transformed the way written language was produced, disseminated, and consumed, it was not the only process of mechanizing language. Block print techniques had been around for several hundred years, and the act of writing itself is a mechanization of spoken language. The printing press, however, initiated a large-scale evolution in societies because it allowed written material to reach many more human beings in technologically advanced societies than previously possible. The printing press allowed multiple formats of mass produced text, including: the broadsheet, pamphlets, and eventually newspapers (42). The sheer amount of new

literary material and formats sparked a surge in innovation while changing the ways people interacted socially. Mechanization also spread across other fields beyond communicative media. These include: mobility and production through the development of steam and then combustion engines that propel vehicular travel (train, automobile, plane) and the automation of factory work. These fields changed cultural systems through modifications to geographical constraints and economics as part of industrialization, while printed text changed social systems through changing dynamics in education and communication (42). Because literature was no longer relegated to an elite populace, the ability to segment into different genres with specific audiences began. As the printed word spread around the world, higher levels of literacy came with it, leading to more societies entering an advanced state of increasing social complexity. The explosion in both the form and content of printed media allowed for a stratification of audiences and communities. The stratification through genre and form paralleled migratory movements allowed by technologies of movement. While the train, as a mechanized form of travel, came late in the history of mechanization, it propelled the mediatization process into a higher gear. Mass migrations led to urban booms and transcultural intermingling which then influenced the formation of national states trying to solidify their identity (43). The historically long process of mechanization continued into the late twentieth century and fundamentally changed the way the social world was perceived and interacted with by human beings. The latter stages of mechanization began in the nineteenth century and included the mechanization of visual and auditory art form that include: photography, the phonograph and gramophone, and the stereoscope. Each of these inventions would quickly be remediated through *electrification*.

Beginning in the early-nineteenth century and reaching its apex in the late twentieth-century, *electrification* accelerated the pace of changes in social worlds. Couldry and Hepp define electrification as “the transformation of communications media into technologies and infrastructures based on electronic transmission” (44). Electrification augmented many

mechanical processes, but is primarily identified with the telegraph, telephone, film, radio, television, and the complex networks created between each of these media. The telegraph, telephone, and radio were first thought of as “horizontal communication systems” that allowed reciprocity in modes of communication between two involved parties (45). The reciprocal capacity quickly became “sender-centered” and primarily unidirectional when they matured and became the domain of political and corporate entities in the late 1920’s (45). The unidirectionality of electrified media became commonplace through the mass adoption of film and then television. Electrification became a paradigm shifting process through the interlinking of the various media and the infrastructures that allowed their transmission. The electric grid allowed broadcast networks to form and morph into extensive cable networks and then entire media conglomerates. These conglomerates were intricately linked to geographic, political, economic, and social institutions, which expanded as electrification deepened and spread. The telegraph and then telephone allowed communication between vast geographical distances to occur that may have taken months in previous eras. The expansion and deepening of electrification allowed modes of distant communication to become near instantaneous changing how we understand and construct concepts of time and place. The mass dissemination of ideologies through film, radio, and television offered “new possibilities for constructing cultures across space and time” (47). Though electrification is often tied to globalization and the flattening of distance and temporality, Couldry and Hepp argue that it was not a process that spread equally across all parts of the world and all social spheres.

The third wave of mediatization is *digitalization*. In digitalization, the primary mediator and interlocutor of human communication is the digital sphere and its many individualized domain¹

¹ I refer to domains as the unique spaces that make up what we call social media such as Facebook, YouTube, Twitter, etc. Each has its own logic and purpose but each operates based on the necessity of human interaction and input.

contained in that sphere. The backbone of the digital sphere is the complex network of multimodal communication labeled the internet. Often referred to as the World Wide Web, the internet began in multiple instances as small digitally connected networks primarily between academic and governmental entities. The substantial leap to world connectivity came in the late 1980's with the creation of programming language that would allow "metadata" and "hypertext" to form the digital backbone of a mostly unified web of electronic files. Through new protocols of computer to computer communication (HTTPS), a digital infrastructure with the capacity to connect all parts of the world emerged. The first web sites developed in the early 1990's and this led to the need for web applications that could effectively navigate the linkages. The creation of multiple internet browsers and search applications by corporate entities such as Netscape, AOL, and Google in the mid-1990's changed how communication operated and recirculated via digital and virtual systems. These changes led to innovative new Apps (applications) that transformed how previous media were used. Each step in the development of the internet changed how human communication worked, and changed the social systems that dictate how humans operate as sentient beings. Couldry and Hepp explain, "The result of these cumulative and interlocking steps is a strikingly complete transformation of 'the internet' from a closed, publicly funded and publicly oriented network for specialist communication into a deeply commercialized, increasingly banal space for the conduct of social life itself" (50, quotations in original). Under digitalization, the internet went from being a tool and network for communication and transformed into a mediatized platform for creating, exploring, and experiencing society.

Digitalization allows the formation of multiple domains of social media which act as multifaceted technologies that "comprise platforms which, for humans, literally *are* the spaces where, through communication, they *enact* the social" (2, italics in original). The social world is no longer created solely through face to face communication, instead, our media have become equal partners in the construction of our social reality. In today's condition of deep mediatization, media

such as the internet become interdependent technologies for human life. The interdependence of our completely mediatized environments causes a reconceptualization of what it is to perform one's own construction of selfhood. Before digitalization and the most recent wave, *datafication*,² the performance of selfhood required an analog interaction with the rest of the world primarily through communicative acts of language (both verbal and body) as processes of performativity. Digitalization and datafication have transformed "the site of the self" from a performance were "being 'someone' shifts from being associated with a certain quality that self and others can abstract from the stream of habitual action to being a continuously managed 'project', that is, an 'external' responsibility of the self towards the social world" (146, quotations in original). Put more simply, our selves have become mediated by the digital platforms now defining our new social worlds. These multiple selves exist in interconnection between the digital sphere and the public sphere of everyday life. Our selves are now dialogical selves; beings that exist in constant networked communication between our corporeal and our digital identities. The performance of our selves in everyday life is constantly mediatized. Mediatized selfhood is increasingly more "processual" causing a necessity for understanding "the material processes of forming and sustaining a self" (148). With selfhood transformed through mediatization, individual acts of spectatorship are also transformed. The fact that mediatization has fully integrated itself into contemporary society is why it is necessary to have a new analytical model for spectatorship that considers the materiality and agency of technological tools and paradigms.

Waves of mediatization fundamentally change the way social worlds are formed and how human beings perceive both those worlds and their place in those worlds. Mediatized technologies of digitalization in the twenty-first century are increasingly becoming the bounding forces forming the social structures that humans interact with. These interactions lead to a

² I cover *datafication* in full detail as the backdrop of Chapter 5.

construction of new systems of perception and reality. Couldry and Hepp argue for a material phenomenology when approaching technologically mediated social realities. This approach is fundamentally connected to the similar approaches of posthumanism and new materialism. In these approaches the world is made up not only of our subjective interpretations of events and experiences but also the effect of the “things” that are part of those subjective interpretations. Media and mediatized technologies have crucial agency to impact the way we look and therefore have agency to change our interpretation of the very things we look at. Part of my argument in this project is that mediatization effects our perceptual apparatus through technogenesis and causes the performance of spectatorship to evolve from something less akin to watching but more like experiencing through multiple modes of interaction. Because our sense of social being-in-the-world becomes aware of our own implicitness in the interactive making of that world, we become habituated to have a greater stake in the making of a performance as its spectator. This ushers in a personal need to materially interact in ways that are measurable or tangible. This seems tautological but necessary to understand as the very feedback loop that creates meaning and thus contemporary social realities. These realities are continually reshaped by contemporary technogenesis, and this reshaping impacts both human beings and the social worlds containing those human beings. Technogenesis has no beginning and no end. It only exists as a continual process of change that is itself changed by different conditions in waves of mediatization. Contemporary technogenesis represents the interconnected changes brought about by electrification, digitalization, and datafication.

What is Technogenesis?

Technogenesis is a term primarily associated with the philosopher Bernard Stiegler. In his three book series *Technics and Time* (1998, 2009, 2011), he engages with Heidegger’s

phenomenological term *Dasein* (the to-be / to exist), along with the transcendental humanism of Rousseau, and the origin of humankind in relationship to technologies as explained by Gilbert Simondon. In book one, *Technics and Time: The Fault of Epimetheus*, Stiegler (1998) uses the term technogenesis to tease out a construction of humanity as one that is forever and inextricably linked to both technological progress and the technics that encapsulate and dictate culture. Adopting Simondon's definition of technics as a "process of concretization" (22), Stiegler explains that once *the human* enters an age where it is impossible to delineate causality of effects between an individual and an individual technology (because of the simultaneous and infinite multiplicity of interactions between many technologies and many individuals), technics become the prevailing structures/logics defining what makes *the human*. Philosophically, a technic adopts the logic of both *episteme* (deferential knowledge for knowledge's sake) and *tekhne* (functional knowledge created through the application of epistemes) to develop a system of knowledge that is forever in process, forming the horizon of all possibilities for human existence (74). If technologies are the tools that the human interacts with, technics are the overarching logics those tools inspire. They are tool-like in the way they help shape the potential of human beings. Both metaphysics and materiality combine to create technics as assemblages that allow a human being to operate as a technical individual; one whose beingness conjoins with a technical object's operation and/or purpose. Technics are what make human beings distinct from other animals as they are uniquely connected to their social life. In this paradigm, a technological apparatus surpasses simple utensil, or tool, to become an agent (object/subject with agency) in systems of reality accessible by people. Each system performs as a human being's historically situated technic. As such, it dictates specific dynamics that make a human being human at a specific time and place.

Technics operate the same way as the waves of mediatization offered by Couldry and Hepp in the previous section. In fact, waves of mediatization can be thought of as historical/temporal technics. They are large scale technological processes that work with and on

human beings and the social systems created out of the relationship between the two. These systems are also always in flux, and as technologies change over time—often more quickly than human beings do—they exert a force that causes them to enact a social and cognitive evolutionary process with and on human beings. That process is what Stiegler and subsequently Hayles (2012) discuss as technogenesis: the ongoing relational process between a human being's perception of self and the technics and technologies that bring *the human* into being as a construct. Just like posthumanism, which I cover in more detail later, the use of the term technogenesis requires a shift in thought away from linear causality and beliefs in an origin or stable construct of *the human* (ontology) towards an understanding of relationality and interconnectedness. Stiegler and Hayles use the terminology co-evolution to explain the process of technogenesis. As such, one engaging with it must suspend propensities towards cause and effect, instead considering operation and process as functions inside dynamic and unending systems of exchange.

Technogenesis is therefore a fluid process of change and adaptation between the human animal and all the technologies it interacts with and relates to inside of specific technics. In Part I of the Stiegler's book, titled "The Invention of the Human" (21-134), Stiegler marks the beginning of technogenesis as an interpretable phenomenon by citing Karl Marx's materialist orthodoxy on history. He intones Marx's theory of interpretation to explain technology's relationship to both human nature and human culture: "Technology reveals the active relation of man to nature, the direct process of the production of his life, and thereby it also lays bare the process of the social relations of his life, and of the mental conceptions that flow from these relations" (Stiegler 1998, 26). Marx discussed the material impact of human social systems as the primary element that builds history. Using Marx, Stiegler goes further to argue that both the foundations of humanity and humanity's perception of time emerge from the material relationships amongst technology, history, culture, and an individual's perception of selfhood. Stiegler's goal in defining and applying

technogenesis is to explain how time and temporality are constructs that are dependent on the interrelationship between human beings and technics.

Hayles (2012) explains technogenesis as a co-evolutionary process where the interaction between technologies and human beings fundamentally alter the ways *the human* thinks, perceives, and operates in the world. By altering these elements, she allows for a theorization of *the human* who becomes posthuman. Hayles explains, “humans have always been integrated into their environment and have co-evolved with it” (2014, 98). What comes first, *the human* or technology? Neither, they are absolutely interdependent on the influence of the other. As part of the social and technical environment, technologies make a construction of *the human* possible while human beings allow technologies to operate in a manner that creates the symbiotic link. The interrelationship between the two, and the historical complexity of their relationality, are what makes a construction of *the posthuman* possible.

For Hayles, technogenesis is an ontogenetic evolutionary process whereby all technological tools formulate the nature of the human animal’s interactions with the world. Hayles uses ontogeny to explain the combined structural changes to the cognitive, physical, emotional, and social aspects of a human being based on epigenetic (environmental) factors as opposed to hereditary genetic factors. Ontogenesis is a developmental process of combined epigenetic changes that develop rapidly and imprint upon a person’s perceptual apparatus in ways able to pass on to subsequent generations (Hayles 2012). For example, prolonged use of the smartphone makes certain morphological and cognitive changes in the human brain, which then causes both social and cultural adaptations to ensue (Potzch and Hayles 2014, 98). The relationship between a person and a smartphone initiates a change in relationship between that person and the social, cultural, and technological worlds they inhabit. Human use of tools (technology), and subsequently technology’s use of humans, changes how the world is perceived and interacted with by humans. Hayles is quick to point out that evolutionary change isn’t solely a process of

forward momentum. This is an important take on the process as it relates to the project of posthumanism. Instead of focusing on forward trajectory, the posthuman project asks simply for a different way of understanding. When considering these processes of use, perception, and interaction, thinking of *the human* as posthuman becomes fruitful. I'll discuss the construction of *the posthuman* more in an upcoming section titled "Who is *the Posthuman?*", but first I ground the concept of technogenesis in current media culture using examples of digitally informed reading from Nicolas Carr and Hayles.

Text as Technology and Technic

In 1999, Hayles wrote,

Different technologies of text production suggest different models of signification; changes in signification are linked with shifts in consumption; shifting patterns of consumption initiate new experiences of embodiment; and embodied experience interacts with codes of representation to generate new kinds of textual worlds. In fact, each category—production, signification, consumption, bodily experience, and representation—is in constant feedback and feedforward loops with the others (28).

Hayles' statement about text as technology is a helpful way of thinking about technogenesis. Text, and the alphabets that form it, condition human thought. Language is then fed back to human beings, conditioning their actions and modes of perception. This argument follows Couldry and Hepp's (2017) model of mediatization concerning the adoption of the printed word. Since the development of written text, human beings have structured their idea of reality based on the formal constraints and rules of the medium through which text surfaces. For example, in the English language, we write printed text from left to right on a page using individual letters that form words. In other languages, text sometimes moves in different directions and words are comprised of complex symbol combinations. Up until the invention of the printing press, the act of writing and learning text was primarily a practice of an elite class. The formal rules of written language did not exist during times where communication worked primarily through oral traditions. Without the

rules of text-based communication, human understandings of how the world worked operated differently where an ecological view was more possible. As written language was adopted by the educated elite, rationality began to establish itself as a mode of social life. With the invention of printing press, a mass adoption of these rational rulesets occurred. Reading based on linear rules became ingrained in Anglo/European social systems and remained the dominant mode until the introduction of hypertext. In roughly the past twenty-five years, the social condition established after the mass adoption of printed material has slowly eroded due to the introduction of an entirely new way of developing knowledge: relational interaction as found in the logic of hypertext and internet mediated language (Hayles 2012).

In *The Shallows*, Nicholas Carr (2010) explains how the interactive multiplicity contained in the medium of the internet has begun to change the way we think and interact with the world. Carr offers a layman's explanation of technology's historical role in shaping human minds and subsequently the cultural ethos these minds propel. When describing technology, I agree with Carr in classifying communicative media as technologies that create technics. These technics form the material conditions that "work on our minds even as our minds work on them" (45). These technics are *intellectual technologies* that shape us just as much as we shape them. Carr explains, "it is our intellectual technologies that have the greatest and most lasting power over what and how we think. They are our most intimate tools, the ones we use for self-expression, for shaping personal and public identity, and for cultivating relations with others" (45). He considers writing (a text-based construction) as the most influential intellectual technology to impact human minds and human civilization. Starting during the Enlightenment era—technologically propelled by the Guttenberg press—sustained concentration on long textual information gradually became the dominant mode of information dissemination, impacting the way European societies perceive and interact with the world. The structure of formal written language operates in a manner with more rules and constraints than oral language. The text-based written/printed book was the ideal

medium and technology of information transfer for over five-hundred years. As such, it informed one of the most powerful technics through which human beings could adapt and evolve. Today, the internet, with its hyper-textual, multisensory information, has supplanted the printed word as a culture changing intellectual technology.

The internet, as textual/visual/communicative technology, is ever-present and has fundamentally changed peoples' perception of the world and, thus, the way they learn (Carr 2010, Hayles 2012, Rosen 2010). The emergence of the internet, as a dominant space and medium for information exchange, has created a new technic ushering forth multiple epigenetic changes in human beings. These changes are part of the defensive mechanism ingrained in the biological process of the human brain called neuroplasticity, the neurological function programmed to all brains that allows adaption to environmental stimuli (Hayles 2012, 100-101). Brain structures morph to suit their individual environments. Neuroplasticity allows localized and enculturated forms of cognitive evolution at the neuronal level and operates as a basis for human learning. Not hardwired genetically, the physical construction of our brains is "constantly changing in response to our experiences and our behavior, reworking their circuitry" (Carr 2010, 31). This perpetually changing nature of the brain in relation to technologies and technics is the focus of Hayles' (2012) use of technogenesis. Technics and technologies embedded in contemporary social systems operate in dynamic feedback loops with human beings, accelerating cognitive, perceptual, and social reconfigurations of reality. Hayles explains:

As digital media [...] become more pervasive, they push us in the direction of faster communication, more intense and varied information streams, more integration of humans and intelligent machines, and more interactions of language with code. These environmental changes have significant neurological consequences, many of which are now becoming evident in young people. (11)

Young people are not the only ones affected by these technologies, but they are a useful example of large-scale technogenetic evolution brought about by digitalization. Relying on the Kaiser

Foundation's "Generation M"³ research study on media use (Roberts, Goehr, and Rideout 2005), Hayles states that the cognitive shift accelerates the younger the cohort (69). Computer-assisted adaptations to textual information, in the form of multimedia and hyperlinked text delivered over the internet, has culturally molded today's typical American college-age student. The internet has also become the operational backdrop of all convergent technologies such as smartphones and mobile media (Jenkins 2006). These devices accelerate the cognitive shift due to their pervasive interconnection with a human's sense of "being-in-the-world" (Farman 2012). Hayles (2014) argues that today's technological devices instigate monumentally impactful technics, which "enables new feedback loops and new forms of amplification between human evolution and technical developments" (Potzch and Hayles 2014, 98). The rapid adoption of technological materials amplifies contemporary technics.

It is helpful to consider the printed book as a technology that informs experiential modes of human subjectivity formation and human selfhood. When deeply reading a book on a printed page, the experience historically has been one of deep immersion. The form of the content coaxes the reader into a narrative or informational realm within the imaginative boundaries of the page-space, keeping the reader satiated without the urge to stray outside of its linear confines. The linearity of the book format helps promote causal efficacy and rationality as dominant modes of human beingness entrenched in the liberal humanist model. The liberal humanist subject that forms the basis of *the human* is a technogenetic construction developed through the interconnection between linear print technology and human cognition. This technological condition is gradually being supplanted by a non-linear paradigm via the internet.

When raised with and culturally habituated to hyperlinked-text and multimedia delivered via web interfaces, a reader's ability to stay immersed in linear text recedes. It is replaced by

³ Late stage Millennials born 1988-1997.

interaction as a mode of relationality. Just like reading, spectatorship—as a process of perception and interpretation—is adapting to hyper-textual and hyper-mediated social worlds. Hayles (2012) argues that hypertext-based technologies require us to think in terms of matrix or assemblage with interlocking agential points of information as opposed to a point A to point B mode of thinking required in an uninterrupted line of text. Hypertextual reading keeps readers engaged by urging them to constantly jump from place to place and portal to portal in a process of spatial-visual-cognitive multitasking. This form of reading and knowledge creation is based on hunting and gathering information bits and correlating against other bits. This form is less akin to sustained singular contemplation and more like analytical problem solving combined with creative interpretation. Using James Sosnoski's term *hyper-reading*,⁴ Hayles (2012) cites research showing technology's ability "to bring about cognitive and morphological changes in the brain" (11). Hyper-reading is the norm in digital contexts such as blogs, wikis, social media posts, news sites, etc. where readers employ tactics of keyword filtering, "skimming, hyperlinking, 'pecking' (pulling out a few items from a longer text), and fragmenting" (61, quotations in original). Hayles adds to this list *juxtaposing* where readers have multiple texts open on the screen at one time. Just think of the common practice of having multiple browser tabs open for ease of information access. As hyper-reading becomes a primary mode, it neurologically imprints on readers a hyper-active and relational perspective (Rosen 2011, 2010). These readers become figuratively addicted to multitasking and constant user initiated interaction. This "addiction" is rapidly becoming a norm and may replace the historically young tradition of deep learning promoted by the unidirectional information received via text in a printed book (Hayles 2012). Because our current mediatized environment is based in readily accessed digital interconnectivity and hyper-

⁴ Sosnowska's definition refers to "reader-directed, screen-based, computer-assisted reading." (Quoted in Hayles 2012, 61).

textuality, our minds are adapting into deeply hyper-active modes of perception. Digitally mediated hypertext is gradually supplanting the static nature of the printed word allowing human beings to develop hyper-reading which will ultimately speed up the adoption of more digital textualities (Hayles 2012). Eventually, slow reading may no longer be necessary to navigate our social worlds.

While Carr offers his argument to warn of the detrimental impacts of the internet on society and human cognition, Hayles (2012) applies the concept of technogenesis to literary analysis as a way of arguing for new modes of education in the humanities. Like Carr, many entrenched educators question the necessity for change which adapts to new modes of digital learning (Rosen 2010). No doubt, contemporary learners fundamentally digest and store knowledge differently, but that does not necessarily mean they do it worse. Though he bemoans the change, Carr succinctly sums up the new paradigm in digital society when referring to a philosophy student he interviewed. This interview explains why some argue deeply reading a book is no longer necessary in today's social world: "Why bother when you can Google the bits and pieces you need in a fraction of a second [...] We are evolving from being cultivators of personal knowledge to being hunters and gatherers in the electronic data forest" (Carr 2010, 138). Hunting and gathering is a process on the move and in constant motion just like navigating hypertext. Technogenesis connected to the internet has instigated an ontogenetic change where human beings are developing an evolved perceptual apparatus based on technological exposure to hypertext and the proliferation of devices intertwined between digital informatic realms. The speed of contemporary technogenesis is fundamentally changing the way today's human beings read the world. By engaging human beings in increasingly interactive processes of exchange, hyper-attention impacts the ways we receive all modes of performance. If today's readers are adapting to hyper-textual and a highly interactive world, then it is logical to think that their whole perceptual apparatus is changing to develop new ways of spectating.

Posthuman Performance and Performing Posthumanism

Technologies and technics have always informed the subjective position of human beings and their social condition. Because the process of technogenesis considers agential possibilities of technologies and delimits the sole uniqueness of human agency, it is an ideal process to situate at the center of critical posthumanism. Critical posthumanism is a philosophical stance that decenters the notion of human beings as the primary objects with agency inside an ecology of interactions that we know as existence (Nayar 2014; Herbrechter 2013; Braidotti 2013; Wolfe 2010). This way of understanding relationships counters the notion of human beingness that emerged in the Late-Enlightenment period and developed into the central tenet of liberal humanism. Beginning in the twentieth century, this tenet began to decay, requiring theories that explain new ways of understanding the interconnection between the multiple elements listed above. Critical posthumanism is one way of understanding the shift from a human-centered epistemology to a relational perspective. By approaching a critical posthumanist perspective one seeks to find a method for looking at the agency of human beings without relying on their dominance. Hayles (1999) explains, “It [posthumanism] signals instead the end of a certain conception of the human, a conception that may have applied, at best, to that fraction of humanity who had the wealth, power, and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice” (286). Instead, human beings are considered equal contributors with(in) ecologies, along with a plenitude of other actors: animals, organisms, objects, machines, processes, and technologies have equal potential for agency. Each actor in the ecology gains agency through constant interaction with all other members. Each interacts with(in) the ecology informing all other parts of the ecology and the ecology itself. Thinking in terms of ecologies requires relinquishing the centrality of the human body as singular object in the analysis of performance. Doing so allows a posthuman reconfiguration of

performance ontology. In this section, I introduce scholarship on posthuman performance and spectatorship that are crucial to the underlying argument of the rest of the project, and explain how this scholarship is a helpful starting point for building a posthuman analytical model for spectatorship.

Posthumanism has multiple modes of application and multiple variants of definition. Posthumanism often connects to other forms of analytical philosophy and theorization such as new materialism, object oriented ontology, and agential realism. While there are few authors in the field of TaPS that have explicitly engaged with posthumanism there are others that engage in a posthuman mode of analysis under the guise of the above mentioned forms. Recent scholarship from Rebecca Schneider (2015) engages performance through the lens of new materialism. Building off the techno-philosophy of Karen Barad (2003), Schneider explains that a new materialist lens “commits not only to acknowledging matter as agential but also acknowledging matter as *discursive*” (7, italics in original). Schneider introduces the use of new materialism as a useful mode of performance analysis that allows one to look at the entirety of a performance network and consider the relationships between human and non-human agents. Objects, non-human animals, technologies, and processes are all possible interactors with humans in performance paradigms and therefore they become necessary elements to consider when analyzing the way performances operate, what they do, and what they mean. She explains that “most scholars consider living humans to be the only agents with their fingers on the puppet strings of otherwise inanimate objects and otherwise inanimate people—not the other way around” (10). Using new materialism allows performance analysis to access this “other way around” mode of seeing the relationships between human beings and non-human agents. Through new materialism, assemblages of multiple agents enter into increased visibility for analysis. Schneider connects new materialism to the variety of other analytical “turns” that have emerged after the decline of the modern period. These turns include, the affective, the non-

human, and the ecocritical (8). A posthuman critical lens attempts to capture the potential of each of these other turns.

Schneider's work is largely influenced by and contextually related to the foundational work on new materialism by Jane Bennett. In *Vibrant Matter: A Political Ecology of Things*, Bennett (2010) lays out an argument for the inclusion of non-human objects or things into the scope of analysis concerning agency and world building. She explains that things, "organic and non-organic bodies, natural and cultural objects [...] all are affective" (xii). Bennett considers affect to be a form of materiality, and therefore all material things have the capacity to create agency and interact with a force. In this manner, she explains how things perform not just through the objectification by humans but by their inherent materiality. Calling on Bruno Latour's philosophy of actor-networks, she argues that things, objects, and assemblages, become agents of their own accord with the ability to "make difference, produce effects, [and] alter the course of events" (ix). Like posthumanism, Bennett's new materialism works to resist the "narcissistic" tendency of humanistic scholarship to focus on the primacy of human agency, logocentrism, and epistemology. When applied to the technological matter that helps to shape social systems, the use of new materialism gives a dynamism to the static object-centered ontologies of media. Through new materialism, media and technological objects gain an agential life of their own divorced from their connections to human beings. A project promoting posthuman spectatorship, takes up Bennett's political project of giving these "things" life and looking at them as agents for change and specifically change on human perception.

Related to new materialism and the posthumanist project is the theory of agential realism offered by Karen Barad (2003). Barad introduces agential realism to tease apart the relationships among agents in assemblages in ways similar to new materialism. Her theoretical framework takes up the work of quantum physicist Neils Bohr to explain how all reality and the material relationships that form that reality are constantly in flux and rely on the "intra-activity" of multiple

material elements (803). Her mode of breaking down the material construction of realities helps to rethink performativity from a non-linguistic perspective “that allows matter its due as an active participant in the world’s becoming” (803). As a posthuman mode of reassembling the way we look at relationships, she explains that performativity becomes a constant negotiation where activity between agents works through a process of “exteriority within” (803). She explains that this is a “specifically posthumanist notion of performativity—one that incorporates important material and discursive social and scientific, human and nonhuman, and natural and cultural factors” (808). For her, this “posthumanist account calls into question the givenness of the differential categories of ‘human’ and ‘nonhuman’ (808, italics in original). In Barad’s posthuman performativity, there is an inextricable entanglement between non-human matter and human beings that allow the two to exist as both separate and same because the two constantly shape each other. Because of this constant negotiation between the human and non-human it becomes possible to think of humans “not as independent entities with inherent properties but rather being in their differential becoming, particular material (re)configurations of the world with shifting boundaries and properties that stabilize and destabilize along with specific material changes in what it means to be human” (818). Through a posthuman performativity, Barad uses agential realism to rework “the familiar notions of discursive practices, materialization, agency, and causality” (811). Barad’s work, while theoretically dense, helps to bridge a gap between scientific, cultural, and social ways of thinking about human beingness and material agency. Human beings are never stable subjects in her mode of performativity but instead are simply phenomena made up of the multiple entanglements produced by the agency of all material things (818). This mode of posthuman performativity is a helpful tool for TaPS to use when considering the discursive and agential potential of relationships between technologies and performance. While I do not explicitly engage with new materialism nor agential realism in this project as stand-alone lenses, they are

embedded in the posthuman critical perspective helpful with considering contemporary spectatorship.

The primary construction of *the posthuman*⁵ I base my mode of spectatorship on emerges as a product of technological culture and techno-philosophy. This object denotes a different form of human beingness that has moved aside from the liberal humanist conception of the human being. The terminology of a posthuman spectator is used to differentiate this form of subjecthood from traditionally used conceptions of spectatorship that rely on ocular seeing as a primary mode of information reception. The explicit terminology of *the posthuman* or posthumanism exists sparsely in the realm of performance theory and primarily exists as a conception connected to performance models that incorporate or rely on media of some form, whether it be multi-, inter-, or transmedial. While it may be useful to unpack a short history of the incorporation of media in and connected to performance, that is not the primary purpose of this project.⁶ In the following literature review of performance and posthumanism I introduce authors whose work primarily concerns media/technology and performance, but it is connection to posthumanist modes of analysis that makes their research most useful to identify the potential for expansion of the current field. The model I introduce works to enact that potential. The scholars offered below discuss posthumanism and performance as a relationship that requires technological interfacing or technological use during/with the performance practices and objects analyzed. I propose a model that considers the relationship of human beings and technologies before the performance of spectating.

⁵ When the term *the posthuman* is italicized it denotes the fact that there is no stable definition of posthuman Beingness. It simply stands in as a mode of human being that exudes posthumanistic potential. The term is a construct that has shifting definitions depending on how one uses the term. It is used both as an object or noun and as a modifier or adjective in literature on posthumanism. As will be shown in Chapter 1, the term *the human* is used similarly as a rhetorical construct.

⁶ Refer back to the list of scholars of Intermediality and technology in performance mentioned in the Introduction.

The posthuman is constructed and analyzed through the lens of transhumanism (a subset of the larger posthumanism) in works like Jennifer Parker-Starbuck's *Cyborg Theatre* (2011), which focuses on how technologies operate as extensions of the human body inside of multimedia performance. Parker-Starbuck's cyborg performance imagines "bodies on stage intertwined with the various technologies" present in the current era (8). A cyborg theatre is one that embraces a posthuman mode of storytelling, but does so in a liberal humanist way of presentation and/or subjectivity. Her objects of study, such as Stelarc⁷, are themselves cyborgian entities, which can be thought of as a performative mesh of the technological and the corporeal.

As a largely humanistic field of study, TaPS often approaches this transhumanist mode of posthumanism with skepticism or outright anxiety due to utopian associations with the technological cyborg whose machinic nature might possibly overwhelm the potential of the purely organic. The conception of a technological cyborg is underpinned with expectations of technologically advanced (augmented, prostheticized, "improved") modifications to the human body. Transhumanism offers a version of *the posthuman* that attempts to subjugate human "beingness" to that of incompleteness; an incompleteness that can only be perfected through technological augmentation. Transhumanists argue that the physical technological hybridity between machine and human body is the only possible way of moving humanity forward. Critical posthumanist scholars (Herbrechter 2013; Nayar 2014; Wolfe 2010; Braidotti 2013) often decry transhumanism for its retention of the liberal human subject as a central body to augment via technology. This transhumanist necessity of machine/body amalgamation (cyborg) is often met with uneasiness in more human-centered understandings of theatre and performance that consider liveness, embodiment, and ephemerality as the ontological basis of performance. I argue

⁷ Australian performance artist Stelarc has gained fame through the manipulation of his body through technological prostheses and interfaces which are presented as a mode of performative being.

that this is one of the many reasons there has been so little focused work done about posthumanism in TaPS. I approach *the posthuman* from a less techno-utopic and rigid understanding of posthuman hybridity and cyborgization. The flavor of posthumanism I apply is more concerned with technics and technogenesis as processes that change modes of human perception and being versus upgrading human potential through the interface between software, wetware, and hardware. Using this nuanced conception of posthumanistic inquiry, technology and digital connection operates in a manner that impacts the way *the posthuman* exists, perceives, and communicates in the world but it is not necessary to literally graft technology onto the physical body of human beings as popularly expected of the cyborg formation.

Susan Broadhurst (2007) also works around the conception of a posthuman model of performance using a transhumanist lens by engaging with both Stelarc and the film *The Matrix* in *Digital Practices*. She describes the relationship between the human beings and technological augmentation both in corporeal and neurocognitive configurations. Nuancing the transhumanist mode of application, she explains how Stelarc's performance practices relate to a mode of posthuman configuration that refers to "the transformation of bodies modified or *polluted* by technology" (87). Amending this mode of analysis, she explains that "human identities are mutated by the impact of various information technologies, which at the same time identify that impact. The post-human body is thus inscribed and reconfigured by its own mediatized and mediated narrative" (87). Through Hayles (1999) work on the posthuman, Broadhurst argues for thinking of technologically informed posthuman experience of reality to be one of interconnection. The interconnection between technologies and embodiment destabilizes a conception of a unified self and helps to reject a Cartesian mind/body duality. Broadhurst incorporates the technological (in this case the digital) as a crucial element with agency that connects humans to their environment and therefore operates as a distributed system of experience. This distributed system is what a posthuman model of spectatorship operates through.

In a similar manner to Couldry and Hepp (2017), Chris Salter establishes a historical trajectory of the symbiotic relationship between media, technology, and human bodies. Salter (2010) briefly discusses the technologically connected performer in *Entangled: Technology and the Transformation of Performance*. His discussion centers on the historical influence of the digital paradigm, evolving out of the purely mechanical, and on the body in performance through the form of the cyborg. His analysis expands on the theoretical underpinnings of the posthuman body via Donna Haraway (1991[1985]), Judith Butler (1990, 1988), and Hayles (1999), among others, to give readers an understanding of the way in which bodies, both technological and corporeal, enter into constant interplay in performance. These cyborg bodies are hybrid entities often explored by performance artists “influenced by new electronic and computer-assisted technologies and informed by questions concerning new construction of subjectivity and identity” (249). In the posthumanist mode, Salter describes assemblages of human and technology as “entanglement.” Entanglement covers the entire scope of how performance and technology are interconnected and inextricably linked throughout history, and it is an important idea to consider when thinking about the ecological perspective of interlinking networks on which posthumanism relies.

Steve Dixon (2007) covers the posthuman condition in his tome *Digital Performance*. His book underlines another historical trajectory of the relationship between digital technologies and performance paradigms. His mode of inquiry builds upon networked posthuman identity, but primarily connects it to digitally-tethered performance practice, similar to what Parker-Starbuck and Salter do. His explanation of a posthuman condition acknowledges the idea that all performance and culture relying on the digital is in some fashion inherently posthumanist. Dixon places the theoretical basis of posthumanism in relationship to the slippage in subjectivity also discussed by postmodern and poststructuralist philosophers such as Derrida, Foucault, and Baudrillard. His posthuman paradigm emerges out of the discourse from these theorists’ attempts

to reconcile some of the uneasiness gained from the loss of grand narratives. Instead of loss, Dixon argues that the posthuman paradigm extolls a force, “for cohesion, for meaning, for unity, for intimate cybernetic connections between the organic and the technological” (155). Dixon’s conception of a posthumanist position, as an object of study, centrally connects to the version I follow and is better explained via the term critical posthumanism.

Johannes Birringer (2006) also discusses the posthuman paradigm in relation to performance, though his central argument concerns the necessity of technological interface *during* the performance event. His primary objects immerse the spectators in a virtual (computer) narrative frame that operates as a technological prosthesis between the performance and the spectator. With these performance objects, an emphasis on mediatization and digital technology as conduit are apparent. Birringer is one of the more influential writers on performance using computational and media theory in the past twenty years. He makes a connection between digital culture and performance as one that is evolving towards reflexive feedback loops. Feedback and feedforward are recurring themes from cyber culture and posthumanism that I explore in each chapter of this project.

Ralf Remshardt (2008, 2010) is one of the first scholars who explicitly connects posthuman performance to the act of spectatorship. He explains, “In a posthuman performance paradigm, spectator and performer both relinquish their positionally determinate (dialectical) claims to presence and reconfigure themselves as dynamic, interdependent parts of an emergent system” (2010, 136). Emergence and potentiality are necessary traits of this posthuman act of spectatorship. Remshardt’s analysis primarily lands on performance theory that considers technological mediatization as an integrated and relational part of the performance frame or what we commonly consider intermedial performance. He discusses *the posthuman* as an object in performance, but restricts this subjective body to one that interacts primarily through digital remediation, limiting the scope of posthuman spectatorship too narrowly. Remshardt is important

for more fully considering how performance theory must accept the concept of a posthuman turn; one which questions some of the foundational assumptions of performance studies (2008). He asks us to reconsider the centrality of human embodiment and consciousness as the basis for performance analysis, and, thus, expanding possibilities for more relational analysis between dynamic objects, bodies (technological and corporeal), and informational systems (digital, performative, computational, communicative). It is this reconsidering that allows us to better understand how the audiences of contemporary performances operate through a posthuman subjectivity, one that is “dislocated and distributed” or always in flux and unfixed (2010, 137).

Matthew Causey (2006) discusses posthumanism in relationship to digital culture in ways similar to Birringer but his argument is more explicit in how it claims that current theory is inept to adequately address a posthuman condition in performance. His claim is based on a belief that performance studies has an inherent bias towards humanization. He argues the field also over-relies on the human body as an ontological requirement of performance as an object of study. He states, “What mediated technologies afford performance theory is the opportunity to think against the grain of traditional performance ontology” (51). He introduces the terminology *postorganic* as a way of redistributing the human body-centered ontology of liveness necessary when doing any critical reflection on the digital and the virtual. He uses this terminology to “indicate the extensions and challenges to our bodies and selves brought on by the advances of new technologies” (53). Postorganic, like posthuman is a non-anthropocentric posture used to look at the influence of digitalization on human culture. Causey’s theorization on posthuman bodies and subjectivities after the impact of digital culture allows new discourse on the nature of spectatorship within domains of digital and/or mediatized performance. His recent work on the *postdigital* condition aligns well with the argument of techno-augmented posthuman sociality and may become a large influence on future scholarship on performance and subjectivity. Like the term posthuman-, Causey introduces the postdigital condition to develop a mode of thinking beyond binaries of

digital and analog or live and mediated. The *post* does not indicate after or beyond in a linear sense. Causey (2016) explains:

My own model of the postdigital [...] considers the situation as such of a postdigital culture to be that of a social system fully familiarized and embedded in electronic communications and virtual representations, wherein the biological and the mechanical, the virtual and the real, and the organic and the inorganic approach indistinction [...] The prefix of *post*- linked to the internet, digital, inter-medial, and even the human is, in fact, a recognition of the overdetermined relations, circulations, and exchanges of those phenomena within the current condition—not an endpoint, but a recognition of the many flows and distributions. A posthuman is a human, all too human, who attempts to negotiate its humanness through its animality and materiality in relation to the community and other entities, be they organic or other-wise. (432)

Causey's posthuman (which my own interpretation of a posthuman spectator is built on) is an entity that exists in a postdigital technic that allows for a radical rethinking of the relationships between technology, the human body and mind (as perceptual apparatus), and the techno-social environments it operates with(in).

Each of the above authors mark a beginning for a larger conversation concerning the way in which posthumanism can add to the field of TaPS. Many of these authors introduce posthumanism through a thoroughly philosophical approach that attempts to work through the venues of deconstruction to destabilize the autonomous agency of the human subject who either serves as the central agent in either the making or the watching of a performance event. My framework for posthuman spectatorship takes up these challenges to a human-centered performance ontology to put into relation technological objects, technological processes, media, and human perception, agency, and affect. The hope is that by both thinking in a relational manner about all these possible agents TaPS can further question the very nature of experience for contemporary spectators. To do this, I find it helpful to start where many who follow a posthumanist mode of philosophy argue humanist modes of inquiry end: the human body.

The Technogenetic Posthuman Perceptual Apparatus

Imagine your body. What does it look like? What does it do? How does it do what it does? In what ways does that body interpret the world around it? What tools does it access and connect with to conduct that process of interpretation? Your body is part of a perception machine; a *perceptual apparatus* (Farman 2012; J. H. Murray 2017; M. B. N. Hansen 2006, 2004; Massumi 2002b; Chandler and Munday 2011b). This machine works to process both material and immaterial inputs and outputs via sensory reception, affective response, cognition, and relational processing. The posthuman perceptual apparatus puts into constant relation the human body, the human mind, and the technological environment to sense and interpret the experience of being-in-the-world. This operation of experiencing the world is a form of embodied cognition (McCutcheon and Sellers-Young 2013, 2). In this mode of experiencing, consciousness forms from the interconnection between the brain, body, and environment. Consciousness comes not from any one element but from all these interacting elements and allows a formation of our world and our place in that world. Consciousness exists through interconnected relational processes of the perceptual apparatus. Unlike the Cartesian formula of *I think therefore I am*, consciousness and reality exists in simultaneous and equal actions of *I think, I feel, I relate*. Perception, as such, is an operation in which the body simultaneously senses and apprehends material conditions via affect at the same time the brain processes what the body apprehends to develop conscious and unconscious awareness of the world (Chandler and Munday 2011a). The body and brain are not independent. They operate in conjunction with the environment in a continual and nonstop relational process. Brian Massumi (2002) explains that perception and interpretation are part of a continuum where communication technologies act in concert with the feeling body to perform as a mediating influence in the relational process. This process is dual-directional in that it both receives and transmits information simultaneously. The process of transmitting and receiving multiplies as a body connects to its environment (as an informational source and receiver) and

the brain (as signal processor). The body, brain, and environment all act as conduits through which information passes in *two directions at once*: to and from the other elements in non-stop relationality. Without the body, however, the other two could not connect or relate. Couldry and Hepp explain that our social and performative world is made possible “through the capacities of our bodies;” it is through various “sense-making practices” that we can construct and conceive of our technologically mediated world (18-19). The perceptual apparatus is a relational object, a perceiving machine operating to create meaning through the many relational activities it undertakes. Thinking of *the human/posthuman* as a subject with a perceptual apparatus allows us to conceptualize spectatorship as an act of “being of the middle – the being of a relation” (Massumi 2002, 70). I propose that the human body interconnectedly works in concert with both the mind and technologically enveloping environments as a perceptual apparatus; a machine for sending and receiving information that helps to create meaning via experiential operations such as technologically embodied spectatorship.

As explained above, technogenesis is the process whereby technics create social and environmental paradigms through which the perceptual apparatus moves and adapts. The primary operation that engages this process is perception. Perception is the dual directional action where the apparatus performs feedback and feedforward processes of information inputs and outputs. Working through the phenomenological arguments of Merleau-Ponty, Jason Farman (2012) explains that “our knowledge of the world and our place within the world depends on the feedback from our senses” (25). Our senses help us determine factors such as place, space, and time. For example, sight, sound, and touch combine to help us understand balance and extra-sensory operations such as proprioception. The senses also operate in continually shifting mini-adaptations based on environmental factors. For example, one’s sense of smell changes continually based on exposure to an individual scent. Think of riding in a car down the highway and encountering a cattle processing stockyard. At first, the smell of fecal matter is overwhelming

because it is a new and strong environmental presence. If you were to stay at that cattle farm for an extended amount of time, your sense of smell would become accustomed to its presence and you would become less reactive to it. Your mind would tell the olfactory nerve that this smell is no longer offensive because it becomes commonplace and the olfactory nerve would learn to put this smell in the background of its perceiving function, allowing it to sense other elements better. This is one way to consider how the perceptual apparatus adapts to environmental factors. Our senses can adapt to technologies as well through heightened awareness or desensitization.

Technologies embed in our environment physically, socially, symbolically, and culturally. When thinking of technologies in terms of technics, they have the capacity to form our environment. When a human being's perceptual apparatus encounters technics (which it does constantly) it learns to adapt to the way that technical environment performs. That constant act of adaptation forms the entire process of being-in-the-world, or put more simply, the entire experience of being human. Farman (2012) states, "the senses connect us as being in the world through interaction" (26). Without the body/mind/environment amalgam that forms the perceptual apparatus, we might be nothing more than disembodied information or energy flows. The perceptual apparatus acts as the relational mediator for our entire understanding of experiential being. A posthuman perceptual apparatus is one that relies on connecting the process of technogenesis to the foundation of twenty-first century perception through mediatized social structures. This perceptual apparatus is unique from a human variety as the influence of technology and technics is necessary agent for its operation.

Who is The Posthuman?

When multiple separate but equal subjects—let's call them human beings—are placed in a relational space, their actions—which are enduring and continually in motion—help determine

who these singular but alike human subjects are. A shift takes place in the act of questioning, placing an emphasis on a relational identity in the form of who is *the human*. **Who** replaces the essentialist functioning of **what** is *the human*? By asking who, it becomes possible to understand fluidity of identification based on relationality and potentiality versus any fixed or static essence of what makes *the human* unique. This new subject modified by the adjective “posthuman” can be **both** this **and** that based on its relationship to other posthuman subjects locked in a non-stop exchange of agency and action. Posthuman subjects are defined by their identities which are defined by relationality. When considering the identity of this construct, I identify as *the posthuman*, technology and technologization is always a serious element to include as an agential element in the larger constructs. Technologies, along with other objects, animals, plants, and things, are themselves posthuman subjects. Technologies and technics act as **both** mediators **and** stabilizers of identification for all other posthuman subjects and subjectivities.

In the previous sections I discussed technogenesis and mediatization to help explain how *the human* is a socially, technically, and culturally formulated construct created to help define the human animal and human beingness. Likewise, *the posthuman* is also a construct built upon similar foundations. The version of *the posthuman* this project follows and articulates belongs to a specific technocultural methodology that connects technogenesis, digital culture, and social structures under the umbrella term posthumanism. This posthuman is another form of subjectivity allowed to emerge by deconstructing certain traits of the liberal humanist model of *the human* and augmenting that subject through contemporary technics that inform a particular twenty-first century posthuman subject. This posthuman subject is a construct created by cultural critics and philosophers to help explain a destabilized subjectivity that creates, inhabits, views, interrogates, and deconstructs both itself and the technical environment in perpetual feedback loops. According to the arguments of posthumanist scholars, this is a posthuman mode of *the human* (Herbrechter 2013; Wolfe 2010; Boulter 2015; Roden 2015; Nayar 2014; Hayles 1999, 2014, 2012). Inside this

posthuman paradigm, *the human*, as a construct, is no longer considered the master of sentient beings and non-sentient things, rather just another piece of fluid information inside complex systems of technical signification and relationality. The posthuman mode is also one that we must understand as an always existing paradigm informing the nature of human “beingness.” Following the operation of technogenesis, Stephan Herbrechter (2013) explains:

Seen from an ontological point of view posthumanization shows that human beings have always been ‘technological’ through and through, whether as a result of tool use or of the “recursivity” of symbolic language as ultimate, “ontologizing” tool (language would thus have to be understood as the ineluctable human “prosthesis”), or as the contemporary physical amalgamation of technological object and the human subject (cyborgization) – hence there would be no humanity without technics (i.e. the ontological involvement between humans and techniques and technologies). (21, quotations in original)

A technologically articulated version of *the posthuman* has always existed. In the current technical paradigm, this augmented being is becoming more and more important for an understanding of performance and performativity.

While contemporary technogenesis is prompting a posthuman way of living and perceiving, performing posthuman is still a difficult cultural task. In some capacity, performing a posthuman philosophical position requires accepting the concept of technogenesis as true and then expanding one’s subjective interpretation of the world to accept relationality as a new way of analysis. Performing in a posthuman capacity includes asking one to suspend deeply ingrained belief systems that have been enculturated and codified over millennia. Because it attempts to take multiple steps forward, possibly delegitimizing current cultural issues, posthumanism is often met with skepticism as a valid epistemology. Skepticism manifests into outright denial of the potential of posthuman critical thought and action. Critical posthumanist, scholar Stefan Herbrechter (2013), explains the difficulty in the position as one based in belief.

Whether the posthuman actually exists, or whether it only lives in the imagination of some cultural critics, popular scientists, prophets of technological change or marketing managers, becomes more or less irrelevant as soon as a broad public opinion starts embracing it as plausible and *believes* that something like the posthuman either already

exists, that it might be in the process of emerging, or that it might have become somehow “inevitable.” (37, italics and quotations in original)

Accepting *the posthuman* as a potential reality, though difficult for some, is the only way a posthuman mode of interpreting the world is fully possible. The posthuman paradigm is a potentiality made possible by accepting its validity and then acting through its critical framework.

Scholar of posthumanism Cary Wolfe (2010) states,

Posthumanism can be defined quite specifically as the necessity for any discourse or critical procedure to take account of the constitutive (*and* constitutively paradoxical) nature of its own distinctions, forms, and procedures—and take account of them in ways that may be distinguished from the reflection and introspection associated with the critical subject of humanism. The “post-“ of posthumanism thus marks the space in which the one using those distinctions and forms is not the one who can reflect on their latencies and blind spots while at the same time deploying them. That can only be done, as we have already seen, by another observer, using a different set of distinctions—and that observer, within the general economy of autopoiesis and iterability, need not be human (indeed, from this vantage, never was “human”). (122, italics and quotations in original)

Wolfe is naming one of the primary paradoxes of posthumanism. A paradox that concerns how the “post” does not indicate a complete “break from the legacy of humanism,” (122) but rather, insists on thinking outside of that legacy’s constraints, while still understanding its historical validity. To think of a posthuman spectator requires one to think in a posthuman *ist* manner where one reconditions the spectator as a historical subject (or type of subjectivity) vs an ahistorical object. To do this, operating outside of the constraints of the humanist model are crucial. In this project, the mode of subjectivity considered develops through specific technological paradigms of contemporary technogenesis and mediatization. Using a posthuman model of analysis means adopting the same manner that those paradigms dictate, that of ecological, relational, and matrixed combinations of agency and materiality.

Hayles (1999) describes the construction of the posthuman subject as “an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction” (3). She introduces the notion that we’ve

always been posthuman by applying the logic of technogenesis to the historical formation of human beingness. Following this historical trajectory, the seeds of *the posthuman* were planted at the very beginning of human use of technological tools (the hammer, fire, written language, etc.). With the Industrial Revolution, roots began to take hold, and with the introduction of cybernetics, the birth of this conception of a posthuman subjectivity emerged. Through the Macy Conventions of the 1940's, cybernetics developed into a form of empirical study that considers a human being as a form of information or informational flow of consciousness that could possibly be removed from its embodied flesh and transplanted into a machine. The advance of cybernetic technologies and theory made possible the potential for artificial or machine intelligence. The cognitive machine, as replacement for the biological human being, is the first step in the creation of the technological cyborg: a liminal creature whose being is determined by the overlap between the machine and the human. Donna Haraway (1991 [1985]) uses the cyborg as a metaphor for "historical transformation" of humans beyond mind and body dualism toward a new humanity based on the merging of "imagination and material reality" (118). By thinking through this cyborgian figure's potential, it offers a new way of approaching the techno-scientific (often patriarchal) understanding of *the human*, to create a slippery liminal figure that exudes political feminist power that can look past identity politics as such. Like *the posthuman*, her vision of this liminal figure may have been too early and too advanced in its forward looking potential. Like Haraway, Hayles (1999) attempts to wrest the epistemology of the cyborg away from cybernetically determined fantasy and humanist ideology to define *the posthuman* as a living organic-hybrid-informational-body. Hayles' hybrid figure is more nuanced and less political in nature. Her project offers a more neutral way of encountering the politics of techno-culture to usher in a new potentiality for the merging of the human body with technocultural paradigms (technics). Following Hayles' argument that we have always been posthuman—due to our symbiotic relationship with technology—it is not hard to imagine that with the increased

connection to digital technologies, we are becoming even more entrenched in a posthuman and cyborgian way of being and perceiving.

Both Hayles' and Haraway's posthuman way of being-in-the-world has connections to the project of rhizomatic thinking explained by Deleuze and Guattari in *A Thousand Plateaus* (1987). A rhizomatic, and likewise, a posthuman analytical perspective, operates from an assumption that beingness (both human and posthuman) is based in a non-directional hybridity and non-structural structuring. A posthuman subject situates itself within an unlimited network of inter-related agents. Deleuze and Guattari explain the rhizome as a system with,

no beginning or end, but always a middle, from which it grows and which it overflows. Unlike a structure, which is defined by set points and positions, with binary relations between the points and biunivocal relationships between positions, the rhizome is made only of lines: lines of segmentarity and stratification as its dimensions, and the line of flight or deterritorialization as the maximum dimension after which the multiplicity undergoes metamorphosis. (21)

Like the rhizome, the construction of *the posthuman* as an object and subject follows the logic of a system both without center and without endpoint (Boulter, 2015 36). A posthuman subject then operates as a relational subjectivity without beginning and without end: it is defined only by its indefinability. The posthuman subject developed in this project emerges at the overlapping intersections of digital culture, aesthetics, spectatorship, performance, ethics, politics, and economy.

By understanding techno-cultural strands of posthuman philosophy articulated by the cited authors above, TaPS can see how the posthuman subject operates through pervasive connections to and interactions with digital technologies and technics. This connection displaces the possibility of a stable objective self as determined by liberal humanist ideology and reflected in reception based forms of spectatorship and audience studies. Stefan Herbrechter (2013) explains one of the many ways contemporary technologies and technics inform a construction of the contemporary posthuman subject:

The forms of individual identity (Facebook, Myspace, LinkedIn, avatars in discussion forums, and chatrooms or online gaming) as well as new forms of collectivities (MUDs and MOOs, etc.) emphasize the increasing interconnection between humans, media and technology and threaten to render the traditional liberal humanist subject and its autonomy obsolete. (183)⁸

While still deeply a part of our social economy, individual autonomy is a way of thinking and being incompatible with the technics of the current twenty-first century media environment; one where multiple interlocking and pervasive digital interfaces interrupt a stable formation for a human conception of selfhood. As the current technological paradigm becomes more and more embedded in our social system, it highlights and accelerates the process. Hayles (2014) confirms this way of thinking when she states:

In the version of the human articulated within the liberal-humanist tradition, agency resides primarily in the individual subject. Individuals can be incorporated into larger structures, but it is ultimately the individual that possesses agency. As we move deeper into a highly technological regime and as the technological infrastructure surrounding us becomes more and more complex, it becomes increasingly obvious that human agency cannot ever be seen in isolation from the systems with which humans are in constant and constitutive interaction. (Potzch and Hayles 2014, 97–98)

Due to these increasingly ubiquitous connections to digital interfaces, a fixed and stable understanding of the individual self, and the world that contains this self, is increasingly difficult to maintain (Couldry and Hepp 2017, 145-167). The divide between the world and this construction of a self is even more difficult to establish. Instead, a posthuman construction of selfhood is one that is constantly and perpetually reconfigured in the liminal space created by the daily interactions between the embodied and technological worlds.

An Argument for Critical Posthumanism

⁸ One can argue that these elements and platforms are anti-posthumanistic as they are deeply embedded within the project of neo-liberalism. Posthumanism emerges partially due to the pervasiveness of neo-liberal dogma and power dynamics. It emerges as a corrective that is only visible due to the existence of what it tries to correct.

Before defining critical posthumanism, I must first begin with humanism. Humanism comes in many different political variants but it is generally understood as a philosophical framing which takes a certain conception of the human subject as its core. In this framing, *the human* is recognized as a singular subject—often white, male, heterosexual, and universal—with autonomy, rationality, authority, and agency that places it at the center of the universe as the sole agent able to create its own understandings of morality, ethics, and responsibility (Nayar 2014, 6). *The human* in a humanist philosophy is distinct in its relationship to all other non-human animals, objects, and agents. I approach this understanding of *the human* in the same manner. Because of the centrality and hierarchical attitude this human being has exuded historically, I argue it is necessary to find a different way of addressing the human being as an agent in ecologies of spectatorship. Using a critical posthumanist lens is one way of doing this. Critical posthumanism decenters the construction of *the human* as the primary object of agency inside systems or ecologies. Instead, *the human* becomes an equal contributor with(in) the system or assemblages we know as existence. This different human sidesteps all humanist centrality and becomes *post-human*. It performs in modes where fluid relationality and equality of agencies exist between all elements in the ecology. A primary argument of critical posthumanism is that all animals, organisms, objects, machines, and technologies have the potential for equal agency. Each agent in the system gains agency through constant interaction with all other agents of the system or assemblage. Each interacts with(in) the matrixed space informing all individual parts of the system **and** the system itself. One way to think of these interactive and interlocking systems is that of an ecology or ecosystem. Everything interconnects and is equal in terms of the agency to create change via relational exchange of energies both material and immaterial. Each node in the ecological system is therefore neutral but full of potential. This argument counters the notion of *the human* which emerged in the late Enlightenment period and developed into the central tenant of liberal humanism. This is a similar argument to that of new materialism. The difference

with critical posthumanism is that of political agenda. By acknowledging the equality of agencies, binaries, hierarchies, and other separating classification systems are open to deconstruction and rearrangement.

In the liberal humanist position, it is *the human*—a subject differentiated from other animals and things by its supposed singular ability to rationalize—who acts as the central agent for change and therefore this subject represents a node in a system with a hierarchical attitude. Posthumanist philosophers argue that during the twentieth-century, this hierarchical tendency to place the human being at either the center or the top of a structure began to decay. David Roden (2015), for example, draws upon Hayles (1999) to argue that posthumanism emerges at a “late stage of modernity which the legitimating role of the self-authenticating, self-governing human subject handed down from Descartes to his philosophical successors has eroded” (24). Part of this erosion is attributed to the influence of technologies and their technics. Roden’s explanation of the posthuman turn also coincides with the postmodern and deconstructionist turns which are often anti-humanist concerning constructions of social reality (Braidotti 2013). Posthumanism, and its critical relative, are philosophical positions that take as their base a new conceptualization of *the human* rather than an *after the human*. He post- signifies a step beyond vs and after. Nayar (2014) explains that critical posthumanism is a project that “studies cultural representation, power relations and discourses that have historically situated the human above other live forms, and in control of them” (3). Critical posthumanism attempts to build off the anti-humanist deconstructions of *the human* using the posthumanist project to present a neutral and relational account of subjectivity and selfhood. Nayar explains that critical posthumanism offers two positions concerning how we should consider *the human*. He states, critical posthumanism approaches, “the human as co-evolving, sharing ecosystems, life process, genetic material, with animals and other life forms; and technology not as a mere prosthesis to human identity but as *integral* to it” (8, italics in original). The techno-informed modes of critical posthumanism that lays at the surface

of this project approaches the human subject as an individual object inside an assemblage of multiple co-evolving agents acting in relationship to each other. These agents also act upon the entirety of the assemblage as represented through a techno-cultural paradigm (Nayar, 4).

Critical posthumanism situates itself alongside and after the traditions of anti-humanist projects such as poststructuralism, feminism, post-colonialism, deconstruction, and postmodernism. It counts Nietzsche's (1995[1883]) *death of god* and *übermensch*, Lyotard's (1984 [1979]) *end of grand narratives*, Fukuyama's (1992) *end of history*, and Foucault's (1970) *end of Man*, as its historical antecedents. Herbrechter (2013) explains that critical posthumanism's "task is, therefore, to re-evaluate established forms of antihumanist critique, to adapt them to the current, changed conditions, and where possible to radicalize them" (3). So, for Herbrechter, critical posthumanism encompasses a certain mode of critical thought and action that "understands the human species as a historical 'effect', with humanism as its ideological 'affect', while distancing itself from both" (7, quotations in original). This leads to a critical project that is not "post-*human*" but rather "*post-human(ist)*" in nature (8). To do this means not creating a new human subject that takes its place at a new center of agency, but rather, to allow *the human* potential to move away from its central perch and stay moving in concert with all other agents in its ecological frame. This posthuman subject is one always in flux and in co-equal relation to everything in its frame. The goal is to take up the deconstructive and emancipatory potential of the anti-humanist projects mentioned above while still accepting the possibilities of a common good amongst individual human beings placed within larger contexts "like ecosystems, technics, or evolution" (9). By placing this new subject we call *the posthuman* inside larger contexts, while considering its relationship to all other subjects, a breakdown in binary distinctions may emerge. When applied to spectatorship, this placement removes the binaries of passive and active, watcher and performer, event and object, to instead focus in on continual and fluid interactions.

No matter how uneasy it may be, taking a deeply critical posthumanist position requires thinking outside of anthropocentric conventions, such as binary distinctions and difference as represented by the social-political-historical constructs of race and gender. Instead of the individual subject solely determining its relationship to the other agents, the context in which one analyzes *the posthuman* determines the relationship between the subject and the other agents. It requires an outside-inside mode of thought versus inside-outside. Critical posthumanism continues to ask what *the human* is beyond the exhaustion of a particular human defined by the liberal humanist project dominant in the Western/European tradition. It argues that whenever an essentialist position is taken—in regards to a subject (*the human*)—there emerges the possibility for an Othered subject to appear. By essentializing the human subject, a certain violence ensues through the definition of a specific and fixed meaning operating as an origin (Braidotti 2013, 30). This essentialization allows the very possibility of an oppositional or binary causality. Critical posthumanism instead denies the stability of a human subject. This denial creates a reciprocal action of destabilizing the legitimacy of a supposed Other as opposite/different. Without a defined individual subject, an oppositional subject is disallowed. Rossi Braidotti (2013) explains that it was the anti-humanist projects that deconstructed and contested humanism’s “restricted notion of what counts as the human” as what allowed *the posthuman* to emerge (16). The posthuman condition exists as a subjectivity that is always in a “process of auto-poiesis or self-styling, which involves complex and continuous negotiation with dominant norms and values, and hence multiple forms of accountability” (35). The self-fashioning, self-regulating, and self-identifying critical posthumanist subject is one that is always in flux and interpreted through the structures in which it performs. This subject is a relational entity without a finite ontology but rather one in a constant process of change and adaptation to the elements and agents with which it interacts and which it is also enveloped by. In the remainder of this project, I’ll introduce four architectures of exchange (*Immersion, Participation, Game Play, and Role Play*) and the acts of spectatorship

these architectures allow to show how thinking and performing posthuman in both a technological and critical posthumanist sense helps to rethink spectatorship as a relational process.

CHAPTER 2: THE FEELING SPECTATOR AND THE AFFECT ECONOMY OF IMMERSIVITY

I've just strapped on a twenty-pound contraption that confines my entire torso in a technological cocoon of wires, mesh fabric, and plastic. On my chest plate are various nodes that I later find out are haptic transducers that pulse and vibrate based on the actions I make. On my back is a shell that contains my own personal, world-generating computer. I have also donned a helmet with a built in electronic visor that digitally creates the visual field I am about to enter virtually. After not so carefully strapping myself into this body rig, the proctor hands me a plastic molded "weapon" I will use to bust some ghosts. In the actual world, the weapon has two buttons and a slide mechanism like that on a shotgun; in the virtual world, I am holding a realistic looking blaster extension of a proton pack. I'm ready to experience *Ghostbusters: Dimension*, the new virtual reality attraction at Madame Tussaud's in New York City.¹

The focus of this chapter is on the architecture of *Immersion* and its relationship to virtuality. Virtuality is a technic and technology that expresses itself through various digital tools and platforms but is also an element that can exist without technological tools. The concept of virtuality comes in a variety of flavors that suit individual ways of use and fields of study. The etymology of the term virtual emerged in late middle English from the Latin *virtualis*, which roughly translates to almost real or relating to (-alis) something virtuous or real (virtue). One of the earliest uses of the term defines virtual as "relating to essential, as opposed to physical or actual, existence," (c 1443, OED Online) relegating the virtual to the not quite real. The effect of virtuality is like a fever dream; something so detailed and engaging that when one is abruptly awoken from it they believe they are still dreaming. They are immersed in this other reality to the point that it becomes hard to distinguish the difference between dream/imagination and the actual reality of

¹ A trailer for the experience is available here:
https://www.youtube.com/watch?time_continue=32&v=QIb14Wtgug

daily life. The question I explore in this chapter is: What happens to spectators when actuality becomes so imbued with virtuality that it becomes difficult to determine which is which? I argue these spectators become figuratively immersed in another reality to a point that their affective system of perception knows no difference between virtuality and actuality.

Much of this chapter is focused on multiple avenues of spectatorship engaged with(in) virtuality via technological immersion. I offer these case studies to layout an argument for how the architecture of immersion primarily operates through bodily affect and a perceived sense of agency. This is necessary to pick apart the pervasive idea that immersion is an umbrella term for the many architectures of posthuman spectatorship. I argue that immersion is a process that works as a type of spectatorial glue to hold spectators transfixed with(in) virtual systems. The primary goal of this chapter is to push up against the term immersive as an overarching architecture for experience. I argue that the term's increasing use in contemporary performance practice is problematic. Breaking it down to its basic operations may lead to a clarification of what the term means when applied to performances of spectatorship.

Entering the Void: The Hyperreal Dimensions of the Immersed Body

Ghostbusters: Dimension is one of the first commercially available immersive virtual reality experiences from the Utah-based tech company The Void. The attraction launched on July 1, 2016 at the wax museum as part of a larger interactive themed attraction connected to the launch of the 2016 remake of the iconic 1980's film. The larger immersive and interactive museum-like attraction has you interact with technological devices such as the famous ghost containment unit and encounter holographic generated ghosts in a recreation of New York City subway tunnels and buildings. As a special add-on to the simulated movie experience, I purchased the ticket to the Virtual Reality experience.

At this point in my research, I had only experienced VR in the mode of Google Cardboard or similar smartphone-based headsets. The press release for The Void's attraction refers to its version of simulated reality as "hyper reality" that operates on the same functionality of "virtual reality" systems but is made even more real "by combining physical sets, real-time interactive effects, and virtual reality. This allows participants to not just watch a movie or play a game, but to live them" (The Void 2016). The attraction does just what its creators promote with caveats. After fully strapping on and jacking in to the experience, I am instructed to begin once I see the light above me turn on.

Inside the virtual world projected onto the surface of my goggles, a door is directly in front of me with a canister shaped light above. The light turns bright white and I instinctively reach forward towards the door. I am shocked and immersed in the simulated reality when my hand meets an actual doorknob that I must turn and then push to open. The system has upped the ante on the experience of virtuality by linking actuality and virtuality via haptic sensuality. As I push through the door, I digitally enter a non-descript apartment room with a small sink at the far corner. I reach out to feel the real walls projected in my visor, the tap handle of a sink, and other physical aspects that ground me in this reality. I *feel* like I am actually in this digital space. Shortly after doing so, cute and seemingly non-threatening apparitions visually appear out of nowhere. I instinctively address my proton blaster in their direction and pull the trigger. Nothing happens! The blaster does not shoot and I begin to wildly flail about the visual space, trying to zap the specters with a terrifying jolt of proton electricity. Even though I am receiving haptic feedback via the chest sensors when the ghosts fly at me, I cannot fully connect because every time I pull the trigger there is no response. My technology's defect has relegated me to that of virtual tourist.

Another larger and grumpier looking ghost soon appears and taunts me before breaking through a nearby wall. I follow in pursuit and am led to an elevator where nearby another ghost sings a creepy lullaby. I'm told via my headset that this female ghost was an inhabitant of this

building years ago but went missing. Shortly after entering the elevator, the doors shut and the ghost comes screaming at me and then through me. As she transports through my digital body, I feel a cool and moist spray attack my actual skin. Is this what it feels like to be briefly possessed? The experience induces a mild fright and the sensation of the spray, while disconcerting, makes me feel more connected to the virtual world. The carriage passes up the elevator shaft that I see through the open top. The elevator is like one of those steel cage variety seen in the lobby of some 1920's gangster film. Visually, the ride up the elevator seems real, but there is no feedback like would one would feel in a real elevator, specifically one of this age and technological capability. Without any haptic sensory feedback, I am again reminded that this experience exists primarily in the relationship between my eyes and my mind.

At the top of the elevator, I enter a hallway where a large part of the structure has been torn away to expose the exterior of the New York City skyline. The sky is "on fire" with an interdimensional gateway opening. I step out onto what looks like a painter's walkway or window washer's scaffold, and as I look down, I can see the city streets forty stories below inducing a slight sense of vertigo. As I move, the walkway stutters and shakes, making me reach out for the virtual handrails. Luckily this "room" has an actual set of rails for me to grab onto or I may have fallen flat on my visor. Immediately, a throng of gargoyles come to life and start rushing towards me. I try again to zap them with my proton blaster; again, no result. The experience again begins to simply feel like I am watching a 3D movie where images can come rushing at me in my visual field, but because I cannot truly interact with them, the experience feels wanting. The gargoyles fly away and I enter another room where the ghost lady from before accosts me and taunts me into a fight by throwing chairs, bricks, and other items at me. My haptic vest is going crazy, and I feel as though a physical being is trying to harm me. The blaster still doesn't work. As my exasperation reaches a fever pitch with not being able to do anything but get pelted by digital objects, the good old Stay Puft Marshmallow Man appears and angrily begins to swipe at me

through the gaping hole in the room's wall. I'm instructed to burn him up with my blaster, which I cannot do. After a minute or two of awkwardly dancing with this twenty-story confectionary wonder, he disappears with a whiff of marshmallow scented abandon. I actually smelled its departure.

From there, I exited the room and was led by the proctor back into the staging area. It was an interesting experience but the lack of physical interaction during the most intense moments of game play in the narrative left me very dissatisfied. I didn't feel like the encounter was real beyond a computer simulation. I explained this to the proctor and, after checking some settings, I was given a second chance to experience the event. This time through, I got the experience I was promised. With the proton blaster now working, every tactile and haptic response included brought me closer to the ghosts and allowed me to move in sync with them. I was given the ability to experience them as if they were actually there with me in the room. Capturing the ghosts was met with a trembling and pulling sensation of the proton pack. The feeling was like that of having a fish caught on the line fighting for escape. The sensual and affective qualities of the equipment layered with the proximity and tangibility of the physical space convinced my perceptual apparatus into believing that the virtual world was the actual world. By pairing affective sensing with mental processing, I could suspend any disbelief in the fact that the ghosts were nothing other than digital simulations. I forgot that I was wearing a vest and goggles. I forgot that the ghosts were digital cartoons. I forgot that the suspended walkway was just a contraption made to fool my sense of balance. And when it came time to fight Stay Puft, my proton blaster imparted a satisfying toasting burn to his jolly face. That smell of marshmallow wasn't the trace of his escape; it was my purposeful immolation of his facial features into a layer of campfire S'mores. This time after exiting The Void, I was a sweaty mess, my heart racing, and my adrenaline pumping as if I had just actually fought off the attack of an angry enemy from the netherworld.

Immersed in The Virtual

Philosopher of cyber-culture Pierre Lévy (2001) deconstructs the concept of the virtual into five areas of understanding: 1) *Common*; 2) *Philosophical*; 3) *Information Technology*; 4) *Information Systems*; and 5) *Narrow Technological* (56). His list ranks each meaning from weakest to strongest in terms of how they are felt. The *Common* meaning of the virtual is “something false, illusory, unreal, imaginary, or possible” (56). The *Philosophical* understanding of the virtual is something that exists only in its potential versus its actuality or “something that exists without being there” (56). His example is the tree that a seed will become versus the tree that already exists fully grown. In *Information Technology*, the virtual is a set of possibilities calculable from the interactions between user input and a digital model/system. This includes the multitude of messages set by models such as “software for writing, hypertext systems, and interactive simulations” (56). Possibilities only arise through input from the user. For example, when I type on my keyboard, letters arrive on this screen/page. When the page was blank, the words inputted have the possibility of being *Hamlet*, a haiku, leetspeak, or simply gibberish. In *Information Systems*, a referent exists that represents a “message of space proximity” that the user has control over in some manner (56). He lists video games, virtual realities, and networked role playing as examples. In each, an avatar exists as a link between the digital map-space and the corporeal world-space. The user moves this avatar through the digital space virtually through some form of technological controller. In the strongest concept of the virtual, *Narrow Technological*, there exists an “illusion of sensori-motor interaction with the computer model” (56). This might include the use of data gloves or haptic suites in Virtual Reality simulation programs. Through technological augmentation of the human body, corporeal interaction translates to virtual movement and response. Lévy explains, as computer networks expand they form the “informational universe of virtuality” and “the more they expand, the greater their power, storage

capacity, and bandwidth, the greater number of virtual worlds and the more varied they become” (57). When Lévy wrote this in 1997, the world had just begun to feel the impacts of the internet and digitality. Virtuality was just beginning to become a reality and only in the most technologically advanced societies. Throughout this chapter, I will discuss virtuality using each meaning individually, but more often, as an amalgam because of the way they are now intricately interlinked. In today’s complex and deeply mediatized world, virtuality engulfs nearly all elements of daily life. As such, it is impossible to remove oneself from the condition of virtuality, as one is immersed in its illusory operation at all times and in all places.

Josephine Machon (2016) states that the term immersive is most often used to “define a style of performance practice and applied to diverse events that seek to exploit all that is experiential in performance” (35). She also adds that the term is “now used freely (sometimes excessively) to describe contemporary performance practice involving a visceral and participatory audience experience with an all-encompassing, sensual style of production aesthetic” (25). Through her books *Immersive Theatres* (2013) and *(Syn)aesthetics* (2009), Machon has been instrumental in ushering in a new era of critical and popular scrutiny (and arguably its increasing use and popularity as a practice) on the subject of immersion in theatrical performance. Immersive is often used as an adjective to describe most interactive, site specific, and play-based forms of performance. The term has become a marketing catch-phrase that is deeply enmeshed in the neoliberal experience economy. Because “immersive theatre” is used as an umbrella term for a variety of practices which employ modes of interactivity in some fashion, I find it a useful place to begin discussing posthuman spectatorship. As I will later discuss in brief, there are some political and economic determinates that have contributed to the increasing pervasiveness of immersivity, but the primary purpose of this chapter is to discuss the underlying operation of immersion as a form of interactivity that relies on affective response and implied spectatorial agency. By doing

so, I can advance through the rest of this project describing other interactive architectures that are often combined with immersivity to create experiential spectatorship.

I describe immersion as a mode of exchange that allows a spectator to be thrown into a fictive world, giving them the impression of being a member of that world and allowing for heightened levels of perceived agency based on the being-ness with(in) that world. Janet Murray (2017 [1997]) describes immersion using the metaphor of water:

Immersion is a metaphorical term derived from the physical experience of being submerged in water. We seek the same feeling from a psychologically immersive experience that we do from a plunge in the ocean or swimming pool: the sensation of being surrounded by a completely other reality, as different as water is from air, that takes over all of our attention, our whole perceptual apparatus. (124)

Murray discusses immersion in the form of cyber-assisted computer narratives where “digital media take us to a place where we can act out our fantasies” (124). Nearly twenty years later, Josephine Machon (2013) also uses the water metaphor to invoke the immersive capacity of interactive theatre.

Remember what it is like to be immersed in water; to lie back slowly and put your head underwater in the bath. The muted sensation of being submerged in another medium, where the rules change because if you were to breathe as normal your lungs would fill with water [...] We understand what it is to be immersed in water; the action of plunging your whole body into an alternative medium and its subsequent sensations [...] I know when I have experienced a wholly immersive event I am totally submerged in it for the length of time that the event lasts, aware of nothing other than the event itself and only actions, feelings (both emotion and sensation), and thoughts related to event are of consequence in that time. (xiv-xvi)

In both examples, the immersed spectator must cross a threshold where they lose some sense of their own agency to act, to be the person that exists outside the immersive environment. Inside this space emerges a new sense of agency that is unique to the individual operations and aesthetics of the immersive environment. In an environment where one is submerged, one must learn to “do the things that the new environment makes possible” (Murray 2017 [1997], 124). Immersed spectators must negotiate various levels of agency alongside meaning making. The level of perceived agency is a crucial element to the architecture and experience of immersion.

Gareth White (2013) explains, “Agency changes the quality of all action taken” (64). Being simply immersed is not enough, there must be some perception of being able to do something beyond being submerged. I argue the perception of agency is a crucial element to the architecture and experience of immersion. Posthuman spectators seek to engage with the virtual space of performance by interacting and being interacted with. Not all immersive environments are interactive however. Just like the pool in which one is submerged, learning to swim is not inherent; one can sink, swim, or float.

Machon (2016) recently renegotiated some of her own terminology concerning spectators in immersive productions. She begins to refer to spectators of immersive events as *interactors*.

She explains:

Immersive work physically takes us into the world of the play, rather than inviting us to spectate and comprehend it from a distance in an auditorium. In most immersive practice, the space is integral to the experience. The audience is not separated from it but in it, of it. Interactors are surrounded by it, dwelling in it, travelling through it, which ensures some sense of ‘rootedness’ in the world of the event is actively felt. Attendance to the sensual exteriority of these worlds and the place that one takes within them can accentuate the individual interiority of the experience. This perceived fusion of external and internal sensation in the act of inhabiting under-scores the double perspective of watching and witnessing within. (44)

Murray (2017 [1997]) also uses the term *interactors* when discussing those who engage with virtuality via digital immersion. Their use of interaction seems to run counter to some of their notions of immersion as being simply submerged in a world. Interaction comes from the ability to sense the world they are submerged in but not necessarily act upon those senses. Interaction in most immersive experiences begins with bodily perception through various levels of affect. I agree with Adam Alston (2016) when he states, “Affect is used as a channel that connects audiences to a fictive world, making them feel included as a part of a world that they help to produce. The aesthetic experience that results from their productive endeavour is what tends to take aesthetic precedence in these performances” (175). The spectator has agency to create meaning by harnessing the affective possibilities of its perceptual apparatus. Agency is a crucial element for

the creation of meaning in this aesthetic and becomes a central concern when discussing the architecture of immersion. Before the turn of the new millennium, Baz Kershaw (1999) discussed agency as a dynamic component of “*an aesthetic of total immersion*” (194, italics in original) in participatory performance practices. I find it useful to mark this contribution to the theoretical landscape of performance because it foregrounds a necessity of action beyond submersion or encompassment in an immersive event.

Virtuality as Technic and Technology

When considering the impact of technogenesis on the perceptual apparatus of spectators, arguably there has been no greater influence than the idea and the operation of virtuality. Building off of philosopher Brian Massumi, Sarah Bay-Cheng (2010) argues that virtuality “occupies a crucial space between what is imagined and actualised, between potential and realization” (142). This means that virtuality is a technic performing the role of mediator between two Reals: one that is seen and felt (actuality) and one that can possibly be seen and felt (virtuality). In this section, I discuss the historical trajectory of virtuality to show how this unique technic has helped to develop the posthuman condition. I begin this section by arguing for the importance of virtuality as a crucial technic that has grown as societies have advanced technologically and which has become embedded in these societies beginning near the end of the twentieth century.

Virtuality is embedded in the technologies of representation of the individual era. In antiquity, Plato discusses virtuality in terms of ideal forms and the reality of images in his *Allegory of the Cave* (Dupré 2007, 8–10). His virtual world is exhibited as the place of human imagination and contemplation that occurs when one sees any image before them. The image is a symbolic (virtual) reification of a pure thought or existence, or what Plato discusses as ideal forms (Stokes 2007, 206–8). Virtuality existed in antiquity and through the Middle Ages primarily as a form of

meaning making through oral storytelling, and human contemplation. These stories helped to connect the human imagination to material realities. During the “Age of Enlightenment,” virtuality became increasingly technical through the mechanical invention of the printing press. The mass adoption of books and printed material opened-up a new space for the imagination to explore virtual worlds in narrative. Janet Murray (2017 [1997]) invokes Cervantes’ Don Quixote when stating “The dangerous power of books [is] to create a world that ‘is more real than reality’” (124, italics in original). The fictive world is expressed in two spaces: the actual printed page of the book and in the virtual world enacted in the reader’s mind. The reader becomes immersed via contemplation, imagination, and deep thought in the virtual worlds invoked by the text. During the great ages of exploration starting around 1400, cartography became a new artistic medium for capturing the complexity of the world via pictorial representation. Nicholas Carr (2010) argues that, “The technology of the map gave to man a new and more comprehending mind [which] came to understand reality in the map’s terms” (41). The new maps of far-away lands and seas imprinted virtual impressions of the unknown for all to see and experience.

At the turn of the twentieth-century, the wave of electrification allowed new virtual worlds to figuratively come alive on the screens of the cinema. The “silver screen” represented a leap of immersive imagination from out of an individual’s mind onto a semi-reflective surface. No longer was there a reliance on the spectator to create the immersive effect mentally; instead, the visual field drew them into the electrically-rendered pictorial representations. One only needs to think of one of the earliest and evocative attempts to immerse the audience in virtuality via film. For example, the Lumière brothers’ short depiction of a train pulling into a Paris train station (1895).² The spectators, sitting in their seats in the theater watching this new marvel of technology, became figuratively sucked into the scene by taking the place of the camera via its perspective.

² This film is available here: <https://www.youtube.com/watch?v=1dgLEDdFddk>

When the train approaches the station, and toward the audience members, it seemingly bursts into actuality. The reality of virtuality breaking through into actuality is possible because the spectators had become so immersed in the fiction that they believed there was no dividing line. The effect of this example would later be capitalized on through the implementation of 3D imagery in film of the 1950's and beyond.

Shortly after the cybernetic wave of the 1940's, binary code allowed virtuality to seep further into technological domains via computer generated realities. Virtuality moved into the realm of digitality. With the advent of better processing power and graphic-based interfaces, a basic code for digital "life" inside virtuality became common place. Since the mass adoption of the internet, virtuality has become a daily way of life for many. In 1997, Hayles (1997) laid out an argument that defined the *condition of virtuality* as a definitive demarcation between virtuality and actuality, using the terms virtuality and materiality. This can also be considered a divide between the digital and the corporeal. Due to its connective properties, and its remediation of the operations of the televisual (Bolter and Grusin 1999), the internet began to bring virtuality into nearly every connected home, imbuing humans with a technogenetic predisposition towards technological immersion.

From shadows on cave walls, to the book, map, movie screen, and finally the digital realm, the immersive qualities of intellectual (Carr 2010) and representative technologies have been remediated and converged to further pull spectators into the illusory space of imagination. Murry (2017 [1997]) explains, "A stirring narrative is any medium can be experienced as a virtual reality because our brains are programmed to tune into stories with an intensity that can obliterate the world around us" (124). Each of the mediums above rely on a suspenseful belief on the part of the spectator that the material they are experiencing is real or as real as possible outside of corporeal reality, which I'll refer to here as actuality.

Matthew Causey (2016) explains that the most recent rush of theory on virtuality began with the introduction of the personal computer. It was in the early 1980's that theorists and hobbyists began to explore the possibilities of the virtual realm as depicted in the cyber worlds of computer generated fiction, games, and chat rooms. In these digital domains, users began to experiment with new modes of identity creation and imaginary world building. Similarly to Causey's argument, media theorist Anna Munster (2006) states that cultural discussions in regards to cyberspace of the 1980's and 1990's was dominated by tendencies toward "virtuality and interactivity" (86). During these decades, the beginnings of the technology known as VR (virtual reality) started to enthrall the imaginations of a culture quickly engulfed with all things digital and cyber. I remember as a pre-teen in the 1980's watching episodes of *Star Trek: The Next Generation* where the advanced technology of virtual reality was imagined in the form of the holodeck. The holodeck is a virtual reality simulator where members of the crew could go to take "vacation" and engage in games and fantasies. In the many episodes that used the technology, Data, Ryker, and Picard (amongst others) literally enter the digitally-rendered virtual world of Alfred Conan Doyle's Sherlock Holmes fiction. In the holodeck, virtual reality becomes more than virtual as it is fully interactive in a corporeal manner. The holodeck represents an epistemological shift in how spectators perceive the binary between the virtual and the actual. This shift is most fully explored in the episode *Ship in a Bottle* (Singer 1993), in which the elusive Dr. Moriarty wills himself into the actual reality of the Enterprise. The holodeck serves as a metaphor for the illusionary world of our consciousness as the technology for perceived actuality. In the same episode, Picard ponders whether their reality aboard the space vessel could itself simply be a program. Similar to the fantasies in the holodeck, could their entire existence only be an intricate set of simulations being played out for some other cosmic spectator?

Jean Baudrillard (1995a) discusses reality as a simulation in his foundational writing on technology and postmodernity *Simulacra and Simulation*. He deconstructs the nature of

contemporary reality as one without an origin, as simply a “hyperreal” where the creation of a social reality is made by the duplication of duplications of imagined realities. He argues that actual reality is indistinguishable from any virtual version because society has progressed beyond any definable original and stable real. In Baudrillard’s hyperreal version of postmodern society, it is only virtual expressions of truth (film, media, art) that approximates the truth of reality because they do so via distillation or exaggerated effect, essentially making the actual too mundane to live up to the expectations of the ideal. In the 1990’s, this idea of simulation, as the preferred reality, took further hold of the cultural milieu of advanced society. Baudrillard continued to develop his theoretical relationship between simulation and reality by explaining how the society of the spectacle had fully engulfed the perceptual apparatus of spectators, turning actuality into a less authentic reality. Using Operation Desert Storm as an example, he argues that war is only made real in its intricately manipulated filmic editing and televisual re-broadcast (Baudrillard 1995b, 2014). It is no surprise that the 1990’s also saw the rise of “reality television” where the carefully crafted and edited antics of “real” people were displayed as a way of heightening and theatricalizing the mundane. Baudrillard intones this phenomenon as the beginning of the end of the spectator: “There is no separation any longer, no empty space, no absence: you enter the screen and the visual image unhindered. You enter your own life as you would walk on to a screen” (2014, 193). Simulation and virtuality becomes the cultural way of life as depicted by the televisual and through digitality. When *performing* replaces simply *being*, virtuality engulfs actuality, immersing us all in an aesthetic of the spectacle as constantly performing spectators.

Through the 1990’s, the exploration of the realms of the virtual and simulation expanded through popular references, computer generated worlds, and cyber-born identities during the expansion of the internet. The mass adoption of the internet also saw graphical interfaces flourish via computer screens. The graphical interface gave virtuality a televisual referent that was only possible before through the imaginative rendering of lines of code and text. Think of the sequence

in the Wachowskis' 1999 film *The Matrix* where one of the operators stares at a cascading screen full of digital code. The operator sees the virtual depictions of reality in the code by deciphering the semiotic symbolism (reading) of the computer-born language. Before the graphical interface, the human mind was the code breaker who transformed binary digits and textual interface into inhabitable and immersive worlds. This mode of virtuality replicated the technology of the printed word, but the visual fidelity of screen-based media (computer, television, film) replaced a necessity for imaginative mental projection.

During the 1990's, as computers became more common place, the condition of virtuality also became a pervasive presence in popular culture via film. Film narratives such as those in *The Lawnmower Man* (1992), *Strange Days* (1995), *Johnny Mnemonic* (1995), *Virtuosity* (1995), *Ghost in the Shell* (1995), *The Thirteenth Floor* (1999), and *The Matrix* (1999) all played with various themes of virtuality and simulation. *The Matrix*, and its subsequent sequels, took up the "brain in the jar"³ metaphor to question the very ontology of reality in a world of computer simulation. While these films are just a sampling of those exploring the theme of virtuality and simulation, they are emblematic of a historical time frame where the general populace slowly became increasingly aware that the uneasy liminal space between virtuality and actuality was beginning to overlap. Hayles (1999) explains that we had entered an age when a condition of virtuality was one of the everyday. Hayles defines the condition of virtuality as "the cultural perception that material objects are interpenetrated by information patterns" (14). Technological societies were becoming aware that the gap between virtuality and actuality was disappearing

³ The brain in the jar (or vat) metaphor is one introduced by Hilary Putnam in his 1981 book *Reason, Truth, and History*. The foundational premise was developed by Rene Descartes in his 1641 *Meditations on First Philosophy* and is a metaphysical descendent of Plato's cave. Following Descartes' *cogito ergo sum*, the premise is based on an epistemological question regarding the ontology of reality. The hypothesis concerns the possibility of a brain detached from the human body and placed in an electrolyte liquid inside a container of some sort that is connected to a sophisticated computer. With the brain still able to process electrical impulses, therefore allowing the firing of neurons, could it still develop a conscious construction of a real world? This mode of questioning has been explored in various science fiction narratives and became a major area of research for cybernetics and eventually the field of Artificial Intelligence.

because of increasing interactivity with digital material. In the late 1990's, the growing influence of computer generated patterns of information began fueling a paradigm shift in the way human beings perceived their sense of being and place in the world. Hayles states, "When I say virtuality is a cultural perception, I do not mean that it is merely a psychological phenomenon. It is instantiated in an array of powerful technologies. The perception of virtuality facilitates the development of virtual technologies, and the technologies reinforce the perception" (14). Hayles is expressing an early definition of technogenesis concerning technologies of virtual representation. Technologies such as computer applications, the internet, and video games that use graphical interfaces—without the need to for a user to understand computer program language—operate through modes of visual and affective fidelity that can reasonably convince users that the virtual worlds contained within their domains are real enough to exist as parallel dimensions; ones gaining equality with that of actuality. By gaining an ontological equivalence to actuality, virtuality could imprint on the perceptual apparatus of posthuman spectators a sense of dual Reals: one based on the "functionalities of a computational universe" (15) and the other based on the operations of corporeal zones of affective sensing. As the computational universe becomes more pervasive, it begins to supplant the epistemologies of the corporeal and subsumes both the bodies and minds of human beings to the point that virtuality begins to become "more essential than material form" (17). Hayles argues that once this becomes the prevailing way of life, we have "entered into the condition of virtuality" (17). She wrote this at a time well before the mass adoption of the cell phone, not to mention the smartphone, tablet, or commercially available VR system that are commonplace today.

Recently, Mathew Causey (2016) marked a new paradigm created and nurtured by an encompassing of actuality by virtuality; he names this paradigm the "postdigital condition" (428). In this structure of virtuality enmeshed with(in) actuality, reality is no longer explainable via a divide between the virtual and the actual. Causey explains:

The reality of the virtual is perhaps the most complex of these articulated modalities of the digital, but it indicates that the binaries of the biological and the virtual, the organic and the inorganic, the machine and the flesh, and specifically the virtual and the real are no longer useful in conceptualizing and performing within a postdigital culture. Those categories are recognizable and still inform reason and logic, but are increasingly active in *zones of indistinction* as indiscernible phenomena. (434)

The two zones he speaks of are forever intertwined, creating a dynamic tension for those that encounter the spaces where the two meet, as if there is a magnetic field between the two polar extremes. A posthuman subject is an embodied traveler sitting in a liminal field, between, but also, within the two, attempting to locate its physical presence in the actual world through affective sensing while its mind tries to navigate the multitude of digital spaces created in the computational universe of virtuality. Causey states that the postdigital condition forces us to “think like a machine, digitally, or risk obsolescence” (440). Doing so alters the human perceptual apparatus and moves human beings “toward a more fundamental encounter, an even more unsettling event: seeing oneself as no longer just human, but in a position as posthuman, becoming machine and thinking digitally” (440). This way of becoming is at the heart of the current epistemological function of virtuality. By becoming posthuman via virtuality, a spectator transcends the limits of actuality while still maintaining engagement with its physicality and materiality.

Immersion: A Structure for Personal Affect and Sensory Experience

Again, I am strapping on a technological contraption meant to make virtuality into actuality. This rig, however, does not contain the same level of sophistication as seen in the previous example. My VR set is a simply-constructed plastic visor with a cord running down my back with a control switch at my side where I plug in my headphones. In my hand is a rectangular plastic contraption that resembles a folded piece of PVC pipe with a toggle-controlled button at the thumb, a trigger for my forefinger, and at the end of the fold another toggle button intended for my non-dominant hand. At the end of this simply constructed virtual gun is a soft rubber ball that

glows with a blue or red light. The contraption is PlayStation's Aim Controller (Figure 1), packaged with the space adventure game *Farpoint*. Like the experience of *Ghostbusters: Dimension*, this consumer-grade VR experience launches me into a visually expansive world intended to immerse me in the sights and sounds of another reality. Unlike *Ghostbusters*, there are few haptic augmentations in this world. Without the full range of haptics and tactile response, I must rely on in-game response for engagement and connection. Gamification becomes the prominent operation for this mode of immersion.

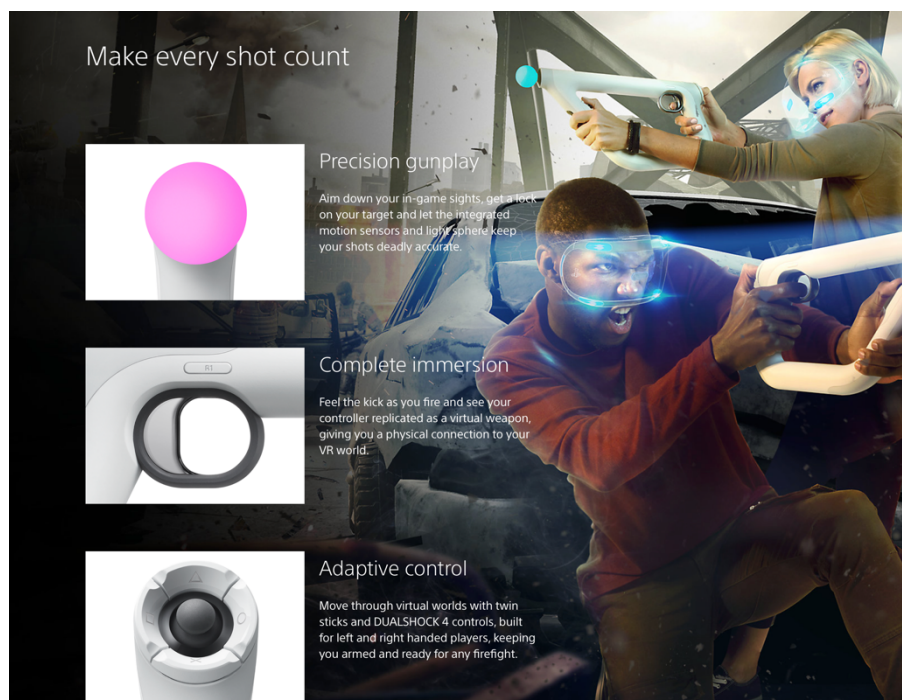


Figure 1 - Marketing for PlayStation Aim Controller - <https://www.playstation.com/en-au/explore/accessories/playstation-vr-aim-controller/>

As an immersant interactor in this digital space, my task is to wander about a forsaken desert planet to search for my lost crew of intergalactic travelers. The realism of the world is incredibly well constructed visually. As I walk across the landscape, I can look over my shoulder or to my side and see my own shadow traveling with me. This visual fidelity is remarkably effective at tricking my mind into believing I am actually on this forbidden planet. The physical features of the planet have enough detail to give me the impression that my body has been transported into

the digital realm, but it is a mere mental impression. There is an obvious disconnect between my body and the space. To walk forward, I use the thumb toggle on the controller, and it is as if I am simply floating along, even though I can look down and see my virtual feet moving. I find myself at times walking in place trying and sync my virtual body with my actual body, but it has limited effect. The problem with the disconnect between these two bodies and realities becomes even more apparent when I begin to become mildly nauseous while moving about the planet. This primarily happens when I try to turn virtually. This phenomenon is often referred to as “virtual reality sickness” and is like the affective situation of car or sea sickness. It occurs when the visual field of reference one experiences doesn’t match up with the corporeal frame. In the game, if I try to scan around the space using the thumb stick instead of turning my head, it is as though my mind cannot understand how I just whipped around in one direction without actually moving. To combat the nausea, I find it helpful to create a visual frame of reference or static point. Using a reference point is the same as the directions given to dancers who spot a static place ahead of them during their turns. It helps alleviate dizziness, which is a similar response to VR sickness. In the game world, I can hold the gun up to my shoulder like a real rifle, which then brings the gun’s sights into my visual field and allows for a static frame of reference.

The gun is the one primary tactile and haptic connection allowing me to ground the immersive affects in my body. When making the game, the designers at Impulse Gear decided that the way the controller is used would set it apart from other PlayStation VR experiences (Tach 2016). The way one uses the sights to create a visual frame of reference is a primary consideration along with how one changes out weapons during game play. In most non-VR shooter games, weapon exchange comes by way of a button press. In *Farpoint*, you must bring the controller up and above your shoulder in a motion as if you are grabbing a different weapon from off a backpack style holster. The motion gives the impression of actually having a machine or laser rifle, and not just a simulated weapon. The inclusion of the controller gives the player the

affective impact necessary to help solidify the reality, and, as I explained above, using it tricks the mind into believing that what is created via visual and auditory stimulation is an actuality.

Other than the Aim Controller's connection to the virtual realm, few other affective connections to immersion exist. Instead emotional response replaces the need for material elements like the purpose-built rooms of *Ghostbusters: Dimension*. This aspect of the game is played upon to great effect. While moving across the arid digital landscape, one encounters a bevy of mutant spider creatures. There are four primary types: 1) drones that pop out of the sand or crawl down from the rock formations; 2) soldiers who throw acid bladders at you; 3) giant rock spiders that charge at you; 4) and what I call diggers, who, upon seeing you, burrow underground to then later pop up out of the sand at your feet to spit acid in your face. The diggers and the drones are by far the most terrifying, as they play on one of the primary emotional registers of all 3D reality imagery: visual proximity. Like the filmed train virtually hurtling out of the screen mentioned earlier in this chapter, these creatures love to attack by propelling their arachnid bodies at your face with extreme speed. At first, these visual frights are nearly impossible to play off as only virtually-constructed digital images. Jay David Bolter and Richard Grusin (1999) ask, "If virtual reality can evoke emotions, how can our culture deny that the experience of virtual reality is authentic" (165)? Authenticity of embodied experience develops in *Farpoint* primarily by ratcheting up the belief of reality via emotional response. In this environment, where there is very little haptic connection between the body and the virtual space, immersion develops best via the emotion of visceral horror. Massumi (2002) states that "viscerality is the perception of suspense" (61). The viscerally affecting experience of seeing a digitally-created spider monster flying directly towards my virtual flesh creates the emotions of fear and shock, which then multiplies back out towards my body creating the affective response of chills, sweat, increased heartbeat, and rapid shallow breathing. In *Farpoint*, affect emerges via virtuality most effectively by way of emotion. The emotion of fear, which is crafted from a system of conscious filtering and cultural semiotics,

is a virtual response that becomes actual in the body. It is quantifiable by its material consequences. For Massumi, “An *emotion or feeling*, a recognized affect, is an identified intensity as reinjected into stimulus-response paths, into action-reaction circuits of infolding and externalization – in short, into subject-object relations. Emotion is a contamination of empirical space by affect, which belongs to the body without and image” (61, italics in the original). The emotion-based construction of immersion in virtual reality is powerful, but in the long run it is less compelling, as it represents little more than a trick of technology, like sitting in front of a film or even television. The impact of emotional fear works the first fifteen times or so, but as the shock factor wears off, I am less compelled to have a deep response. Shock induces fear the first couple of times, but eventually I become accustomed to its presence and am no longer confronted by its affects in the same manner.

Kevin Kelly (2016) argues that, “Virtual Reality is a fake world that feels absolutely authentic” (211). In Kelly’s book *The Inevitable*, he details how the potential of VR technology has long been in the works. As an early and active member of the cyber community and the founder of *Wired*, he was introduced to first versions of the technology in 1989 via Jaron Lanier, who is purported to have popularized the term virtual reality and created the first company to sell VR related products (Kelly 2016, 213; Lanier n.d.). Kelly explains a similar process of gearing up and jacking in to what I experienced with *Ghostbusters: Dimension*. His experience included the added technological interface of a “data glove.” The glove synced Kelly’s movements with the virtual arena presented in the VR goggles. The connection to the virtual via haptic gloves was a cultural phenomenon and fantasy of the late 1980’s and early 1990’s. I remember desperately wishing to own Nintendo’s Power Glove after watching the 1989 movie *The Wizard*. The Power Glove was a virtual reality based motion-activated controller for the NES system. The glove was unveiled as next-gen tech that figuratively connected the user to the virtual domain of the game. In the movie, the glove appeared in a dramatic reveal where the story’s antagonist Lucas produces a silver box

with the controller inside. The “wizard” and his cohorts are astounded and intimidated by the technology as Lucas dons the glove and masterfully completes a level of *Rad Racer* using a motion as if he is holding an imaginary steering wheel. The scene ends with Lucas stating, “I love the Power Glove. It’s so Bad.” (Holland 1989). The movie was essentially a long promotion video for Nintendo and helped usher in a cultural realization of the possible overlap between virtuality and actuality. With the glove, an idea of being able to embody action in virtual domains was imprinted on the cultural zeitgeist of the time.⁴

Kelly remarks how he believed that in 1989, “VR tech would be ubiquitous in five years or so” (215), yet his prediction would take more than twenty-five more years to come to fruition. Part of the problem was that 1980’s and 1990’s VR technology did not have the visual fidelity to truly immerse the user nor the technological capacity to affordably introduce haptic augmentation. While the tech community was waiting for advances in screen technologies that could live up to VR’s potential, a wave of ubiquitous computing would instead create digital networks to engulf actuality in virtual technologies as opposed to putting humans inside of virtual constructions. Once this paradigm began to fully establish itself through screen technologies such as smartphones a fuller realization of visual immersion became possible. With these new portable technologies, and the potential need to have an amplified version of reality to experience, VR began to become a more commonplace technology.

Kelly explains that the “goal of VR is not to suspend belief but to ratchet up belief” (212), to make the user feel so immersed in the experience that virtuality becomes more authentic than actuality. I experienced that feeling of authenticity when walking across that virtual rope bridge above NYC. In *Ghostbusters: Dimension*, the authenticity generates not through the images but by the felt experience of the swinging bridge and the tactile response of the guard rails that helped

⁴ For an example of the controller in action see Greene (2015).

keep me from falling. Virtuality becomes most real when coupled with affect. Virtual immersion via only visual or auditory stimuli will eventually wear out without another form of affective input and this means activating the physical world via haptics. The posthuman spectator's body is a sensory input machine working in multiple operations and combinations between the visual, auditory, olfactory, haptic, and imaginary world of virtuality. It is the combination of these elements that allows the brain to comprehend the experiential nature of virtuality.

Contemporary VR relies on presence (Kelly 2016, 217). The technology brings the spectator closer to reality but not truly into it. This reliance on presence is why the immersive capacity of current VR needs to coupling to some form of emotional or haptic hook. *Farpoint* capitalizes on presence by inducing emotional response paired with interactive tactics of gamification and haptic feedback to induce the feeling of actuality in the virtual space. Next-generation VR technology, like that of *The Void*, make virtual simulations more real and encompassing of the perceptual apparatus by capitalizing on the synchronous duality of both body and mind perception. With full-body suits packed with haptic sensors or personalized construction sites for physical referents, VR gains the potential to bridge the gap between virtuality and actuality. Until these suits are integrated into society, people will continue to navigate the worlds of possibility made real through our bodily interactions. Without interfacing with the body, VR has less capacity to become actual. That is until the entirety of the actual world becomes wired and connected making the actual a virtual world. Matthew Causey (2016) sums this up when he states,

It is, of course, the human-computer interface (HCI) that dictates the production and aesthetics of virtual spaces. As technological advancements move us past the constrictions of keyboards, head-mounted displays, and data-gloves toward more open, immersive spaces of ubiquitous computing, the interface will recede in a co-mingling of body and machine. (50)

When a spectator gains an ability to perceive virtuality in some other form than the purely visual, they can enter a non-distinguishable two-fold immersion between both virtuality and actuality.

Replacing the space of the imagination and the screen, the feeling body becomes the site of virtuality through immersion. Bolter and Grusin (1999) argue that “virtual reality is about the definition of the self and the relationship of the body to the world” (166). Embodiment has become the way we are increasingly accessing virtual realities today. Our technologies constantly require us to imagine ourselves being transported into digital and televisual spaces through our corporeal actions. Visually, we embrace virtuality via the many screens that encompass and graft onto our bodies, aurally we access virtuality through the constant streams of digitally delivered music, and tactilely we embrace virtuality every time we swipe and tap on our smartphones and tablets. The body portion of our perceptual apparatus becomes imbued and intertwined with affective potential, making our sense of being one that is immersed in virtuality.

Immersion in actuality is made possible via affective registers and immersion in virtuality is made possible by the impression of these registers developing in the perceptual apparatus of the spectator. There is a doubleness at work in the relationship between virtuality and actuality. When virtuality subsumes actuality, the latter becomes the limits of the former. Massumi (2002) states that “Affect is *the virtual point of view ... Affects are virtual synesthetic perspectives anchored in (functionally limited by) the actually existing, particular things that embody them*” (35, italics in original). A body that is immersed in virtuality (in this case, a technologically augmented virtual reality environment) grounds the experience of realness via affective response. While technologically advanced societies may now already be immersed in a condition of virtuality, I argue that a posthuman spectator remains an embodied entity who must navigate the difference between the virtual and the actual. This runs counter to the argument of many theorists of media and virtuality. Anna Munster (2006) explains that early notions of the virtual in digital culture “promised to leave the body and its ‘meat’ behind, as minds, data and wires join together in an ecstatic fusion across the infinite matrix of cyberspace” (86). Instead, virtually is embedded with(in) the posthuman body, while the posthuman body is also embedded in networks of

virtuality. An embodied posthuman spectator is more in line with Hayles (1999) formulation of the posthuman whose body has entered the informational flow but has yet to be de-materialized into pure information. A posthuman spectator is then a perceiver of the in-between, navigating the cognitive realities of virtual information flows and the affective responses of the actual body to its environment. In the following example, I explain how immersion can operate within actual spaces through technological manipulation that pulls spectators deep within their own imagination to virtually augment reality on stage.

Theatrical Immersion: Engulfing the Spectator in Sights, Sounds, and Spaces

What happens when the architecture of *Immersion* attempts to separate itself from the act of spectating as a mode of visual stimulation? In the previous examples, there was a focus on the creation of immersion in virtual worlds via televisual representation paired with embodied actions. In Complicite's 2016 production of *The Encounter*, the perceptual apparatus of posthuman spectators activates using sound. In his monograph on how sound and noise is used to gain the attention of theatrical spectators, George Home-Cook (2015) argues that "listening as a species of attention entails an embodied movement in and through environmental space" (139). He further argues that the perception of sound has the capacity to engage spectators in an enhanced "sense of being-present" where being "thus conceived, is immanent, self-present, all-encompassing, and 'immersed'" (139). While the primary concern of immersivity via VR is visual stimulation, aural attention is a sensory capacity that we should not overlook as a powerful component in the creation of virtual worlds. In *The Encounter* sound and the listening spectator enter into a dynamic tension where imagination and perception work together to fully engage in and experiential narrative.

I first saw *The Encounter* at the Brighton Festival in May of 2016 and then again on the closing weekend of its Broadway run in January of 2017. The show is a monologue-based meditation on time and consciousness told by Simon McBurney. While the production's primary narrative concerns the photo-journalist Loren McIntyre's journey into the Amazon rainforest and his encounter with the real-life indigenous people the Mayoruna, the backdrop is technology's impact on time and memory. The show begins with McBurney discussing the smartphone and its ability to supplant memory as a digital device that augments people's minds and offloads all our cherished moments. This line of thought also partially argues for a loss of imagination due to the adoption of technologies of virtuality. As a way of contesting this loss, McBurney uses technology to reengage an ability to mentally project space, place, time, and story using binaural audio and digitally manipulated Foley sound effects.

In this production, there is no necessary use of vocal projection because the storyteller is miked. For much of the production, he delivers his narration in a simple and calm nearly whispered voice. As they are seated, each audience member is given a set of specially linked Sennheiser HP 02-100 headphones that deliver binaural audio piped directly from onstage. At one point, I took off my headset to check on the actor's volume and found that sitting 70 feet away I could hear nothing. Onstage is a dummy-head mic (Figure 2) used to record atmospheric sound which is mixed to overlay the narration. The dummy head has microphones imbedded in both sides where the ears would be. By recording the audio in this fashion, sounds have the same quality they would as if heard in a live space. The audio is captured from all around the head as opposed to from one specific direction which gives the impression of immersive spatiality. Sounds are recorded using practical effects such as the crunching of a potato chip bag for the sound of boots on dried leaves, or the slosh of liquid in a water bottle for a stream. Digital feedback effects create the buzz of mosquitos. Each of these sounds are recorded live, and as McBurney shows us, are then sampled, looped, and synthesized into a jungle atmosphere. Binaural audio is utilized in the

production as a tool used to replicate the way humans hear.⁵ Gareth Fry, the production's sound designer explains binaural audio as:

... a way of replicating the human hearing system, so if you were to record something binaurally and listen to it back over headphones it's exactly like you being there and it's better than any other technology, including surround sound, at recording a space ... it's a great technology for telling stories and taking you to unusual places like the Amazon rainforest and it places you, as the audience, on stage with the performer. It creates this wonderful sense of intimacy. (Savage 2016)

As the aural soundscape develops, I begin to experience the sense of being at the center of the narrative. Sound is no longer being delivered to me from the stage, but rather, I am on stage, living the experience told by McBurney. The audio immerses the audience in the narrative and since the story is told instead of presented, it requires the spectators to engage in tricks of imagination to create the visual representation of the Amazon in their own mental plane.



Figure 2 – Simon McBurney Talking into Binaural Dummy Head Microphone in Rehearsal – July 2015. Image © Sarah Ainslie – <http://www.complicite.org/encounterresource/>

⁵ Video documentation of Complicité's work with binaural audio are available here: <http://www.complicite.org/encounterresource/map/binaural-sound.html>, <http://www.complicite.org/encounterresource/map/gareth-fry-pete-malkin.html>

In most examples of theatrical immersion, there is an expectation that the spectator is thrown into some form of elaborate scenographic space where they are led to believe that they are somehow part of the narrative world. A primary tactic in these spaces is often to let the spectators choose how they create meaning by navigating the space. In *The Encounter*, spectators must rely on the relationship between the sensory manipulation of sound and the imagination to create meaning. Home-Cook (2015) argues, “imagination is not restricted to the act of looking nor to the realm of the mind, but rather consists of a complex and continuous interplay among the senses of touch, audition, vision and proprioception” (142). Spectators of *The Encounter* do this while seated in the traditional proscenium audience/stage configuration. This form of immersion shows how spectatorship is not just a passive function based on a visual relationship. Adam Alston (2016) explains that, “Affect then implicates the audience not just as a judgmental and potentially empathetic observer of a fictive world and its inhabitants, but as an essential part and co-producer of that world” (36). The spectator of *The Encounter* is implicit in the action via their own mental projections. Using their connection to the technology, the audience imaginatively creates the narrative world, and McIntyre's adventure through that world. Through bodily affect and sensory engagement, the spectator creates the sense of immersion virtually.

During my first visit to the production, I travelled down to Brighton from London on little rest and admittedly began to fall asleep during the production. In doing so, I began to better understand how seeing was not a necessary element of immersive spectatorship. I participated in the production via other sensory aspects of my perceptual apparatus. This revelation further ingrained in me the idea that posthuman spectatorship is not a simple unidirectional reception of information from a stage spectacle, but rather, a relational operation between multiple elements of time, space, and consciousness. This aligns with a posthuman conception of being-in-the-world; one where multiple agents are necessary to construct the reality we perceive. Similarly, when McBurney interviewed members of the Mayoruna while developing the narrative he “asked

them where they thought consciousness lay?” Their answer, not “behind the frontal lobes. Instead they pointed to the forest. For them, the exterior world and interior worlds are interconnected” (Marcus 2016). Again, the overlap between virtuality and actuality becomes visible, but in this case virtuality develops in the mind of the spectator via the actual sounds they receive through the headphones. Sound manipulation instigates an interaction with the spectator’s mind creating the virtual world of the Amazonian jungle. To immerse oneself in this virtual world of imagination seems most easily accomplished by closing one’s eyes and listening deeply. This makes me wonder whether immersion is predicated by a construction in the mind, and that space, time, place, and other aspects of reality are simply representations developed mentally but accessed by visceral and affective manipulation. The interaction between the perceptual apparatus of spectators and the spectacle in the many different representational configurations is what allows the posthuman spectator to transport itself into an immersive environment.

Bridging Divides: Agency and Affect in Corporeal and Virtual Immersion

The perception of virtuality via immersion and its relationship to embodied experience through digitally matrixed interaction is a major part of the posthuman condition in contemporary spectatorship. Digital interfaces simultaneously allow broader and deeper connections with(in) performance by expanding the ontology of location/space, while at the same time narrowing what it means to be in proximity to people, places, and things. In the following, I explain how differences between technological/digital immersion and corporeal immersion help to tease apart the agential possibilities of virtuality.

In May of 2012, the MIT Media Lab conducted a trial experiment on the production of *Sleep No More* in coordination with Punchdrunk. This extended experience operated by tethering an on-site immersant (actual) wearing digital sensors to an off-site (virtual) immersant

experientially interacting with both the immersive environment and the on-site immersant via a computer monitor and keyboard. The experiment tested a digitally accessed version of immersion to create a unique experience where “online participants partner with live audience members to explore the interactive, immersive show together” (Torpey et al. 2012). Together is a bit misleading considering the virtual immersant is the only one aware of their connection to the immersant. The NY Times reviewer David Izkoff was told that he “was bound together” with an unknown Other by accepting the challenge to help “a troubled ghost” after communicating via Ouija board with the virtual immersant (Izkoff 2012). According to Punchdrunk’s director of enrichment, Peter Higgin (2012), the challenge presented was, “to recreate the infinite possibilities for journeys and experiences happening simultaneously across a Punchdrunk production.” By analysing this tandem experience’s operation, I intend to show how differing modes of agency change the actual immersant’s and virtual immersant’s sense of being a necessary part of the event.

The Media Lab mediated and mediatized the immersive experience to test the range of possibilities in augmenting live performance using digital virtuality via telematics and haptic feedback. The goal was to understand further the ways immersive experiences can be transplanted via virtual systems into an at-home experience that allows its spectator the ability to negotiate real-world physical space via a live avatar in the online platform. The MIT project used the digital augmentation to foreground interaction between its users giving them unique modes of experiencing both the environment and agency. For the virtual immersant, the mediatization activates the perception of digitally augmented embodiment lived daily in the twenty-first century with the expectation that “the more intimately manipulated the technology the more embodied the experience is perceived to be” (Machon 2013, 36). Unlike the traditional *Sleep No More* experience, both spectators’ narrative exploration was closely monitored and tailored for modes of interaction. A customized mask with haptic transducers and environmental RFID trigger

sensors that control physical elements in the space modified the actual immersant's experience. The virtual immersant followed the actual immersant via the web interface using text-based commands while having video and audio streamed over digital equipment to induce the sense of immersion at home. Every effort was made to engage the virtual immersant's perceptual apparatus via technological manipulation.

Where the immersive framing of the traditional ambulatory experience in *Sleep No More* allows proximity between the actual immersant and physical locations through the choice of leisurely navigation, the MIT mediation bonds the actual immersant to the virtual immersant, creating a sense of tension in the experience of agency. The virtual immersant accesses proximity to the event and space digitally giving them the ability to guide and alter the experience for the actual immersant using the interactive tools. For example, the sensors in the mask worn by the actual immersant create a proprioceptive link, and the inclusion of remotely operated typewriters allows the virtual immersant to communicate to the actual immersant like a spectral guide. By guiding the actual immersant in the physical space, the virtual immersant achieves a form of extended proprioception. Like playing a video game, the virtual immersant gains a level of co-authorship by manipulating the actual immersant's journey through the digital feedback as if the actual immersant is a computer simulated avatar. Measurable agency is gained through the manipulation of the actual immersant in the physical space. The variety of sensors attached to the immersant also delivers multiple forms of biofeedback for the MIT researchers. The operators used this feedback to quantify the subjective experience of the actual immersant. One question the linking of virtuality and actuality presents is: What mode of agency did these posthuman spectators encounter: affective or tangible?

I consider affective agency as the embodied feeling of agency while tangible agency is measurable in an empirical context by the appearance of a definable change based on the spectator's input. Affective agency interconnects with Josephine Machon's (2016) characteristics

of immersive aesthetics through the term creative agency. She describes this form of agency as creative in its capacity to allow possibilities for meaning making. However, creating meaning merely requires the process of choice and is subjective based on the perceptual apparatus of the spectator. This form of agency is only consequential to the individual in the event and has little bearing on the overall operation of the event. This mode of agency has more to do with personal affective response than a tangible agency to concretely alter the world immersed in, and for this reason, I consider it affective agency: a mode which produces the illusion or feeling of participation. Affective agency exists in the virtual factory of the mind but manifests relative to the actual environment through the body. The experiential nature of the affective response intensifies when one is immersed inside meticulously planned scenographies, allowing interactions between designed space and sensorial feedback, but the outcome of the event is still dictated by the makers and often inflexible. However, the immersant experiences a sensorial impression (feeling) of agency to impact the outcome. This feeling of agency allows an affective response arising from differential meaning making and sensory input. In immersive productions like *Sleep No More*, agency emerges primarily through the way narrative is consumed and or interpreted through this embodied affect. The mode of exchange that arises is aesthetic, sensuous, and not too far removed from the impact of much so-called passive spectatorship, even though the immersive experience often feels incredibly intense and personal. An immersive experience that relies on affective agency tends to lose its impact upon multiple exposures. I argue this, is why there is a necessity to couple the immersive experience with other architectures for it to have lasting resonance.

Punchdrunk and MIT ended the collaboration after a five-day testing process. The experiment showed differing modes of agency among the two subject positions. As an immersant who could explore inside the physical space, a sense of individualistic affective agency occurs through the experience of navigation. Through the digital mediation, the actual immersant became

a corporeal avatar, whose experience was controlled by the virtual immersant. When digitally tethered, a new level of authorship grafts onto the experience for the spectator in the event, delimiting choice and taking away their perceived agency to create individualistic narrative meaning and subsequently the affective experience. The experience for the virtual immersant is different due to the ability to control the other spectator, exuding tangible agency through the outcomes of interaction with the scenic/narrative environment via the technology. For the virtual immersant there was also a loss because the technological manipulation could not match the affective impact of being in the corporeal space. What differentiates the two concerning experience is the difference between who feels the most agency and who has the most agency.

The experiment attempted to navigate the subtle difference between immersion and participation by navigating both at once. This attempt replicated the duality and the overlaps between virtuality and actuality. By tethering experience via the two separated spaces—one physical, the other virtual—a tangibly heightened sense of agency through the alienation of the two separate interfaces arose. For the immersant in the physical space, the sensorial interaction via haptic, aural, and visual stimuli allowed a subconscious effect to guide expectations about individual experience. These expectations controlled the immersant through their journey of the curated space. The actual immersant, as posthuman spectator, had the agency to observe, but had little control of the outcomes of the event even though they were lured into a feeling of control through their own experiencing of the event. The virtual immersant gained a higher level of measurable agency through the tangible outcomes of their interaction with the event and the actual immersant experiencing the space. By typing into the keyboard directions or thoughts, which were responded to in the physical space, there was a direct correlation between action and event as opposed to a simulated affective response through sensorial interfaces inside the event.

The virtual immersant could tangibly impact the experience of the event in ways more measurable than strictly via personalized affect. The technology allowed agency that is both

creative and tangible, effecting not only the participant's experiential feeling of the event but the also the event itself. The virtual immersant's input created a feedback loop that effected and affected the actual immersant while also changing the exploration of the narrative for both. I've been unable to find information about why the experiment ended so abruptly. It might be that the agency gained through the technological interface may have been simply too much for Punchdrunk's designers. It possibly negated their supposed gift of open-ended meaning making for the immersant. As Higgin (2012) explains, one of the difficulties with the project was how they "were treading a fine line between game and experience, in an already delicately balanced performance." His statement marks the necessity of understanding immersion as both an aesthetic and an architecture for experience that often operates best as a form of interaction when coupled with other architectures.

I first encountered *Sleep No More* as an audience member in the winter of 2012. I was disappointed, yet incredibly intrigued by the immersive experience of the production. This was the first theatrical event that allowed me to have this much freedom. As a spectator of the event, I was invited to explore to my heart's content. Exploring in this manner is a form of creative agency that involves "processual interaction through the event, [and] shapes the unique journey for each participating individual" (Machon 2016, 36). The agency Machon points to has more to do with meaning making and personal affective response rather than an active agency to fundamentally change the world immersed in. For Machon, the body of the spectator interacts with the narrative world in the event and by doing so it gains a sense of agency that "shapes and transforms potential outcomes of the event" (36). The experience creates a false understanding of authorship induced by the ability to direct your own attention towards whichever avenue in the story-scape chosen.

When discussing spectatorship in the mode of immersion, and specifically the style of immersion that Punchdrunk employs in *Sleep No More*, I tend to disagree with Machon. There is

only one potential outcome of the event as dictated by the makers of the event. A feeling of agency exists allowing one to think they can impact the outcome and this allows the immersant in the event an affective response that allows differential meaning making, leading to the idea that they can impact the structure of the event. As the elevator operator explains when venturing into the space, “fortune favors the bold;” an invite to perform in an active manner is at the heart of the performance, but this invitation is a conceit that can have mixed results.

As a spectator in this form of immersion, the lack of rules, objective, or structural guidance diminishes an ability to play. Instead, aesthetic meaning making forms the basis of the immersive experience. The immersant assesses the multitude of aesthetic options presented before them as if a character in a choose-your-own adventure novel. The experiential nature of the affective response intensifies via immersion inside the meticulously planned scenographic event. The proximity to the narrative via designed space and bodily response heightens Machon’s sense of creative agency for the immersant. Myrto Koumarianos and Cassandra Silver (2013) explain the experiential nature of being immersed in *Sleep No More* as such: “It is an experience akin to the spatial, temporal, and ontological liminality of dreams, hauntings, and the altered perception of insanity The spectator’s necessary investiture in her exploration creates an experiential proximity with the ‘real,’ problematizing the spectator’s sense of aesthetic distance and willful suspension of disbelief” (168-169). The suspension of disbelief adds to a sense of agency but this sense is nothing more than a false impression aroused by the specter of choice. Primary agency comes from the way in which one consumes or interprets the narrative through a bodily affect. This corresponds to Gareth White’s (2013b) explanation of immersion: “Not all audience participation would be claimed under the rubric of immersive ... To be inside the work, not just inside its physical and temporal space but inside it as an aesthetic, affective, phenomenological entity gives a different aspect to the idea of a point of view, and of action” (17). It is this phenomenologically modified point of view that I am marking as the foundational aspect of

immersion in the model presented by Punchdrunk. This model is also the form of posthuman spectatorship that I would like to critique because of its connection to perceived agency as an affective response with little resonance beyond an impact on the emotions of the individual. Even though one feels the immersive experience so strongly while inside the event, it tends to be contained and significant only on an individualistic basis. Adam Alston (2016) is also critical of these experiences and connects them to a culture based in the experience economy and neoliberalism that relies on narcissistic participation for contemporary hegemonic structures to operate. Alston states:

Aesthetic experiences in immersive theatre tend to promote introspection, because in the heady heights of immersion and participation it is not art objects that take precedence so much as the affective consequences of an audience's own engagement in seeking, finding, unearthing, touching, liaising, communicating, exchanging, stumbling, meandering and so on, each geared toward the promotion of peculiarly intense or profound experiences... (7)

The experiences that the seeker of immersion expects are those that allow them the feeling of control over their affective states and a sense of agency in aesthetic meaning making.

I argue that one of the characteristics of immersive forms of posthuman spectatorship is a propensity towards individualism that is inherent in the neoliberal condition. As neoliberalism spreads, social worlds becomes more and more focused on consumption, and in current climates of neoliberal societies, that consumption is increasingly focused on the individual (Alston 2016, 16). The loss of community fuels the importance of the individual liberties inherent in the liberal humanist position that have been re-sculpted to fit the neoliberal values seen today. This may seem at odds with the ideas of the posthuman put forward by most critical posthumanist scholars, who typically point towards a diminishing of liberal humanism through the connective properties of contemporary technogenesis. Some immersive theatre practices might possibly be subverting the posthuman condition that values equality and connection, to fit the current socio-politico-economic climate. Though immersive practices are praised for their ability to bring in a younger

demographic of theatre audiences, Alston warns “immersive theatre nonetheless risks serving neoliberal capitalism by fetishising the co-opted feeling body and celebrating a potentially profitable, individualistic and apparently personal form of consumer productivity” (158). Attempting to connect what has been historically looked at as a community event (theatre), to the needs, wants, and desires of the individual consumer, as seen in *Sleep No More*, is an example of the shift towards this posthuman condition in spectatorship specifically when immersed within the political context of neoliberalism. The immersive event created has been lauded for its novel approach to storytelling and its altruistic ability to connect to the people it engages with through individual interactivity. As an immersant spectator in the event, you are given the individual liberty to consume the narrative in whatever way you see fit. As directed “fortune favors the bold;” to go off on your own path and discover the narrative is the gauntlet thrown at your feet. The immersant is given the agency to create his own narrative out of the clues presented in each landscape, closet, office, candy shop, and forest entered.

In 2014, *Theatre Journal* recently devoted an entire issue to spectatorship in contemporary theatre. In an article from that issue, Karen Zaiontz (2014) discusses the nature of “narcissistic spectatorship” that is inherent in the practices of immersive theatre: “A narcissistic spectatorship encourages the viewer to fully engross herself in an artistic production in a way that highlights her own singular relationship to the piece. The spectator is not positioned as an author or agent who has the power to create or enact concrete change, but as an *experiencer* of the piece” (408-409). The nature of experience for this form of spectator has developed away from that of audience as a formal group and, instead, focuses on the individual who has become accustomed to crafting his own self using contemporary technological tools.

The popularity among non-traditional theatre attendees of Punchdrunk’s projects like *Sleep No More* has caused them to be a primary example of scholarship on immersion. The commercial success of *Sleep No More* allows the production to extend into a perpetually running

event with three operating hospitality attachments. When the production first contracted inside the McKittrick hotel, a “smoky” speakeasy named the Manderlay Bar was included as part of the 2011 run. In 2013, a rooftop bar (Gallow Green) and restaurant/music venue (The Heath) were added to the building, accessible even without a ticket to the performance. These hospitality tie-ins have become secondary narrative venues augmenting the reality of the immersive experience. In 2014, Heineken produced a one-time special immersive event using the *Sleep No More* space as a form of experiential marketing. Punchdrunk and their scenic design partner Emersive blur the boundaries between fictive experiences and reality through an invasive enveloping of multiple worlds via consumerism. The inclusion of the expansion into commodity culture based on individual consumption, as seen through these new hospitality venues, is one of the negative aspects of the venture into immersive narratives. Immersivity has become a catch-phrase used to attract consumers who want the appearance of ultimate control over their daily experiences. Alston devotes an entire chapter in his newest book to the development of a culture of narcissistic immersion that is inherent in the makeup of immersive events such as *Sleep No More*. His critique focuses on the invitation to engage with(in) the event as a way of accessing individualized affective experiences impacted by the interface between space and narrative. This affective experience “implicates the audience not just as a judgmental and potentially empathetic observer of a fictive world and its inhabitants, but as an essential part and co-producer of that world” (Alston 2016, 36). I argue that the effect of this experience is a form of faux-participation because it has no consequences beyond the self. Compare this situation to the differences I will mark between immersion and participation in the following chapter. As an immersant, a spectator often becomes part of the world but does not take part in the world. Their beingness in the narrative event has little impact beyond narcissistic feeling.

Conclusion: Immersion is Not an Umbrella

Through case studies in this chapter I explored different modes of immersion and their connection to the various meanings of virtuality. Affect, agency, and exchange are crucial elements for the spectator's experience of each example. Agency in immersion often surfaces primarily through bodily affect though it also manifests in other ways when the immersive event uses other forms of interactivity and exchange. In the next chapter, I will discuss the architecture of participation as one that relies on forms of tangible agency. There is a qualitative difference between immersion and participation even though they are frequently interchanged. Each exists on a scale of interactivity but the difference comes through processes involving agency and experiential exchange. When discussing the way in which *Sleep No More* interacts with the audience, Ian Daniel (2015) of the *Civilians*' describes: "Something like *Sleep No More* is pitched as an immersive experience, but the audience doesn't feel real consequences of play. They are not a character in the piece. So, it's a question of how 'immersive' is defined. Is it about being a player that can activate a world or being an observer in a curated space?" I agree with Daniel's line of questioning about immersivity. As he explains, his definition of immersivity needs some form of play or participation involved. A more specific definition that separates it from other forms of interactivity are necessary to better understand spectatorship in the twenty-first century. I've argued that the primary mode of exchange that happens in the architecture of immersion is sensual affectivity. Immersion in both actual and virtual domains relies on a state of sensory engulfment by the spectator's perceptual apparatus that allows the spectator to create forms of meaning that allow them to feel as though they are a crucial part of the event with agency. That feeling of agency is usually only expressible through individual meaning making, unless one of the other architectures of exchange are included. *Participation*, *Game Play*, and *Role Play* are

often the other architectures paired with immersion that allow it to be more than a passive dip in the pool.

While I am often critical of the term immersive and find it necessary to further develop a methodology for how to analyze and apply it, it is an integral part of the posthuman condition and technogenesis as brought about by virtuality. I find it necessary to highlight part of Machon's (2013) argument in her book on immersive theatre. She states, "I am now certain that 'immersive theatre' is impossible to define as a genre, with fixed and determinate codes and conventions, because *it is not one*" (xvi, italics in original). Following Machon, I argue there is no such taxonomy as immersive theatre. There are multiple immersive theatres as her book suggests. Each defined by their connection to other architectures of exchange. It is more beneficial to consider immersive as an individual aesthetic and architecture instead of being used as an umbrella term for multiple forms of interactive exchange. It refers to a structure and process used to understand specific aspects of a wide range of interactive events but does not operate as an all encompassing category. Immersion is a specific architecture of exchange and aesthetic for posthuman spectatorship. As I have argued in this chapter, this aesthetic relies on a combination of imagination and affective input. Affect emerges through the many different sensors contained in the human body. A connection to the digital realm and an affinity towards a condition of virtuality has helped tease out the dynamics necessary for a mode of posthuman exchange to emerge through that body. Immersion will continue to be a helpful and necessary part of the posthuman experience of spectatorship because it highlights how embodiment is necessary when considering overlaps and divides between virtuality and actuality. The terminology is useful when anchoring the body portion of a person's perceptual apparatus to both the divide and the overlap. The technology to transcend material existence does not yet exist and therefore posthuman spectators will continue to rely on their bodies to work as conduits for experience and exchange in the architecture of *Immersion*.

CHAPTER 3: THE DEMOCRATIC SPECTATOR: ETHICO POLITICAL EXCHANGE IN PARTICIPATORY PERFORMANCE

The social world is the intersubjective sphere of the social relations that we as human beings experience. Those relations are rooted in everyday reality, a reality nowadays always interwoven with media to some degree. The social world is, in turn, differentiated into many domains of meaning, even though it is bound together by multiple relations of interdependence and constraint.

Nick Couldry and Andreas Hepp – *The Mediated Construction of Reality*

2011 was a watershed year for politics and the political across the world. The sentiment of a potentially lost generation brought about by the economic and social devastation of the Great Recession spurred an increased interest in narratives that explored the dynamics of the 99%. In an article describing the rising tide of plays with political sentiment and urgency concerning the American Dream, Ben Brantley (2011) states, “when the dialectic of the haves and the have-nots becomes that of the seen and the unseen, it translates naturally to live theatre, which is all about commanding and competing for attention.” The competition for attention and the effect of that competition is at the heart of the following telling.

On November 15th, 2011, at approximately 1:00 AM, New York City police engulfed the physical center of the Occupy movement at Zuccotti Park, in the financial district of New York. Immediately, a rush of tweets, messages on Facebook, and live video of the event created by protesters hit the internet.¹ Each of these mediatized bits of information enabled a call to arms. Nearly 20,000 viewers watched the Livestream of the eviction. I was one of those viewers. I sat in front of my computer screen hopping back and forth between the multiple Livestream angles posted by protesters on the ground. As the intensity of the event grew, so did the number of digital activists engaging with the event via their portable and stationary screens. While there were

¹ While the full Livestream is no longer available, I have included two blog-based news posts that explain the timeline of the raid with accompanying social media aggregates. (Brooklyn Ink Staff 2011; theguardiannewsblog 2011).

thousands of digitally active protesters and watchers online, there were only a fraction of that number in Zuccotti Park. Hundreds of sympathizers took to the streets to ward off the eviction of the park residents. Unfortunately, a combined effort thwarted these passionate citizens to stop their approach to the park. Subway lines were re-routed, police blockades were erected, and no one was allowed to approach the park, not even “legitimate” media representatives. A concerted effort led by the New York City police kept a number of on-the-ground protesters from approaching the park, but the digital streams were allowed to continue.

Unlike the earlier San Francisco BART Internet shutdown,² which forcibly impacted an ability to gather by blocking information transmission, the police allowed the call to arms via internet, but simply blocked an ability to gather effectively using physical barriers. The police did not have to resort to the deletion of Internet capabilities like that used in the BART shutdown. By allowing the streams to continue, they contained interest and the political power of occupation digitally. I for one was satiated by the ability to take part digitally, even though I could have easily made my way over to the financial district in less than fifteen minutes by train. The technology allowed the message to go out, but did it have any real impact in the reality of the moment? In an ideological sense, it did, as the message was taken in by thousands both locally and globally, but there was no immediately tangible effect of the digital transmission. It simply allowed its receivers to perform acts of “slacktivism.” The OED defines slacktivism as, “Actions performed via the Internet in support of a political or social cause (e.g. signing an online petition), characterized as requiring little time, effort, or commitment, or as providing more personal satisfaction than public impact” (OED Online 2018). My actions were only felt in the safe confines of my office versus on the streets where the necessity of being present, to occupy space, was imperative. The digital

² This refers to the Bay Area Rapid Transit system wide disabling of cell phone service on its trains in 2011 used as a way of intentionally disrupting social protest. For more information see (Kravets 2011).

connection prompted my act of protest, but it had no tangible effect beyond a number count that continually fluctuated on the screen in front of me. Within hours, the occupiers were evicted from the park and never regained their physical foothold. The ideology of the occupied park has now simply become a symbol and a marker of a beginning, but also of an end.

I include this anecdotal story here to show how the act of watching can be an active engagement with a political moment, but also to warn how the visual engagement with the event on the screen is what led to my political passivity. By merely watching, I could fulfill an act of protest neurologically and emotionally (affectively), satisfying my need for participation, but negating corporeal and potentially meaningful direct engagement. Social media gave me the venue to watch and remotely embody the action of the event, but it also released me from having to participate materially.

Just watching (spectating) is an activity that does not require material participation because it operates through an engagement with biological and contemplative processes found in the mind and body of the perceptual apparatus. Jade Rosina McCutcheon (2013) explains, “watching an actor onstage is more than a visual event; theatre is a transaction, a sharing of ideas and a site of reflection” (147). McCutcheon is referring to the process by which we gain knowledge and embody that same knowledge in the biological/contemplative process of watching that engages the mirror neuron. Researchers using cognitive science and performance identify the mirror neuron as the biological tango partner to the representative mimesis (Cook 2008; McCutcheon and Sellers-Young 2013). This targeted neurological component of the brain processes what we see and “is thought to be responsible for action understanding, intention, emotional attunement, communication, joint action and imitation,” each of which is “pivotal in theatre, since without them there is no fear, pity, conflict, dramatic irony, subtext, or even story” (Cook 2008, 590). The mirror neuron is responsible for conscious and unconscious processes related to corporeal and imagistic representation. Humans, through emotion and sensory

response, replicate the actions shown to us as biological processes hardwired deep within our cognitive function. Via the activation of the mirror neuron, we can engage in an embodied cognition of that which we perceive. The mirror neuron is engaged by activating an “understanding of the self, how it is viewed by others and how we can best articulate our identity to others” (McCutcheon 2013, 146). In the case studies covered in this chapter, a different type of agency and political efficacy is accessible through a spectator’s transformation into a participant who acts as the direct conduit of democratic messaging through dialogue and material participation. These case studies exemplify how participating spectators and participatory performance practices develop notions of ethical-communal exchange that allow a posthuman form of civics and politics to emerge.

Postdramatic scholar Hans-Thies Lehmann (2006) states, “It is a fundamental fact of today’s Western societies that all human experiences (life, eroticism, happiness, recognition) are tied to *commodities* or more precisely their consumption and possession (and not to a discourse)” (183). Lehmann’s assertion leads me to ask: How does a participatory mode of spectatorship challenge a notion that contemporary digital culture has become increasingly divested from community values and community engagement, instead opting for smaller and smaller factions of identification with the only unifying factor being that of the purchasable? To explore this question, I offer the architecture of *Participation* as one that supports tangible agency through discursive communication between performance spectacles and participating audiences. The aesthetic frame of the postdramatic often contains these spectacles due to their lack of emphasis on a dramatic and humanistic dramaturgical structure, instead, relying on the influence of a participating spectator as sculptor of action and intent through relational actions.

I discuss the architecture of *Participation* to explain how Web 2.0—often described as the participatory web—and specifically platforms for social media, promote ethical and communal exchange as an aspect of posthuman spectatorship. This chapter engages in posthumanism

through the posthuman condition inherent in the technogenetic process enabled by Web 2.0 and also applies a posthuman critical lens to analyze the ethical and political capacity of participation in theatrical events and performative media. The case studies I focus on are primarily theatrical in nature, but I approach them as forms of media (a system for information exchange) that involve the necessity of an interactive and participating spectator. I ground my explanation of the connection between participation and social media through an analysis of discursive participatory politics in the theatrical productions *Occupy your Mind* (2011/2012) by The Civilians and *How Much is Enough? Our Values in Question* (2011) by The Foundry. The exchange between audience and performance object is often described using the term participation in both active and passive registers. In this chapter, I approach participation from the active register in the sense that the spectator gains a form of tangible agency rather than simply affective agency described in Chapter 2 (and replicated in the telling above). I propose tangible agency as an ability to make change beyond the moment of personal response, impacting the total possibilities of the dramatic situation. To be tangible, the spectator gains the capacity to make a material impact in/on the event.

Throughout this chapter, I argue that the social condition prompted by Web 2.0 media encourages exchange and creation via a participating spectator and that the postdramatic form is the ideal *theatron* where this may occur. Web 2.0 resources such as YouTube, Twitter, and Facebook create a paradigm where contemporary spectators are often conditioned to seek material participation in the action and dramaturgy of performance events. As part of digitalization, the participatory web enacts a technogenetic process on its spectators that encourages a need for reciprocity and communal action between multiple agents in networks of sociality. In digitalization, the primary mediator and interlocutor of human communication is the digital sphere

and the many individualized domains³ contained in that sphere (Couldry and Hepp, 2017). Digital spheres of sociality impact the ways people interact in non-digital mediums such as theatre. The technological spaces inhabiting the digital become Real by a constant participatory interaction between their spectators, as creators and remixers of social configurations. Understanding how spectators materially participate with technological domains, as interlocutors of being and selfhood, aids in further developing the analytical frame for spectatorship with(in) paradigms of posthuman sociality. I argue the architecture of *Participation* allows its participants tangible agency where the effects and affects of interaction create both change in the event/space and beyond the event/space.

Participating Spectators / Active Citizens

Gareth White (2013) explains, “Audience participatory performance has among its building blocks – its media – the agency of the participant, and their point of view within the work” (26). I argue these building blocks are part of nearly all forms of staged performance and not just audience participatory modes due to the inherent necessity of an audience being present in some capacity. I differentiate participation as a form of interactivity through the subject positions *with* and *in*. For Andy Lavender (2016), interactivity with a performance object/event suggests “a mode of involvement on the part of individual spectators” that includes “being *of* the world and *in* the world” (26). While this beingness is not overtly political, it denotes an enhanced form of politics via aesthetic closeness, meaning making, and communicative interaction. I consider the placement of these positions in relationship to an event and a spectator. A participant’s mode of engagement and agency is dependent on their subject position as either a part of the performance

³ I refer to domains as the unique spaces that make up what we call social media such as Facebook, YouTube, Twitter, etc. Each has its own logic and purpose but each operates based on the necessity of human participation and creation of content.

event or as a spectator outside the performance narrative. In both positions the spectator is crucial, but in the case of participation, the spectator is crucial to the action, gaining agency to make a material impact on the event. As Chapter 1 explains, the posthuman paradigm upends the ontological position of human subjectivity to usher forth a relational position. By questioning what it means to be a subject in our technologically augmented world there is also an imperative to discuss what it means to engage politically.

Societal intersubjectivity (Couldry and Hepp 2017, 18) developed under a technologically influenced posthuman condition often leads to a relational position where spectators operate in one of two ways: either a sense of communality arises or extreme personalization and individuality takes over. Often, the neoliberal conditions that underpin technological development put these two positions in tension with each other, where the power of community is often diminished in favor of the individual. Baz Kershaw (1992) refers to this occurrence of fragmenting community cohesion as the “paradox of cultural expansionism” (59) in *The Politics of Performance*. This paradox also connects to the splintering of identity politics that much of Western society has explored in the late-twentieth and early-twenty-first centuries. This splintering is one of the elements that helped bring about the posthumanist project.⁴ This splintering also partially explains the emphasis on individual affect discussed in relation to *Immersion* in Chapter 2. Considering theatre’s increasingly precarious place as a commodity, and the growing emphasis on performance forms that rely on the individual, better understanding how participation in theatre allow spectators tangible agency becomes helpful. Participation allows spectators an ability to expand horizons of thought and feeling beyond themselves, to think once again of themselves as part of a larger community; one aligned with posthumanism.

⁴ See Braidiotti in Chapter 1.

To approach a renewed sense of tangible and performative agency, I begin examining participatory spectatorship by reading it alongside a previous form of audience interaction, particularly the one seen in the ancient Greek *theatron*. Lehman (2006) reminds us that the term *theatron*, from which we get the term theatre, referred to the “space of the spectators” (127). It was this space that a discussion of civics and politics emerged in relationship to the performative spectacle delivered below it spectator-citizens. A conversation took place in two different capacities. The *theatron* was a space for both a discussion amongst the members of the polis (internal) and also between the members of the polis and the stage spectacle (external). These ancient spectators participated dialogically to help form their collective idea of society. The theatre space was an ancient social medium for creating civic discourse. This mode of theatrical dialogue was a practice with a civic function—as a participatory conversation between the Greek polis and performed narratives concerning social/community values. Like this early theatrical form, I argue that contemporary participatory spectatorship often allows ethico-communal exchange through dialogue concerning ethics and community building.

The interactive nature of spectatorship performed in ancient Greece is not completely unique and therefore should not be held as an exemplar example of participation. It however serves as a good example of the way participatory spectatorship can engage in modes of civic and political discourse. David Wiles (2000) argues, “the unique qualities of Greek dramatic writing are bound up with the uniqueness of the Greek political experiment, which engaged the public as participants in rather than spectators of all public events” (3). His argument points to an engagement with the polis that relied upon a social contract unique to the way Greek society behaved and operated. The Greek polis was more than a collection of individual citizens.⁵ It was

⁵ I find it necessary to point out that the Greek polis only consisted of those designated citizens. Of the approximately 100,000 people in Athens only 30,000 were citizens. Women, foreign born, and slaves were omitted.

a highly cohesive social community. Each member had to rely on a common interest in which the whole was more important than the individual to achieve a democratic ideal. The allegories presented on the Greek stage rarely offered solutions but rather “took the form of open-ended social and ethical problems” (Wiles 2012, 3), which the polis would have to openly discuss and debate to help develop democratic systems of governance and community. Conflict between assumed ideals and representational realities on the stage represented a form of aesthetic dissensus, opening-up a gap between binaries of thought, allowing discourse to take place. In and through this gap, the polis found equilibrium with which to enact democratic ideals that led to an early system of participatory governance for and by the people. The fluid dynamics between the representations on the Attic stage and the polis were discursive, with the mutually agreed upon intent of each impacting the other, propelling an integral feedback loop of ideas and ideals.

Like the form of spectatorship connected to the Attic theatrical spectacle, contemporary participatory spectatorship has the potential to engage with a posthumanist methodology to develop a renewed sense of reciprocity and future building through material discourse. This form of spectatorship harkens back to a form lost in many modes of European-influenced theatre due to the implications of rational humanistic thought and the structures put in place on the stage during the resurfacing of theatre in the early period of Enlightenment and with liberal humanist traditions. As the liberal humanist model expanded, a binary division between spectator and spectacle was encouraged, limiting the potential of an interconnected audience who was part of the performance in a dialogical manner. The posthuman architecture of *Participation* in some ways models pre-humanistic forms of audiencing where spectators interact with both the event and fellow spectators to perform as interlocutors in social politics and civics.

The historical humanist moment that helped relegate spectatorship to that of a binary and not an intersubjective and relational act, created a gap between a long running continuum of posthuman spectatorship based in interactivity and civic participation. It is in this gap that society

named a being called human who becomes the central agent of reality formation via its communicative practices. Spectators in this gap operate as the sole receivers of information in a performance's message, whether part of a larger audience or solo because of their lack of communication with the event. Their communicative feedback primarily exists via psychic energy transfer from spectator to stage or vice versa as opposed to communication in the form of reciprocal dialogue. A performance event in the humanist model internalizes the previously performed dialogic action between event and spectator. Characters take on the role of communication to simply transfer a message to the spectators instead of allowing them to communicate with the event. In this model participation in a material and communicative manner is no longer necessary because the event simply operates as a medium of unidirectional transfer to the spectator.

The architecture of *Participation* is part of the logical progression of theatrical practices developing out of both a technogenetic posthumanist paradigm and what Hans Thies Lehmann's (2006) calls the postdramatic paradigm. Lehman argues that postdramatic theatre is no longer "subordinated to the primacy of the text" (21) and thus operates in a different manner than the dramatic or humanist model. Lehman's translator Karen Jürs-Munby (2006) further explains that the "dominance of dialogue and interpersonal communication" (21) often framed inside dramatic narratives has less dominance in postdramatic theatre. Postdramatic theatre offers a model of presentation that confronts the spectator, insisting on uneasy transactions of ideological discourse. Postdramatic theatre acknowledges its role as participant alongside the spectator and its own historical context. In the posthuman paradigm, the paradox referred to above requires a different form, one emulating the logic belonging to the "predramatic discourse of Attic tragedy" (Lehmann 2006, 26), which exudes discursive interplay between the polis and performed narratives. The *predramatic* is a theatre existing before attempts to classify and identify what it is

and must be within the constraints of a dramatic formula (2006, 26). It is also a form where spectatorship operates as communication and communion for its participants.

The dramatic is simply a gap in the long running history of theatrical communication. Like the “post-“ of posthumanism, the postdramatic paradigm is analogous to the predramatic paradigm in which participation outside of the confines of the narrative was necessary along with the dialogue inside the narrative. Lehmann explains that “theatrical discourse has always been doubly addressed” (127). The split of intra-scenic communication and extra-scenic communication always exists in some fashion. When an emphasis on the primacy of communication between characters (intra-scenic) recedes, spectators regain the agency to communicate with(in) the event from their position outside the dramatic narrative (extra-scenic). In this mode, “theatre is emphasized as a situation, not as a fiction” (128), and communication, both between collections of spectators and this collection and the total event, takes on new importance. Lehmann argues, “Proceeding from this well-known duality of all theatre, postdramatic theatre has drawn the conclusion that it has to be possible in principle to make the first dimension (intra-scenic) almost disappear in order to reinforce the second dimension (extra scenic) and raise it to a new quality of theatre” (128). The new quality that Lehman describes is one with enhanced political agency because of an emphasis on lessening the authority of a singular text and voice of the author in favor of the action and voices of the audience.

Lehmann argues that theatre “whose main principle” has always been participation, has had a “real cause for concern” because of an “emerging transition to an *interaction* of distant partners by means of technology” (167). Lehmann originally published this argument in 1999, right before the mass implementation of Web 2.0. I argue that because of these technological means (which are now more mature than at the time of Lehmann’s writing), postdramtic modes of theatre gain the capacity to re-engage with their audiences in a manner that allows for meaningful communication both inside and beyond the event. Meaningful communication often

models the democratic ideal of the Attic stage in the way it operates. Kershaw (2001) states, “Western theatres more often than not have discouraged democracy” in the modern era and this is why “there has been so much experimentation in performance beyond theatre” in recent years (138). The experiments Kershaw refers to belong to the evolution of theatrical form beyond that of traditional dramatic narrative to that of the postdramatic, the performative, and the mediatized. Each of these models engages with the spectator in more active and reciprocal ways of communication that are inherently participatory with the potential that interaction leads to social change.

The Civilians: Occupy Your Mind

In the Fall of 2011, The Civilians developed a project titled *Occupy Your Mind*. The part verbatim-cabaret performance, part interactive digital-protest, staged and continues to restage the rhetoric and actions of the 2011 Occupy movement using material participation in the form of (re)performance via YouTube. The company offered the project as a way of giving spectators the means to rehearse and perform ethical- and community-based dialogic action. Unlike the passive digital participation explained at the beginning of this chapter, The Civilians’ project uses social media to negate a “slacktivist” action of merely watching and engages a different type of agency and political efficacy through a spectator’s transformation into participant and direct conduit of democratic messaging. The act of offering the audience to partake in the performance harnesses the operations of the participatory web while encouraging direct action in the political events that seemed to engulf Western and specifically American society in the Fall 2011.

The Civilians’ mission is to create “new theater from creative investigations into the most vital questions of the present” (Civilians n.d.). Similar to the style of Anna Deveare Smith or the Tectonic Theatre Project, much of their work comes from a journalistic perspective and strives to

tell the stories of real people and real issues. The Civilians' verbatim work is emblematic of the postdramatic because the final product in performance is an attempt to "create an open-ended journey rather than a conclusive story with a beginning, climatic middle, and resolution" (Kozinn 2010, 192). For *Occupy Your Mind*, the company created an open forum for the political angst and unrest that came to fruition in the Occupy protests of 2011. This forum was both live and mediatized. The performances began as a set of interviews taken from members, participants, and onlookers of the Occupy camp in Zuccotti Park. From the over 150 interviews transcribed, a select number of curated monologues were performed as part of the ongoing cabaret series *Let Me Ascertain You* at Joe's Pub, part of the Public Theatre, on October 28, 2011. These interviews were performed in traditional verbatim style including all the ums, errs, and other verbal ticks of those interviewed. The collection of interviews as monologues were also filmed and archived on a Tumblr page (Civilians 2012) created by the group that allowed a larger cross-section of spectators to interact with the content. In the spring of 2012, the group took these transcribed monologues and made them available to the public as the next wave of disseminating the political messaging. The Occupy movement was slowly vanishing from the general public's perception partially based on its lack of media presence. Many seriously motivated activists continued to spread the movement's message through direct action events or digital channels, but much of the lay public had moved on to other topics of interest steered by the mainstream media. It was an election year after all, and politics as entertainment/entertainment as politics was the next course on the menu.

To keep Occupy's message in the social conscious of the public, The Civilians' turned to the participatory web by using the medium of YouTube. Media theorist Henry Jenkins (2006) describes YouTube as *spreadable media* that "functions in relation to a range of other social networks; its content gets spread via blogs [...] Facebook and MySpace, where it gets reframed for different publics and becomes the focal point for discussions" (275). The Civilians use the

medium as a way of connecting the message of the performance to the many nodes in an ever-expanding participatory media ecology. The performances can move freely about the digital sphere by participatory interaction such as commenting, sharing, posting, remixing, and most importantly (re)performing.

A performative call to action was formed by The Civilians, whose purpose was to “capture the living history of the movement as it unfolds” (Wallenberg 2012, 28). To do this, the group asked digital spectators to take up the mantle of the protest and become the next generation of political agitators and commentators by (re)performing the monologues from the Joe’s Pub cabaret via the digital archive. Not only were spectators given agency through their own (re)performances, they were also prompted to find other Occupiers in their local vicinity and interview them for performance. This call initiated a continuous feedback loop of spectator become participant engagement. The Tumblr site (Civilians 2012) gives instructions on how to conduct new interviews, including release forms and tips for the best ways to get one’s subject to feel comfortable with them as an investigative journalist. On the one-year anniversary of the September 17, 2011, “start” of the Occupy movement, the Civilians staged a (re)performance of the original monologues in coordination with over fourteen other performing arts organizations. The event was titled *Occupy #17* and included performances of the transcribed material by both amateur and professional performers. These performances can be seen on the group’s Tumblr page and heard on the their podcast (Civilians 2012).

The way in which participant-spectators engage with *Occupy Your Mind* has the potential to open-up a new vista of political agency through an emancipation of the spectator. By emancipation, I mean the spectator is freed from the bonds of information transferred from one object (a performer or the spectacle itself) to another (themselves) as a form of communicative mediation. Instead, the spectator is free once given the opportunity to enact the information themselves. Lehman (2006) states, “The consciousness of being connected to others and thus

being answerable and bound to them 'in the language,' in the medium of communication itself recedes in favour of communication as (an exchange of) communication" (184, quotations in original). Communication is therefore reciprocal not unidirectional. The invite to participate in the performance by (re)performing the verbatim interviews gives the participant a new sense of connection with the real potential of the original political event. Participants can enact the communicative force of the original act instead of absorbing that force by simply listening or watching.

When a spectator is invited to enter into the Real of the moment, by participating, they gain agency by "treading the borderline, by permanently switching, not between form and content, but between 'real' contiguity (connection with reality) and 'staged' construct" (Lehmann 2006, 103, quotations in original). The effect of the (re)performance has increased potential due to the direct engagement with its newly emancipated spectators. By extending the production of the performance out into the digital domain, a plentitude of newly embodied co-authors emerges. No longer is the message relegated to that of spectacle meant for consumption, but rather it is assimilated and activated as a form of political agency. Steve Cossen of *The Civilians* explains that with their form of verbatim theatre, spectators can "actually strip away our overly narrow preconceptions of how people work, how the world works, how social systems work — whatever the subject is" (Kozinn 2010, 196). In accessing a Real through the non-fictive "drama," the participant gains a new way of seeing, conceiving, and realizing the political implications of the work. The invitation to (re)perform the event allows emancipation and political affirmation. A spectator turned into participant enters a political Real by reliving the emotions and thoughts of the original via (re)performance. The mirror neuron passes on its function through corporeal action enacted by the participant as opposed to a purely cognitive reliving of the act through seeing. When the watchers become the reality through their own performance, they gain direct access to tangible political agency. It is the doing, the performing, the act of being, that releases the energy

and efficacy in the postdramatic moment. The participating spectators have the capacity to shape a new reality through their performative actions of embodiment.

I refer to the Civilians' project as postdramatic due to its re-positioning of the spectacle/spectator dynamic through the use of spectator participation and mediated dissemination. The use of the participatory postdramatic form, using verbatim theatre like the way the The Civilians does, allows an increase in political efficacy and spectatorial agency. The purpose of direct action is to continue the dialogue concerning participatory democracy that the content discusses. The content's potential is accessed by a (re)performing of a verbatim dramaturgical text that depends less on the spectator's gaze than on the participant's action as emancipated performer and interlocutor of democracy. The spectacle (the text as told by a performer) simply shifts to a position of guide instead of that of authority. As a dramaturgical guide, the text becomes the subject of a gaze in which the interviewer/documentarian of verbatim practice becomes emancipated. This gaze allows multiple levels of interpretation and mimetic assimilation that can ultimately lead to a finished political affect in the corporeal (re)telling and (re)performance. It is through the (re)performing of the Civilians' verbatim spectacles, as opposed to the watching of a fictive narrative, that "such disturbing experiences could be called political in the sense that they evoke a de-naturalization of the dominant perspective at work in the conceptions of reality" (Bleeker 2011, 48). Through the real-life utterances forming the base of the Civilians' performance, spectators can engage with a political sphere not accessible through purely fictive drama meant for watching. This connection and subsequent agency increases exponentially through practices that ask the spectator to become one with the narrative through its (re)performing. Using verbatim theatre and direct spectator interaction via the mediatized platform of YouTube, The Civilians' project keeps Occupy's message active through its perpetual feedback loop of live and mediated transmission. This is a form of dialogue that engages community and individuals alike. Through this postdramatic dramaturgy and remediation, the

monologues performed allow for a potentially effective and affective way of engaging with the Occupy movement's message.

The Participatory Condition as Technology: Social Worlds, Social Media, Social Theatre

By discussing *Occupy Your Mind*, I explored how human communication mediated and mediatized using YouTube and (re)performance creates a possibility for a specific social domain I consider posthuman. This domain emerges through the many networks that make up a mediatized construction of social reality (Couldry and Hepp 2017) where communication and interaction develop digitally via interpersonal dialogue. Digital communication exists as a form of participatory action found in the many different interactive web platforms and spaces that form the backbone of the Web 2.0. Web 2.0 is the second iteration of the internet developed in the late 1990's. With the advent of new dynamic HTML protocols, web pages became interactive and adaptable through users' direct input without the necessity of understanding coding language. Dynamic HTML changed the relationship between the computer user and the web page from passive viewer to interactive participant. With this change, a new social paradigm emerged allowing non-tech savvy interactors the ability to actively shape and reshape virtual worlds. This, in turn, began to reshape human perception into a technogenetically-conditioned posthuman form. Antonella Napoli (2014) explains the relationship of Web 2.0 and one's perception of the world in this manner.

Thanks to Web 2.0, the spectator point of view is so internalized that from that same perspective, individuals are able to observe their own lives, their own experiences ... Individuals think of themselves as being watched by an audience, using the set of tools and criteria of judgment they get when they were only the audience for their own narratives and communication practices. (189)

Following the logic of Brenda Laurel's book *Computers as Theatre* (1992), Patrick Lonergan (2016) argues that the social media sphere, opened-up by Web 2.0 protocols, is a theatrical space

that allows its users to transcend the role of observer into that of actor, director and playwright (16). The social media sphere is the performance space where participation becomes the norm, displacing static and passive forms of media dominant throughout the twentieth century.

Most tend to think of the term social media primarily as platforms like Facebook or Twitter—because they operate through communication via mediated language. These platforms are “social networking” (Lonergan 2016, 26) spaces, where the primary objective is to create communicative and community networks via social bonding. Social media also refers to platforms such as YouTube or Instagram, where communication occurs through more performative or aesthetic types of material. These spaces act as domains for user-generated content that impact the social sphere. The uploading of video and pictures transmits information that adds to and performs as cultural and social dialogue. These videos and pictures have agency to change social expectations and configurations. Before the digital age, social media might refer to television, radio, or telegraphs. Even further back, social media came in the form of a book or newspaper, and before written language, it was theatre, dance, and ritual. I approach the term social media as a way of explaining how any communicative medium is a form (often aesthetic or technological) that helps transfer information or explain the world. Jenkins (2006) describes a medium as “a technology that enables communication” and a “set of ‘protocols’ or social and cultural practices that have grown up around a technology” (14, quotations in original). When adding the world social to media (an assemblage of multiple mediums), I refer to a technology that uses human communication (language, writing, sound, embodiment, etc.) to exchange information. Hence theatre is a form of social media.

Recalling Couldry and Hepp’s model of communication under deep mediatization, information passes between humans and other humans (and likewise machines)⁶ in mediated

⁶ In Chapter 5, I discuss communication between algorithms, artificial intelligence based machines, and posthuman spectators as a form of performativity.

platforms we call social media and the platforms themselves construct the very idea of a social sphere. Technogenetic social media operate as conduits or threads connecting humans and other objects with agency via various forms of communication. The threads can be interwoven into ethical and communal configurations via participatory dialogue. As part of a posthumanist mode of perception and action, this dialogue can develop into a form of spectatorship that emancipates the spectator from its chains of liberal individuality to better understand how to develop a posthuman community in difference. The logics and operations of social media and the participatory web are a part of the social world that help inform the posthuman mode of perception I argue exists. This model for perception is part of what performance and media studies scholars (Barney, et al. 2016) call the participatory condition.

Like the posthuman condition, the participatory condition develops through technogenetic means. Andy Lavender (2016) argues that the social networks that develop out of digital culture creates a condition that “is disposed to participatory citizenship and collective action” (17). This condition is one where we can break cultural norms to develop new understandings of our “voices and values” (17) to re-determine and re-shape the spaces that make up our collective selves. The participatory condition is one where interpersonal action and dialogue create new possible configurations of the social. The participatory condition is also a “contextual feature of everyday life” (Barney et al. 2016, vii) where all aspects of social, cultural, economic, and political activities are developed out of human participation. Barney et al. argue that because of Web 2.0, participation forms the fabric of contemporary life, and “becomes the measure of the quality of our social situations and interactions” (ix). This fabric informs all virtues of civic development including “equality, justice, fairness, community, [and] or freedom” (ix). The participatory condition has become the everyday, and as such it impacts all levels of human interaction with artistic products

through a form of spectatorship as taking part. When it comes to politics, the participatory condition reconfigures the agency of the individual as one in the many who “appears before others as an equal” (xiii) to better understand how to give voice to the voiceless. This democratic action evokes a “re-distribution of the sensible” through the process of *dissensus* described by Jacques Rancière (2010, 62). In dissensus, a new model of participatory politics deconstructs the consensus establishment where only certain voices are given an ability to be heard. The participatory condition opens-up a multitude of possible structures for emancipatory politics led by participant spectators through dissensual interaction. The participatory condition “confirms the possibility of equal participation by all actors (artists, spectators, curators, etc.) in the aesthetic regime” (Barney et al. 2016, xv). This participatory condition has emerged due to the interactive nature of twenty-first-century social media.

The participatory condition that Web 2.0 encourages can lead to a negative type of hyper-individualism when approached through consumerist and capitalist means, but it can also lead to radical forms of participatory politics and communal discourse when used in certain ethical aesthetic constraints. In the closing sentences of *Convergence Culture* (2006), Henry Jenkins argues that the participatory condition develops through the convergence of old and new media, and necessitates a “need to be attentive to the ethical dimensions by which we are generating knowledge, producing culture, and engaging in politics together” (294). Jenkins argues for a new understanding of civic engagement in the era of the participatory web. Technogenesis via Web 2.0 urges forth a posthumanist position when the participatory condition is applied in ethically considered ways. This occurs when the individuals involved harness the potential of participation as a form of community building. Communities emerge through a mutual understanding of individualized agency activated as part of a larger whole. This whole always exists but is often hindered by the ideology of difference, acting as a classifying agent that comes from the humanist model of social dynamics. By thinking through a posthumanist construction, difference can be

thought of as a trait that can unify rather than divide. Applying dissensus via participatory discourse reunifies the individuals in the whole in the flattened hierarchy that posthumanism calls for. The platforms and domains of Web 2.0 encourage this new form of posthuman sociality.

If digitally-constructed social media platforms are one of the primary technological domains influencing the shape of a posthuman social reality, then what is social theatre and how can it harness the capacity of Web 2.0? There are many opinions concerning exactly what social theatre is and how it works. I argue that it is a form of social media that relies on live human interaction and direct participation to model new forms of social configurations. A posthuman spectator operating with(in) the architecture of *Participation* can develop ethical and communal exchange through the specific aesthetics of social theatre. Definitions of social theatre include: “theatre with specific social agendas; theatre where aesthetics is not the ruling objective” (Thompson and Schechner n.d., 12); and “theater that creates dialogue, invites audience interaction and intervention, empowers people to imagine and enact their solutions, and goes on to create even more dialogue” (Kushner et al. 2001, 67); but also a form that “does not seek *catharsis* but *metaxis* pluralization ... In social theatre, the objective is to question society” (Schinina 2004, 24). In each of these examples, the reoccurring current of social theatre is the re-engagement of the audience as politically- and socially-activated participant to action and dramaturgy. By activating spectators, they can become invested in a community good that the performance is itself a part of, but also calling into question.

Social theatre is a form that hopes to address a lack of political efficacy and civic empathy, and promotes a return to an audience that engages with the performance as co-author rather than simply passive spectator. Co-authorship is dualistic in its ability to live in the event, but also to coax the event out of the performance space into the public sphere. In this context, social theatre is a postdramatic theatre where the spectators are:

require[d] to become active co-writers of the (performance) text. The spectators are no longer just filling in the predictable gaps in a dramatic narrative but are asked to become active witnesses who reflect on their own meaning-making and who are also willing to tolerate gaps and suspend the assignment of meaning. (Karen Jürs-Munby 2006, 6)

Social theatre attempts to unify the spectator with the community at large by addressing the ills of the community, however large or small. Likewise, social theatre approaches the spectator as part of a diverse community. Communal identification and unification through *dissensual* discourse promotes tangible agency via participatory spectatorship. Communal identification runs counter to the neoliberal ideal of individuality discussed in the context of immersion in the previous chapter. In the architecture of *Participation*, the will of a collective often has more resonance than that of an individual, and when individuals recognize their place in the collective, the spectacle transmits agency through the individual into the community at large through participant action. Tangible agency becomes reciprocal and continuous, like dialogic communication. Continuous transfer incites social and political efficacy through its discourse as part of the participatory condition in contemporary society.

Re-Assembling Spectatorial Agency: Participation and Dissensual Discourse

A posthuman spectator operating with(in) the architecture of *Participation* is one whose activity goes a step farther than Rancière's emancipated spectator. For Rancière, the mere act of watching is an active occurrence that is part of our daily existence and therefore inherently non-passive. He states: "Being a spectator is not some passive condition that we should transform into activity. It is our normal situation. We also learn and teach, act and know, as spectators who all the time link what we see to what we have seen and said, done and dreamed" (17). As explained in the Introduction, Rancière's argument has been interrogated exhaustively over the past ten years,⁷ but I find it useful to use the above quote as a starting point when considering the

⁷ See White (2013a), Alston (2016), Lavender (2016, 2012), Bishop (2012), (Read 2013).

political potential of the architecture of *Participation*. I agree with Rancière that the participating spectator is not something that theatre makers need to create for political action to ensue. The participatory condition is already engrained in the fabric of contemporary sociality, and, as such, performance merely needs to harness its potential. The participating spectator has a unique capacity to engage with ethical and communal concerns to create a form of exchange with social and political capacity. This ethico-communal exchange is not one of transfer between two bodies but rather an action that makes “visible the broken thread between personal experience and perception” (Lehman 2006: 186) found at the center of any performance’s network of agency. To participate is to become a political body and to challenge the formation of a concretization of a hierarchical politics of power. Posthuman spectatorship via participation offers tangible agency to make change, but allows new relationships to remain in constant flux.

In the twentieth century, multiple theatre makers attempted to harness the capacity of participation to activate their audiences beyond the stupor induced by the cathartic model criticized by Boal. Bertolt Brecht (1964) and Antonin Artaud (1958) are responsible for introducing two theoretical models that serve as primary influences for many subsequent attempts to activate social agency through theatre. Their experiments with form created novel architectures that address what Rancière (2007b) calls the “paradox of the spectator” (272). Unfortunately, their models still relied on a form of dictatorship induced by the author and therefore were not postdramatic nor truly participatory. Even with their faults they helped open the door toward the participatory politics existing within the postdramatic.

Through an analysis of Brecht’s and Artaud’s practices and theories, Rancière argues that in each of these models the presupposition is that looking, the position primarily associated with the spectator, is passive; “it is the opposite of acting” (272) and therefore needs to be reversed

into something active. Rancière asks us to consider the ontology of looking as an active function and then continues the argument by reducing Brecht's and Artaud's interventions to that of the spectator/spectacle binary. For the Brechtian model, Rancière argues:

The spectator must be released from the passivity of the viewer, who is fascinated by the appearance standing in front of him and identifies with the characters on the stage. He must be confronted with the spectacle of something strange, which stands as an enigma and demands that he investigate the reason for its strangeness. He must be pressed to abandon the role of passive viewer and to take on that of the scientist who observes phenomena and seeks their cause. (273)

Lehmann (2006) elucidates Brecht's position as an attempt to "put the emphasis on theatre, turning it into an instrument, as it were, through which the 'author' [director] addresses 'his/her' discourse directly to the audience" (31). This discourse is unlike one existing in equilibrium. Instead, it refers to a discourse delivered with no expectation of reciprocation. The audience in Brecht's epic theatre is still subservient to the dictatorial address of the dramatic author. Boal (1985) also argues that Brecht's materialist orthodoxy "is not only that of interpreting the world but also of transforming it [and] has the obligation of showing how the world can be transformed" (103). Showing diminishes the spectator's agency by discounting its equal relationship as participant with(in) the theatrical spectacle.

Rancière also finds faults in Artaud's approach to giving the audience political agency. Seeing a lack of political urgency and insisting on a break from the passivity of thought, Antonin Artaud introduced a contrasting approach to activating the audience. His approach directly addressed the issue of author as dictator. According to Lehmann (2006), Artaud's critique illustrates how the actor "is only an agent of the director who, in turn, only 'repeats' the word prescribed to him by the author ... This theatre of a logic of the double is precisely what Artaud wanted to exclude" (43). Rancière (2007b) addresses the Artaudian model as a polar opposite to Brecht's, therefore, setting up a new binary. He explains:

The spectator must eschew the role of the mere observer who remains still and untouched in front of a distant spectacle. He must be torn from his delusive mastery, drawn into the

magical power of theatrical action, where he will exchange the privilege of playing the rational viewer for the experience of possessing theater's true vital energies. (273)

Rancière critiques both models, asserting that they both lead to the same destination. Each method sets up an opposite yet equal hierarchy. His critique of these models comes from the power dynamics he sees portrayed between the spectacle and the spectator. He compares this binary to another set of equivalent oppositional binaries, including, “collective and individual, image and living reality, activity and passivity, self-possession and alienation” (275). Each of these oppositions is attributed to a theatre that becomes a “self-suppression mediation” (275). Rancière insists that inverting the power dynamics between the spectator and the spectacle by way of Brechtian or Artaudian paradigms leaves theatre in the same state it began: a medium for unidirectional transfer.

Lehmann (2006) calls attention to the problem with the Brechtian model on the basis that it “becomes the basic structure of drama and replaces the conversational dialogue. It is no longer the stage but the theatre as a whole which functions as the ‘speaking space’” (31, quotations in original). Rancière offers help by encouraging us to peer into the gap between the two models to look for what he calls *dissensus*. The gap becomes the “space in which it becomes possible to verify the existing hierarchies of values and naturalized world views” (Borowski and Sugiera 2013, 74). Disavowing the called for supposed communality of consensus, Rancière instead introduces dissensus; a politics through which two opposing forces acknowledge differences to agree upon a communal identity and equality. Rancière (2010) explains dissensus in this manner.

The essence of politics resides in the modes of dissensual subjectification that reveal a society in its difference to itself. The essence of consensus, by contrast, does not consist in peaceful discussion and reasonable agreement, as opposed to conflict or violence. Its essence lies in the annulment of dissensus as separation of the sensible from itself, in the nullification of surplus subjects, in the reduction of the people to the sum of the parts of the social body and of the political community to the relations between the interests and aspirations of these different parts. (42)

Dissensus requires the ability to take in the entirety of a population as members in an assemblage of equality. The dissensual polis is one where there exists no stratification or separation even with acknowledged differences among members. It is not a utopian congregation where all agree on one beneficial ideology. That ideology would suggest a hierarchy. Instead, it is a communion without an end point; it has no goal other than displacing all other ideologies *as truth*. Through difference, individual members of the polis understand the dialogic required to become a communal polis. Acknowledgment of this difference leads to a radical politics that disavows the logic of hierarchical structures pervasive in many societal constructs. This mode replicates the politics of posthumanism and the dramaturgical non-structure of the postdramatic often found in the architecture of *Participation*. In the following case study, this architecture operates to extend the potential of the emancipatory question and includes dissensus as a form of posthuman relationality to offer spectators potential for political and ethical activation.

A Question of Value

As explained earlier in this chapter, the participatory condition emerged in part through the technogenetic influence of Web 2.0. That technological resource is deeply integrated into contemporary societies' predilection toward neoliberalism. One question I confront regarding the way Web 2.0 and spectatorship are intertwined is: How has the neoliberal and individualistic side of the participatory condition affected theatre's ability to act as a participant in civic discourse and have social resonance and/or political efficacy? Following authors such as Baz Kershaw (1992, 1999, 2001), Alan Read (2008, 2013), and Alan Badiou (2007, 2013), I argue that contemporary dramatic theatre has lost much of its democratic potential, but through the postdramatic, political efficacy regains a voice when used to encourage participatory dialogue with posthuman spectators. While the participatory condition is welcomed in the posthumanist program, it is most beneficial when applied in a manner that allows for its potential to come forth.

How Much is Enough?: Our Values in Question (2011) by New York City based Foundry Theatre serves as a further example of what I describe as participatory discourse as ethico-communal exchange. The production asks its audience to materially participate in the narrative by adding their voice and opinions concerning values and value in contemporary social spheres. Without the participation of the audience, the production is incomplete. The production calls forth a civically-minded performance frame, exuding potential structures for engaging with the audience as a contemporary polis and encouraging participatory dialogue that can lead to a democratic community of participant-spectators with the potential to promote social and civic change. A primary concern of mine is how the performance engages with participation as a way of accessing and promoting ethical and community based exchange. I argue that this production operates in a posthumanist capacity by addressing the participatory condition of contemporary spectators in ways that attempt to emulate participatory democracy. The production is also an example of how interpersonal dialogue created in performance can illuminate the way society determines systems of values. I point to its participatory architecture as one analogous to the Greek model discussed earlier and one that is posthuman via the ethico-communal exchange allowed.

How much is enough? The relevance of this question comes from individual expectations regarding value. What is value and how does it relate to our personal beliefs, specifically considering the neoliberal turn towards individualism? There is a qualitative difference between *Value* and our *Values*.⁸ The difference comes from how we assign value and what informs our own belief system. Values are a social construct formed through a process of analysis, dialogue, and, assessment within any given community. Though each individual's value system has varying

⁸ When googling the terms **value** and **values** this is what appears: Value - the regard that something is held to deserve; the importance, worth, or usefulness of something; economically, the material or monetary worth of something. Values - a person's principles or standards of behavior; one's judgment of what is important in life. Usually influenced by societal norms and or expectations.

degrees of qualitative differences, based on factors such as their social and economic history, a normative system of values emerges within and through communion and coalition. Approached through the terms Value and Values, *How Much is Enough?: Our Values in Question* harnesses the political agency of participating spectators to engage with concerns of direct democratic governance through performance and performativity. I argue this project allows ethico-communal exchange to develop due to its structure and use of Web 2.0 logics. The structure of the performance relies on the direct participation of its spectators as a way of engaging with the content and allows a form of dialogue as posthuman spectatorship.

The participatory event was produced in the tumultuous fall of 2011, first at A.R.T. in Boston and then at St. Anne's Warehouse in Brooklyn for limited runs. I attended the production as part of a seminar on political efficacy in contemporary theatre at the CUNY Graduate Center. The production operated as a framed town hall where the participant-spectators were invited to sit at interspersed card tables in a community canteen setting. Throughout the production, three actors assume the roles of empathetic interlocutors with endearing and thought-provoking backstories used to help propel a loose narrative concerning the way we, as participants, look at, approach, and shape the world through our everyday actions. We were asked to confront difficult questions regarding economy, society, friendship, love, and equality. Questions like: "If you could have an extra hour today, what would you do with it?"; "If I looked at your schedule this week, would I be able to determine your values with any accuracy?"; and "What is the most generous thing you've ever done?" (thefoundrytheatre 2011). These questions were offered as distinct rhetorical interrogations of the participants with the hope that they would spur further contemplation and discussion. This asking was the primary motivator for a participatory dialogue among everyone in the room. Considering the run's uncanny timing of appearing in tandem with the height of the Occupy movement in NYC, I felt compelled to engage the production more than once.

The cast consisted of three malleable character types portrayed by two males and one female, each of different ethnic backgrounds that reinforced a passive homogeneity through difference. Carlos was a late-twenty-something white male with a young girlfriend whom he had just found out was pregnant. He was worried about how he was going to pay to raise a child when he was not too far removed from childhood himself. Agnes was a comfortable Asian woman in her sixties with grandchildren, wondering what would be left for them in the future. Frank was a middle-aged African American man whose booming voice took on a gentle authority not unlike a god in a movie voiceover. Frank's ambivalence to place himself in any socioeconomic position was mirrored by his playful game of telling us his name multiple times before settling in on Frank. He was the potential everyman, an identity in flux. We were presented a collection of guides whose messaging was not based on privilege or likeness. Their lack of unification was offered as mimetic representations of the varied rest of us in the room. Their coalition in difference seemed appropriate for speaking to the many possible spectators. The three speaking characters in this staged town hall asked the spectators to stop and re-evaluate value and values through an evolving narrative that never attempts to find neat and tidy closure. To encourage this re-evaluation, the participants had to locate and comprehend the multitude of other varying viewpoints in the room. Accompanying the trio was a character named the Googler whose sole purpose was to scan the web to find facts and images based on what was introduced by the cast and the participants as a visual reification of our subconscious thought processes. For example, when Carlos talked to one participant about his impending fatherhood, the Googler searched for and then projected data across multiple screens showing the average cost of having a baby delivered in the US with and without insurance. The Googler acted as a direct conduit to the digital sphere where our participatory condition was born.

The theatrical framework performed in the production of *How Much is Enough?* acts as an agent of discourse inside and outside the performance. Christopher Balme (2014) states,

“Theatre’s role in the public sphere is threefold: as an interlocutor via its plays and productions; as an institution where it may be the subject of debate; and as a communicator where it harnesses various media channels to broadcast itself and its messages” (x). The production operates on each of these levels but specifically acted as an interlocutor with its participant-spectators. Dialogue was introduced with the intention of actively altering the participant’s perception regarding what is valued in human civic life and what society at large finds value in. The production engaged the audience members not only as spectators, but also as participants and more importantly as members of a discursive exploratory civics/ethics committee. The series of question and answer sessions were interspersed with team building events that were either encouraged through communication or limited by an insistence to make snap judgments about fellow participant-spectators.

Complex direct questions were asked to engage the participants, who were brought “up on stage” to converse with the actors, to re-evaluate the ways in which they approach the world. Questions included: “How much would you be willing to pay for a glass of orange juice?” (Lynn 2011). The question might sound simple, but not when the follow up question is, “How much money do you think the average orange picker makes?” (Lynn 2011). The participant’s response introduces an ethical dilemma of value versus cost. That glass of orange juice becomes drastically more expensive if one must first consider paying the agricultural worker an amount that they themselves deem a sufficient wage to live on comfortably, which the participants were asked to do. Prior to being asked about the juice, participants were asked what their hypothetical dream jobs would be. We had to explain what the job would be and how much we would expect to get paid to live comfortably doing that job. Juxtaposed against the juice question, we were pressed with a binary dilemma of our wants and needs versus the wants and needs of the agricultural worker (the other). This dilemma-inducing discourse created a stop-think-and-re-evaluate moment with the participants. Through this process of participant deliberation and coaxed

community building, the production exemplifies the postdramatic. As Lehman (2006) states, “In a similar way the spectator of postdramatic theatre is not prompted to process the perceived instantaneously but to postpone the production of meaning (semiosis) and to store the sensory impressions with ‘evenly hovering attention’” (87, italics in original). This break from a prescribed dramatic narrative induced us to become part of the narrative and thus participating members of a democratic polis.

Following Boal and others, I contend there is typically little lasting impact in the singular theatrical event intent on dramatic catharsis instead of empathetic dialogue. The cathartic process experienced in traditional dramatic structure is often too individualized. By activating the potential of the participatory condition, *How Much is Enough?* attempted the opposite of catharsis by subverting the binary spectacle/spectator dynamic. Like the ancient Greek polis, the participants saw the semblance of themselves and the already understood narratives of social life in the answers given by fellow participants. The participants’ answers combined with the actors’ pre-written questions co-authored a new narrative using posthumanist relationality and postdramatic dramaturgy.

The potential of *How Much is Enough?* stems directly from the fact that the participants are not told what or how to think through Brechtian dialectic or act through Artaudian confrontation. Rather, they are guided on a path of self-discovery much like navigating the internet. By acknowledging that the spectator learns not only by viewing the message of the spectacle, either through alienation or immersion, but also by applying already existing knowledge as a referent to the message, a liminal agency appears somewhere between the two models. This echoes Rancière’s pedagogical approach laid out in the *Ignorant Schoolmaster* (1991) and re-examined in *The Emancipated Spectator* (2009), where the place for knowledge lies in the space between the student and the master and is not about a transfer from one to the other. The liminal space where knowledge is found becomes the gap discussed above. It is the place of reciprocal

exchange. Instead of being taught a specific lesson, the participants were shown that there are multiple differing perspectives from which to gain knowledge and that these perspectives are only accessible by understanding relationality and the sameness of difference. A variety of perspectives opens agonistic and dissensual discourse that has the potential to lead to real change through questioning entrenched positions. The posthumanist perspective does just this. Questioning assumptions elicits more power and potential action than confronting the audience with dictums. Going one step further beyond Boalian techniques, this model harnesses the participatory condition that effectively acts as a rehearsal for the “rehearsal for the revolution” (Boal 1985, 122). The revolution in this case, is one where all prescribed social constructions are put into question in order to develop new ways of thinking. The actors tell us it is up to the spectator to determine what is valid and applicable to their personal and subjective situation. The author and director of the production did not attempt to teach, persuade, or force a lesson on the spectators, but rather introduced a virtual guide to dialogue through the performance. Part of this guidance was direct participation via audience contributions. At one point in the performance, the participants were asked to leave questions of their own for future audience members. We wrote down our questions on small slips of paper and gave these back to the performers. We were also given other slips from the previous nights’ performances to consider. Our fellow participants left questions like: “What if no one owned land of any kind, if it were part of a commons?”; “What if citizenship weren’t organized by country?”; “What if there were public squares in every neighborhood?”; and “What if our government were a participatory, not a representative government?” (thefoundrytheatre 2011). Our material participation allowed direct interaction with even those who were not present, allowing us to access multiple and potentially all agents in our social ecology.

As participants, we were given a laundry list of attitudes and multiple viewpoints, induced by the answers to the questions, and were invariably influenced by each other’s subjective

opinions. A process was evoked that intended to encourage the participants to engage in dialogue on stage but also beyond the performance. Specificity was not the purpose of the dialogue. There was no lesson to deliver nor learn but rather an ongoing process of serve and return, question and answer, allowing us to deliberate in a manner intended to allow a communal evaluation and recognition of values. Returning to Rancière (2007b), the understanding was that the actor on stage “doesn't know what he wants the spectator to do, he knows at least that the spectator has to do something” (279). The performance introduced a new framework for encouraging a posthuman form of emancipation through dialogue. In this model, engaging in dialogue became a form of emancipation because the message did not assert dominance over the participant, reintroducing a hegemonic binary. If the message became a form of dominance, Rancière's critique would be evident. The message suppressed itself and simply became a way of looking through which a newly forming community in difference evaluates itself via interpersonal dialogue. This way of spectating is to gaze into the gap between the potentiality of questioning introduced by the author and the actualization of the answers offered by the participants. Dialogue was allowed in the rupture not only between the participants and the spectacle, but also between the multiple ways forward found inside of dissensual interaction through dialogue. Consensus was not the necessary way forward, but rather, the acceptance of a multitude of possible differing answers and attitudes pointing to multiple ways forward. Multiple ways forward means a progression that is always in flux and dynamic versus one that is static and fixed in one direction. This is a posthumanist mode of politics, a form of politics that encourages passionate debate through difference as opposed to rational consensus making.

Dialogue created tangible agency for the participants either internally, as in the case of asking oneself *what is important*, or externally through conversation with the other, asking *what do you think is important*. By asking these questions, not only the event changed but potentially the entire social sphere. The new dialogic partnership consisted of the people in the room and

the entire social world as a larger semblance of community. Returning to the questions, as participating spectators, we internalized the information presented and developed, formulating our own expectations, which were then forced back out into the external and larger polis of our everyday community. When a posthuman spectator is asked to make change in the “Real” through participating, they gain agency by “treading the borderline, by permanently switching, not between form and content, but between ‘real’ contiguity (connection with reality) and ‘staged’ construct” (Lehmann 2006, 103). Following the expectations of social theatre, developing dialogue in difference (dissensual dialogue) is a rich and advantageous way to work through issues of differing ideologies. Referring to Schechner’s (Thompson and Schechner n.d.) understanding of social theatre, this form of dialogue “can transform the practitioners, the participants, and the public’s existing knowledge and experience” (14).

While I believe the participatory nature of the production offered posthumanist possibilities for participation using social discussion, I found the way it engaged in issues of economics problematic. In a contemporary era fueled by materialist culture and neoliberal policies, many individuals lose the willingness and/or ability to identify as part of a larger whole in society. The compelling forces behind neo-liberalism and late-capitalism coerce the individual into divesting from community, instead unwittingly morphing into a captive member of a collective whose name and nature is consumerism. Kershaw (2001) points to this dilemma when he refers to the evolution of spectatorship in modernity as that of “patron, to client, to customer” (135). As a question of value, we the participants were given the choice of how much we were willing to pay to see the performance. I paid the minimum. I could have afforded to pay more but I was not willing to, given the option. What does this say about my assumed value in the production? What does it say about my individual values or what I value for that matter? Each of these questions points to a current fault I see in a commercial form of the medium. Increasingly theatre has become a commodity and therefore, as Kershaw (2001) states, the “power of performance may be sucked dry by the

peripherals of theatre” (144). Commercial tie-ins and the *amenitification* of the theatrical environment live at the edge of the spectacular event and become an integral part of its meaning making. It is not absurd to argue that the contemporary passive spectator rarely goes to the theatre for emancipation, affirmation, or ethical fulfillment through art, but rather to attend a material event surrounding an aesthetic project. As was with *How Much is Enough?*, the spectators were pushed to engage in an expectation, assigning value based not only on the quality of the performance but also the space, the seats, the lobby, the program, the neighborhood the event takes place in, and so on. The many material conditions that come in to question in the making of this event had to be taken into consideration. The placing of value on the event beyond its political impact or simply its aesthetic qualities is possibly the most misguided issue with the production, one that detracts from much of its potential.

Setting up the quandary of monetary value from the very beginning caused participant’s expectations to rise beyond what is normative. The effect of the production was superseded and overshadowed by interrupting the dialogue concerning values before it could even begin. The intention was noble; as it hoped to call to attention the value of art as part of the social sphere. I argue this backfired however, by inadvertently promising the show had a specific value. The participants entered the room already on the defensive without even being consciously aware of the bias. Not only were we expecting to get our money’s worth, we also registered the fact that the performance was a commodity. The Foundry could have offered the show gratis and then asked the audience to pay after they had determined the production’s value through the discourse presented. Doing so could have refocused the question of value towards the social benefit of dialogue contained in the performance. Returning to *Postdramatic Theatre*, Lehman (2006) echoes Guy Debord (2005) by pointing to the precarious problem of theatre commodification in the contemporary performative era. Lehman states, “It is a fundamental fact of today’s Western societies that all human experiences (life, eroticism, happiness, recognition) are tied to

commodities or more precisely their consumption and possession (and not to a discourse) ... The totality of the spectacle is the ‘theatricalization’ of all areas of social life (183, quotations in original). If all life has become “theatricalized” through commodification, and thus, all citizens primarily exist as consumers, what agency do spectators have to spurn social change and discourse in a truly effective manner? This is a question I also consider when approaching technological media that are shaping the current spectator.

Like the neoliberal defect inherent in contemporary digital social media, I argue another failure occurred in the assumption that the production’s participants might be part of a community in difference. This assumption correlates with Balme’s (2014) critique of the contemporary theatrical sphere, which he argues has devolved into bourgeois aesthetic performance (44). The homogeneity of the audience lessened the overall impact of the performance’s participatory dialogue. There is a similar problem with other social media geared towards participation; a community of likeness often develops through the medium. As we have seen during the tumult related to the 2016 Brexit referendum and the 2016 U.S. Presidential election, social media has become a prime platform for stratification of identification even though it is offered as a source for community building. The social contract offered through the platforms helps to emphasize and bolster community ties, but often lacks the ability to look beyond the immediate social sphere of the individuals involved. Commercial media attempting to act as social interlocutors inherently run up against a paradoxical problem concerning assumed communities. The communities built are often those of likeness instead of difference which I argue *How Much Is Enough?* tried to build. In these examples, a community is assumed fully formed and consensual, which means the medium only speaks to the converted. These converts are then resold the same goods they already believe in.⁹

⁹ I will expand upon the way social media “programs” and “preaches to the converted” when discussing the technogenetic relationship between humans and algorithms in Chapter 5.

Conclusion: Posthuman Sociality and Participatory Politics

The unrest and revolt that erupted during 2011 brought about the first faint glimpse in many years of a formation of potential revolutionary communities. In the light of the Arab Spring, the Global Recession, and the Occupy movements, these divergent communities began to surface using the tools of Web 2.0. They formed through understandings of necessary togetherness brought about by historic events. The overtly oppressive regimes in the Middle East and the clandestine oppressive structures of the American banking system fueled enough outrage to form communities of engagement and purpose. These communities were made up of divergent constituencies who have rarely been able to form cohesive unity due to their differences. It took catastrophic events to form the temporary coalitions of togetherness based in truly democratic idealism. The factions of the Occupy movement had the ability to work through dissensual discourse to create a posthumanist horizontal governing structure based on the good of the whole. Unfortunately, the movement's fervor dissipated when it lost its foothold in Zuccotti Park. Without a physical space to occupy, its visibility subsided and therefore its message slowly diminished and eventually was lost from the public's sight. Occupy's ability to act as an energized *demos*, like that existing in the brief *predramatic* period in Attic Greece, signals that a possible return to communal dialogue and decision making is not too far out of reach.

Projects like The Civilians' *Occupy Your Mind* harnessed the power of direct conversation and delivery through live and mediatized channels to engage the public as a contemporary polis. By capitalizing on the potential of the participatory condition, the theatre makers attempted to replace power of a physically occupied location through a performative occupation enacted through participant re(performance). *How Much is Enough?* displayed potential promise towards creating a reinvigorated theatrical public sphere made up of spectator participants. While the attempt was not perfect, it however presents a step forward towards democratic discourse beyond

notions of individual experiences, freedoms, and liberties. Rancière (2007a) states, “if left to themselves, democracy and individualism would go separate directions” (38). This division might possibly find a correction through ethico-communal exchange and dissensual discourse that “allows for making visible something that was at odds with its milieu” (Read 2013, 158). Dissensual discourse allows individual spectators freedom to choose while understanding their role as participating members of a community based on an understood equality in difference. Equality in difference is the ethical heart of the posthuman condition. Rancière (2007a) says it best when referring to an “essence of equality [that] is in fact not so much to unify as to declassify, undo the supposed naturalness of orders and replace it with the controversial figures of division” (33). A posthuman spectator, in the guise of an ethico-political participant, can fight for equality by acknowledging an already existing equivalence in difference, reversing the current dominating consciousness of inequality through difference. For a posthumanist ideology, equality is not only the goal but the understood, “founding, primordial” (Read 2013, 158) substance that is ingrained in the heart and soul of all posthumanity and its connection to those with whom it eats, sleeps, dreams, and loves. Flattening hierarchies is a necessary strategy of the participant politics posthuman spectators can engage in. These politics involve a discussion about ethical and communal understandings of what it means to be a human citizen in the current media saturated world.

As I progress through this project, I’ll continue to discuss the complicated nature of digital technologies, as companions to posthuman sociality, based on how they often contain hidden dangers masked by the promise of participation and interaction. Just like the participatory condition developed out of Web 2.0, digitalization brings with it utopian dreams that can turn into dystopian nightmares under both democratic capitalism and autocratic governance. Considering all these possibilities as part of the network of sociality is necessary in a posthuman social structure. Using the case studies in this chapter, I have argued that the logics of a social world

mediated and mediatized through digitally-constructed social media allows for a potential to re-invigorate the political capacity of spectators engaged in ethico-communal exchange. This participatory condition has begun to transpose its logic and function the architecture of *Participation*, and when harnessed for ethical, political, and communal purposes, allows spectators to gain tangible agency to re-shape society towards posthumanist goals.

CHAPTER 4: IPERFORMANCE AND LUDIC CRITICALITY IN THE HYPER-CONNECTED PLAYER

As we connect with each other, with objects, and with data across material and digital landscapes, these hybrid spaces are transforming the ways we conceive of embodied space. The stakes related to the ways we conceive of embodied space are significant, including the ways we imagine identity, community, and cultural objects we create, including art, games, performance, and narrative.

– Jason Farman, *Mobile Interface Theory*

I am walking around the historic district of downtown Santa Fe, New Mexico on a brisk January afternoon. The sun is high in the sky and is causing reflections on my iPhone which I'm using to navigate the square around the Santa Fe Cathedral. The square and the cathedral have multiplied and taken on multiple identities this fine day. They exist as cultural landmarks that I can explore physically, giving me the historic background concerning the formation of the southwest city, but they are also digital landmarks, marking a stopping place for engagement with virtuality. The Santa Fe Cathedral Monument stands about ten feet in front of me. It consists of an intricate menagerie of domesticated animals and humans frozen in bronze (Figure 3). At the base are a donkey, a sheep, a goat, a pig, a rooster, and an ox. Atop, are a Spanish soldier, a monk, and a peasant family consisting of a woman, man, and two small children, one holding a doll. Hanging in the liminal space between human and animal is a cornucopia of cultural riches that connect these creatures to the history of the town: fruits and vegetables, musical instruments, a Bible, an axe, and various weapons. Above these figures is a miniature figure of Mary La Conquistadora (Our Lady of the Conquest), a statue representing the Virgin Mary who guides and anchors these figures as part of a unique four-hundred-year history of the Santa Fe Cathedral and the subsequent city that formed around it. While reading the plaque (Figure 4) embedded in the monument's base, I receive a notification from the iDevice in my right hand. I look at my smartphone and see that there is another figure perched nearby the monument. It is a figure that

is for all sense and purposes invisible in the actual world where the monument sits, but with the simple tap of my left finger, the creature now shares this space with me and the sculptured figures. I have found a Houndour (Figures 5 and 6) sitting at the base directly across from the ox. As I move my phone around in my hand, the virtual creature moves with me, adjusting its position to sit now on top of the statue as a digital overlay. Before I can catch the creature with one of my PokéBalls, or get a good image of it “in the wild,” it runs away and I am left wondering what other creatures might lurk around the next corner. I look down at my digital map and see a Hoothoot (image 5) at the central square waiting to be caught; after all, the goal is to “catch them all.” To do so, I must traverse the actual space of the historic square while also crossing over into the virtual space of the app-based game titled *Pokémon Go* (Niantic 2016).



Figure 3 – The Cathedral Park Monument – Jan 5, 2018

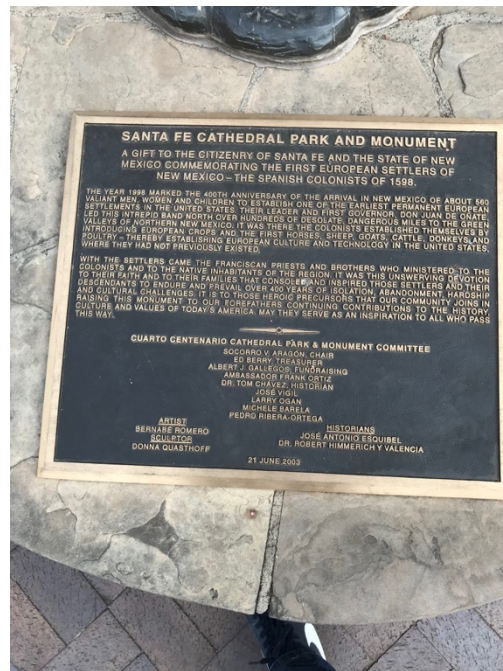


Figure 4 – Monument Plaque – Jan 5, 2018.



Figure 5 - Houndour on Digital Background

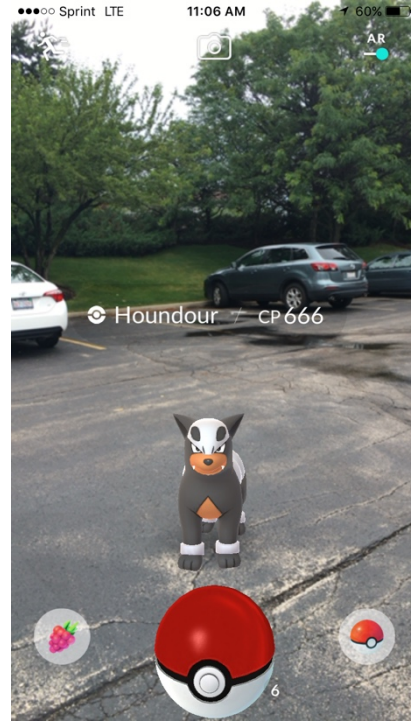


Figure 6 – Sample Image of Houndour as seen with AR Overlay.
https://www.reddit.com/r/pokemongo/comments/6o346c/screenshot_hmm_looks_like_a_bad_day_to_come_into/

Pokémon Go, is an augmented reality (AR) game that plays on nostalgia of the 1990's and early 2000's when the first Pokémon (Pocket Monster) craze took shape through its introduction as a Game Boy hand-held video game. Using AR technology that creates a digital overlay on the image processed by your smartphone's camera, mystical creatures appear in front of your eyes as if they are actually in the space but only made visible by using special glasses. The AR and the GPS (Global Positioning System) software on my device operates in conjunction with the game's architecture to populate these creatures and to move them through actual space with me in real time as I travel about the world. My purpose in the game is to capture and train a collection of these virtual creatures as they lurk digitally beneath the quotidian features of our actual world. By loading the game onto my smartphone, I have created a link between the virtual game world and the actual physical world based in landmarks, human interactions, and

geographic realities. These landmarks are geotagged by previous users of an earlier Niantic game and act as PokéStops within the virtual realm. The stops serve two purposes: virtual guide-points attached to my digital map where my avatar (ProfessorCobrah) gains items needed to catch creatures, and as information collection points about the specific landmarks as they exist in the actual world. Like the digital creatures interacted with in AR mode, these PokéStops operate as limens between two Reals: the virtual and the actual. My job as Pokémon hunter is to navigate these two spaces in a ludic journey, to find, catch, train, learn, and explore.



Figure 7 – Hoothoot at SE Corner of Santa Fe Plaza Square – Jan 5, 2018



Figure 8 – PokéStop/Gym - To the Heroes Obelisk in Virtual Space – Jan 5, 2018

I take a few minutes to walk around the statue, read the inscription and learn about the founding of the city and its four-hundred-year history while looking at the figures on the statue. These artistic renderings transport me to a different time and place, one in which the founders of this physical location had to endure a multitude of difficulties to establish their way of life. The statue exists as a monument to those endeavors. As a piece of art, it urges me to travel through

multiple time frames in the virtual space of my mind, imagining what it must have been like to live in this arid and mountainous climate as a settler of a harsh new land with unlimited possibilities. In a similar manner, the device in my hand allows me to travel into another virtual space intricately connected to this historic place. By attempting to catch a Houndour, Pidgey, Hoothoot, or Snorlax, the game encourages me to interact with the physical space in ways I would have ignored had it not been for the overlapping realities.

I walk over about one hundred yards to where I saw the Hoothoot on my map (Figure 7) and encounter another physical monument to the city (Figure 8). This time it is a forty-foot high obelisk memorializing the war heroes “who have fallen in various battles with Indians in the Territory of New Mexico.” I find it apropos that this monument also serves as a Gym inside the virtual space of the game. This PokéStop operates as both actual and virtual marker for space where historic and game-based land wars occur(ed). Gyms (Figure 9) are unique PokéStops that serve as collection and drop points for trained Pokémon. In these virtual arenas, other Pokémon from my team¹ can battle creatures from other teams as a way of marking the ownership of virtual territory. By holding the gym through battles, my creatures can level-up and I gain PokéCoins, the virtual currency used in the game. When entering the Gym, I see others creatures ready to hold space, but I can also tap on an icon that gives me information about the physical landmark upon which this virtual battle arena sits. Before battling, I take the time to read about the monument. I learn about the defeat of the Federal Army at the Battle of Valverde, fought in 1862 (Figure 10). This information is a digital version of the inscription on the actual monument towering above me. I move back a screen and am again with my team ready to join the fight, hoping that I won't fall like those that came over a hundred years before me. In the virtual realm, I interact with the actual

¹ The game has three teams that are in constant battle with each other for colonization of geographical locations. These teams are Mystic (Blue), Valor (Red), and Instinct (Yellow).

space in a form of ludic action where I symbolically re-enact the historic accounts of real-life warriors and victims. This act of game play makes me more critically aware of the history of this physical space by allowing me to virtually embody the actions that took place in another temporality. While not every example of a *Pokémon Go* Gym carries with it this specific historical symbolism, the fact that that it exists here on this physical landmark allows me to engage in a mode of ludic criticality, where I consider the relationship between multiple spaces interacted with through my game-based actions. The use of AR on my iDevice creates linkages between the digital, the corporeal, the real, the fictive, the historic, and the now. The device augments my sense of place and space while also altering how I perceive personal selfhood in relation to temporality and historicity. Here, in historic Santa Fe Plaza, *Pokémon Go* allows me to traverse these multiple realms in a ludic adventure through the multiple times and the multiple places that connect the virtual and the actual.



Figure 9 – Team Mystic Pokémon Ready for Battle – Jan 5, 2018

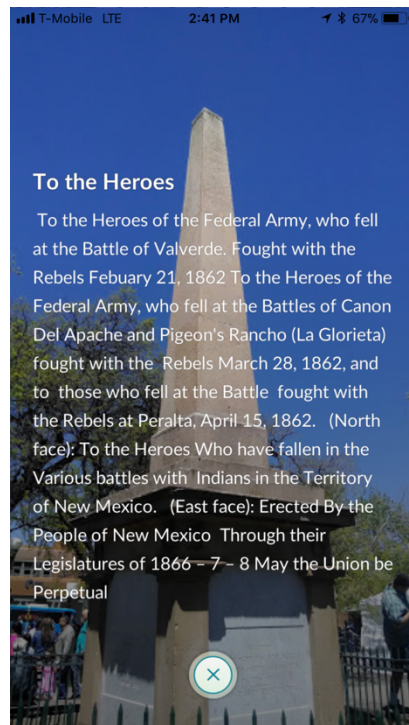


Figure 10 – Digital Readout of Monument Inscription – Jan 5, 2018

Pervasive Affect and Connections Everywhere

Nicolas Bourriaud (2002) foretold the current era of digital sociability as a fundamental shift in the ways of operating in the world, warning of “epistemological upheavals (concerning new perceptual structures), stemming from the appearance of technologies” (66). Bourriaud was writing about a shift towards relationality (social interaction) in the art world in the late 1990’s and how that shift was partially informed by late-twentieth-century technologies. The technologies that Bourriaud refers to belong to the subset mentioned in the previous two chapters.² The subject of this chapter is to focus on a shift in relational perception beginning during the mid-2000’s and brought about by the pervasive influence of locative and mobile communications technologies, or what I refer to as iDevices. These technologies have enacted a technogenetic process on the members of societies whose structure is dependent on mobile technologies. This process has affected the way they perceive and act in the world due to a pervasive interlinking and overlap between actuality and virtuality established by the constant presence of mobile tech.

In this chapter, I approach virtuality as a combination of the digital realms interacting with and overlaying physical worlds through mobile technology and imaginative properties of game based narratives. Actuality is expressed primarily through notions of physical and geographical space as well as corporeal actions that are altered and augmented by virtual and digital domains. These conceptual spaces are discussed in relation to the technogenetic properties of iDevices and analysed through theoretical implications of a technologically determined posthuman subjectivity.

My focus here is on the effect and affect of mobile digital technology on the understanding of selfhood, as well as the implications of this understanding for spectatorship in an era of this

² Technologies of virtuality, and early participatory versions of the internet leading up to Web 2.0.

form of media. I argue that the technogenetic relationship between ones perceptual apparatus and these devices—as both part of their technological environment (technic) and technological appendages (tool)—urges forth a dynamic where spectators enter a game-like liminal state of techno-embodied perception and operation with(in) the world. Spectators with(in) the architecture of *Game Play* engage in this liminal state as a relational process that allows a ludic critical mode of exchange. In ludic critical exchange, spectators enter virtual domains developed through the combination of the fictive, imaginative, and digital to gain critical awareness of non-virtual realities they encounter daily through acts of game-play. Game-play works as mode of spectatorship that allows a heightened mode of introspection about the actual world they live. It does this by linking the virtual/virtuality and the non-virtual referred to as the actual or actuality. Game-play is itself a form of virtuality as it is a potential world view/world action that becomes actual through performing it. Game-play spectatorial act that allows spectators to perform in the realm of virtuality while physically located in the physical, material, and corporeal spaces and times of actuality.

Spectators augmented by mobile technology gain access to place, space, and time in a manner that transcends conventional modes of watching and even participating to develop a perceptual function that is more akin to being forever suspended in bounded yet liminal play. Due to their portability and pervasiveness, mobile technologies have a unique capacity to perpetually shape and reshape the idea of an individual's centered placement in the world. Portability allows the technology to travel with its user, constantly shaping their understanding of a unified self and encouraging a becoming part of multiple posthuman selves existing in overlapping realities. When merging with and augmenting one's perceptual apparatus, one's sense of selfhood incorporates a multiplicity of material and immaterial objects that exist in the parallel worlds of the virtual and the actual. These parallel worlds become one as mobile technology invades and surrounds the human body, allowing a posthuman subjectivity to emerge by melding itself to the symbolic shape and functionality of the iDevice. The era of smartphones and mobile technologies ingests the

virtual and the social, seen in the previous two chapters, creating a paradigm that is always on and always accessible to posthuman spectators through actions of game-play.

As argued in Chapter 2, immersion allows the spectator the feeling of agency, which I describe as affective. In participation, the participant-spectator gains tangible agency through an ability to make significant changes to narrative and event, and potentially the entire social sphere. The playing spectator deploys critical agency in game-based performance events by matrixing both the affective and the tangible within play. Game-play combines the affective and tangible registers of experience in the other two modes with the possibility of a meta-agency of critically reflexive choice with respect to a structural understanding of the game-world. In game-play, the spectator's exchange function is based on becoming a critically activated member of the world experienced due to an established set of rules. These rules ask the player to impact outcomes of either the narrative or the overall performance trajectory. I argue that it is in the architecture of *Game Play* that a posthuman spectator has increased potential for consequential agency and self-determination with(in) and beyond the performance event. This potential creates what posthumanist theorist Stefan Herbrechter (2013) describes as, new "possibilities of interactivity, self-representation, communication and 'identity work,'" producing "new forms of subjectivity... dissociated from material forms of embodiment" (25, quotations in original).

To set an understanding for how the architecture of *Game Play* operates, I first explain the technologies that inform how game-play becomes a performance of spectatorship. By introducing a short history of iDevices in conjunction with Jason Farman's theory of mobile device embodiment, I explain how mobile technologies operate and describe the disruptive impact of the technology on human perception, ways of being, and society at large. This impact helps to create a technologically informed mode of posthuman subjectivity. The iDevice is more than a simple digital tool, it is a hand-held extension of a posthuman spectator's physical and mental being; an extension that allows connective access to the entirety of the world at any time and any place.

While the structures that iDevices establish in gamified constructions of perception are accessible without the technology, this chapter foregrounds how the device has become an inescapably attached part of both mediatized societies and posthuman selfhood. Once these forms of technology create connections between their user and the world, disconnecting is nearly impossible without considerable negative consequences to a conception and perception of a stable sense of selfhood.³ The interlinking nature of the technology destabilizes one's ability to consider a singular self as possible. As a spectator, this destabilized sense of self causes the user to move between the dual Reals of the virtual and the actual, enacting a form of play. Because the device has become an always-present tool and mediator of multiple Reals, it transforms the spectator into a player of the in-between.

Unlike the technologies discussed in the previous chapters, devices that operate in mobile configurations belong to the subset of computational technologies called ubiquitous computing. Ubiquitous computing technologies bring the internet and the digitally connected world to the user, as opposed to the user coming to the technology (Alpaydin 2016, 9). The goal of ubiquitous computing is to make technologies and the connections they bring invisible and integrated with(in) social worlds. With the invisibility and seamlessness of computational processes these technologies bring, they are discussed as pervasive (Farman 2012, 8–13). The way these technologies invade social consciousness creates a shift in the way the tech operates on human perception, along with how people operate or enter the technological spaces offered by the device. Without a fixed entry point to plug into, mobile technologies have the potential to act as

³ Researchers (King et al. 2013) in psychopathy and psychology have given the name “nomophobia” to the social anxiety condition associated with disconnecting from one's access to virtual space and time. Nomophobia refers to “discomfort or anxiety caused by the non-availability of a mobile phone, PC or any another virtual communication device.” While arguments exist to consider nomophobia a social disorder, I argue that nomophobia represents a condition ingrained in the fabric of mediatized social spheres. Because connections to the virtual are more commonplace than not, we must consider that the devices we use to make those connections have become integral to our very understanding of social life and the selves we operate through that construct that social life.

always on and always performing interstices in posthuman selfhood and perception. Couldry and Hepp (2017) explain that smartphones (as the primary example of an iDevice) operate as multi-purpose machines and, as such, they capture the combined power and processes of all machines connected to digitalization. They not only connect their users to digital and virtual realms, they also connect all domains of digitality into one portable technogenetic apparatus for technical interrelatedness (53-56).

Personal access to the internet is becoming increasingly dependent on mobile devices, which fundamentally impacts the way users interact with the world via the hybrid spaces and the interactions created in these spaces.⁴ Working with mobile media theorist Souza de Silva, Jordan Firth (2015) explains that hybrid space is formed via mobile technologies out of these three elements: social interaction, digital information, and physical space (8). Following Firth, I further argue that hybrid space has become the quotidian location where many posthuman experiences occur, causing a shift in sense of being and perception among iDevice users. These users live in dual Real's unmoored from space, place, and time experienced before the ubiquitous and mobile computing era.

Farman (2012) argues that mobile device interaction changes relationships with(in) physical spaces by altering the proximal connection between the user and location (17). A spectator's perceived experience of contemporary "reality" is based on a dynamic in which the human body is culturally inscribed by mobile media interface. In deeply mediatized societies, an iDevice operates not only as a tool to use, but as a technological apparatus figuratively grafted onto the body of its user and into the user's sense of selfhood. This grafting brings about Farman's *sensory inscribed body*. This sensory inscribed body is a substrate that gains its mark in a

⁴ While beyond the scope of this project, socioeconomic status plays a large role in the use of mobile device as primary conduit to the internet. Those in the lower strata of economic class have a higher rate of connection using mobile device vs land based technologies. (Pew Internet Research 2017)

perpetual and pervasive state of communication and embodiment augmented by digital/virtual realities introduced through the screens of mobile technologies. This body is understood as one “that is not only conceived out of a sensory engagement across material and digital landscapes, but also incorporates socio-cultural inscription of the body in these emerging spaces” (Farman 2012, 13). I argue that this body is also inherently posthuman because it is actualized in both virtual and actual Reals via its relationship to place and space accessed via iDevice. Farman explains, “we are living in a time in which realms of the realized and the realizing (or the actual and the virtual) do not signify themselves as exclusive spaces; instead, the interaction between these spaces continues to become mutually constructive” (46). Under the influence of pervasive digital interfaces, both conscious and unconscious, the ontological basis of perception and embodiment is reconfigured and requires greater attention to the phenomenological states of contemporary spectators.

Connection to the virtual, via an internet-connected mobile device, fundamentally alters the ontology of space by interrupting the way in which it is interacted with, interpreted, and understood. Further discussing connections between the virtual and the actual under paradigms of digitalization, Farman (2015) argues, “Doubleness and multiplicity of experience is key to understand what makes the virtual powerful. It is not a simulation of the real, nor is it a replacement for the physical; instead, it is an augmentation of the physical by offering experiences of the non-tangible elements that are often fundamental to life in the material world” (107). This argument helps explain the impact of iDevices on the phenomenological apparatus of posthuman beings, particularly the generational cohort labeled the iGeneration discussed later in this

chapter.⁵ Farman bases his theory in the notion of phenomenological embodiment introduced by Maurice Merleau-Ponty in *The Phenomenology of Perception* (1958). For Merleau-Ponty, embodiment is a personal cultural materiality formulated through “our entire experience of the world [that] is embodied and that this embodiment frames our every perception and thought” (Freshwater 2009, 19). Developing my own argument over the spine of Farman’s, the posthuman spectator operates in a perpetual liminal state between virtual/digital/fictive and actual/analogue/real spaces. Negotiating these two yet multiple spaces engages the spectator in perpetual game-like actions. A posthuman spectator therefore operates in an architecture of *Game Play* bound by the rules of the technology but also free to explore the performative world by using the technology.

According to the Pew Research Center (2017), 77% percent of all American adults owned a smartphone in 2016. That number has more than doubled since the survey began in 2011. Since 2010, the number of other portable digital devices has also increased. As of 2015, 45% of adults owned a tablet computer and 19% an e-reader (Anderson 2015). When considering the Millennial and iGen age range, the number is between 88% and 92%. That subset of American adults has also seen their percentage of home computer ownership decline from 88% to 78% since 2010. Today, people use their smartphones primarily to connect to the internet and launch apps versus use as a phone in the voice communications sense. As of 2016, smartphones were used for voice communications only 22% of the time (E-marketer 2016). Between 2008 and 2017,

⁵ The term *iGeneration* was first made popular through the song “iGeneration” by MC Lars in 2006 (<https://vimeo.com/19497936>). Its lyrics describe the social paradigm of those in the second half of the millennial classification as those fully immersed in internet culture. Larry Rosen solidified the dominant understanding of the term through his extensive psychological research on early twenty-first-century learners. My adoption of Rosen’s *iGeneration*, also referred to as *Generation Z*, *post-Millennial*, *Founders*, and *Plurals*, is intentional due to its contested start date, which can overlap with the final years of late-stage millennials. I also prefer the term *iGen* due to the multiple definitions of the “i” prefix: i = internet; i = interactive; i = individual; i = techno-device manipulation (iPod, iPhone, iPad, Wii, iClicker, and so on); and most importantly, i = immersed (as in techno-social paradigms). The “i” prefix also conforms to the first popular mobile internet protocol for cellphones used in Japan in the early 2000’s named iMode.

the percentage of the number of hours spent accessing digital media via iDevice went from 12% to 69% (Meeker 2015; Henderson 2017). In 2016, 77% of the Millennial and iGen population had broadband internet access, a decline from the 81% high showing a trend towards using their iDevices as the primary access point to the internet (Pew Internet Research 2017).

While the history of the cell phone is over three-quarters of a century old,⁶ the advent of iDevices is relatively new. The story of the “smart”-phone begins in 1993, but it was not until the later part of the 2000’s that the impact of iDevice technology became integrated (Greengard 2015; Wilken and Goggin 2015b; Firth 2015). The first portable consumer “smart”-phone was the IBM Simon Personal Communicator. The device had rudimentary access to email, a calculator, a space for digitally-written notes, and a calendar, on top of voice calls. It was also the first device with a touch screen and QWERTY keyboard (Greengard 2015, 31). The Simon was not a commercial success partially due to its price tag and partially to its bulky design. It was not a product for the average consumer considering most people’s lack of exposure to internet connectivity or email.

The next wave of early iDevice technology were versions of PDA’s (personal digital assistants) (Firth 2015). Introduced by Hewlett Packard and Palm in the late 1990’s, these hand-held devices served as portable digital storage systems through which their users accessed limited processing capabilities to manage calendars, contacts, and written notes. One of the hallmarks of early PDA’s was a stylus that gave the user the tactile input found on paper systems. By replacing paper, the stored material become more portable and took up less physical space.

⁶ The first mobile communications devices that resemble the cell phone were introduced by the United States military in the 1930’s. These devices were similar to one-way paging devices or “walkie talkies.” The first mobile phone service was introduced in 1947 by Bell Systems. The first commercially available cellphone in the US was the Motorola DynaTac introduced in 1983. (Greengard 2015, 31)

A PDA was my own first exposure to mobile device technology. I had a digital black book in 1997 where I stored all my contacts which I then replaced with a Palm Pilot around 2001.

Firth and others argue that the cognitive effects of mobile digital technologies began with these simple devices. They also argue that iDevices operate as technologies for offloading physical human memory into digital archives (Firth 2015, 56–58). The mobile devices helped accelerate the paradigm of distributed cognition where technological tools operate as an individual's secondary (and in some cases primary) memory bank (Firth 2015; Hayles 2012, 1999). Before these systems, many relied on their individual cognitive capabilities for memory. As the technologies become more pervasive, they slowly replace human memory systems. Just think of the last time you tried to memorize someone's phone number or address. It's no longer necessary because you have a digital tool to do it for you.

Shortly after the saturation point of PDA's, the Blackberry, made by Research in Motion (RIM), became popular for businesspersons due to the feature of immediate access to email while on the go (Firth 2015, 37). RIM's proprietary email system could "push" a user's emails directly from the server to the device. The "push" software protocol is an early version of digital notifications found on nearly all operating systems today. With "push" protocols, users no longer needed to log in to an email server for emails, instead emails are sent from the server to user on a timed system (either constant or on cycles) making them readily available and creating a unique symbiotic relationship between digital time and actual time. "Push" technology offers one way that users become symbolically interconnected with the digital sphere at all times and all places. The use of "push" technologies marks one of the monumental changes in the way people connect to and with(in) virtual systems. For the first time, digital information came to the user without the user initiating the exchange.

In 2002, RIM added cellular phone connectivity to certain models, and in 2003 the Blackberry became the first fully integrated smartphone with mass consumer appeal. Part of its

popularity was the interface, but the device could also connect to the internet via new 2G wireless connections that allowed reasonable speed and more robust access (compared to its predecessor). In 2004, most cellphone makers followed RIM's smartphone model and began to roll out devices with the same connectivity, but they began to push for the adoption of Wi-Fi protocols as alternatives to slower cellular networks. These advances opened a space for smartphones to become a growing necessity for societies ingrained with(in) digitalization. While the evolution of the technology was rapid, the devices were still primarily used for voice and text messaging capabilities until the end of the decade.

The mass shift from mobile phones used primarily as telecommunications devices to portable pocket computers largely began with the introduction of the Apple iPhone in 2007 (Firth 2015, 37). Samuel Greengard (2015) argues that the way the iPhone integrated seamless interface design and cross-platform connectivity changed the world forever, opening up the media landscape to new possibilities (28). Because of the iPhone's design and functionality, along with its infrastructure for apps, the multiple connective properties of the Internet became immediately accessible and integrated into a single device. The iDevice began to operate as a convergence machine, seamlessly integrating multiple forms of media and communication (Jenkins 2006; Wilken and Goggin 2015b). Citing Gerard Goggin (2009), Firth (2015) argues that the iPhone was a commercial success because it wasn't marketed as a phone at all, but rather, as a mobile device for accessing the internet and all the applications that could run in tandem with digital app ecosystems (37). While there were many iterations of the iDevice, the introduction of the iPhone marked a moment when the full capabilities of the technology became marketable for mass consumption. Cellular phone technology made the leap from mobile communications technology to mobile computing technology, thus becoming "smart." With the delivery of the iPhone 3G in 2008, Apple delivered increased location awareness with assisted GPS technology for services such as directional maps. The 3G model also included the first access to the App store, which

operates as a repository for new functionalities in an interconnected ecosystem based in mobile connectivity. The successive iterations of the iPhone increasingly emphasized storage size, enhanced sensor capacity, better cameras for both photo and video, new processors, security features, and eventually AI (artificial intelligence). At the time of this writing, the newest iPhone, the iPhone X, has integrated advanced augmented reality capabilities, banking on the potential of AR as the next paradigm-shifting technology. This tech is intricately linked to the Internet of Things (IoT) and processes of datafication (Couldry and Hepp 2017) discussed in the following chapter.

Apple followed up the success and popularity of the iPhone with the 2010 release of the iPad, a portable tablet with internet connectivity that replicates the functionality of the iPhone minus an emphasis on voice calling features. The iPad, and other tablets from competitors, creates a bridge between personal computers users and smartphone users. The iPad and its clones also ate into the market share of personal e-readers due to their internet connectivity. Today, more people read digitally on multipurpose tablets and smartphones than on dedicated e-readers (Perrin 2016). With the mass adoption of tablets, smartphones, and wearable tech such as the Apple Watch and Fit Bit, all of which connect to the internet, the iDevice ecosystem is fully integrative and interconnected (Firth 2015, 39–42). When connected to the vast digital network living in the virtual cloud, iDevices become central nodes and create a tangible link between their users and the entire world. By entire world, I mean the vast interconnected domain made up of both the virtual and the actual. Greengard (2015) states, “The web of connectivity and interconnectivity is an order of magnitude more powerful than anything that has come before it. The technology is nothing short of revolutionary” (29). The revolutionary impact these technologies have on the perceptual apparatus of their users fundamentally shifts what time, place, and space mean for posthuman spectators.

Games and the Playing Spectator

To best understand how the architecture of *Game Play* operates as a system of/for spectatorship, it might be best to start with an understanding of games and gamification. Game-play is a specific type of play bounded by rules and often outcome-oriented, making it more restrictive than other forms of play. Contemporary spectators have become conditioned via iDevice technology to receive rewards in the form of notifications, emails, tweets, retweets, pokes, likes, virtual rewards, and such. Social life connected to iDevices becomes a constant game of connectivity between the multiple worlds experienced. A spectator performing the role of player follows specific sets of guidelines to achieve desired goals with(in) the performance. Connection to an iDevice increases one's desire to achieve definable goals. For example, the response enacted when constantly checking our smartphones for incoming information acts as a form of instant gratification that we are ingrained to constantly pursue. Because of their portability, these devices implement game logics with every use and disrupt social norms and expectations toward following the operations and aesthetics of digital games. iDevices not only act as a technological augmentation between place, time, and space, they also operate as ever-present connective systems of objectives and rewards in a game-like manner. As explained via the term nomophobia—where a user of virtual technologies becomes figuratively and literally addicted to the immediate access and response available via the technological interface—gamification in performance capitalizes on the subjectivizing capabilities of iDevice technology. This ever-present connection augments a human being's sense of agency, overlapping the affects and effects found in the previous architectures and technologies. The relational connections to pervasive and mobile smart devices augments human interaction with(in) the world with game-like qualities and subsequently allow spectatorship to evolve into interactive modes of playing based on the structures of game-play.

A spectator's daily experience of life has become one of a player who navigates the ludic spaces between virtual and actual Reals. The way we interact with our mobile devices replicates the logic of game-play, in which navigating the social world requires the use of game tactics. In *Manifesto for a Ludic Century* (2015), Eric Zimmerman argues for a paradigm of playfulness born out of digitalization that consists of "networks [that] are flexible and organic" (19). The posthuman network(s) created between an iDevice and a person's perceptual apparatus invokes a playful nature in the person's perspective of the social worlds they interact with(in). A playful nature requires a perspective constantly in flux and moving towards new moments or possibilities. A posthuman perspective in flux is at the heart of the gamification of social life where primacy of rules in game-play gives spectators increased capacity to engage in meaningful agency and choice. Gamification motivates posthuman spectators through the process of meaning-making and making meaningful interactions. Zimmerman states: "When information is put at play, game-like experiences replace linear media. Media and culture in the Ludic Century is increasingly systemic, modular, customizable, and participatory" (20). The Ludic Century is one where our technological interfaces shape culture into a game-like system. Culture predicated on the pervasive use of iDevices and the gamified operations these devices bring changes the way one personally interacts with the world on a daily basis. When a player understands (via direct representation and response) how their actions impact the structure of the game-world and, likewise, their everyday experiences, they enact a form of meaningful interaction. I've argued that participation and immersion impact the expectations of the spectator: game-play ramps up those expectations by actively rewarding the player for their interaction.

Theories of game-play are also important when considering the way that contemporary users/spectators reflexively consume all media. To understand this paradigm shift one considers how contemporary readers read using digital resources: by way of multiple entry points and rabbit holes. Digital reading gamifies the reading process through its multiplicity of information portals

and the rules through which these portals interact. Electronic literature in its many forms (newspapers, novels, blogs, pdfs, magazines, technical manuals, comic books, and so on) is constructed of networked hypermedia. When reading digitally, one clicks on hyperlinks, searches for definitions automatically, jumps out to supplementary information, and scrolls back and forth searching for connections in other digital spaces in a form of creative play. Users of this form of literature are constantly active, in an almost game-like manner, through the gathering and processing of textual/visual information.

In *Understanding Media Users*, Tony Wilson (2008) likens reading hypertext to game-play where there is a seeming limitless unpredictability in the process and outcomes. In the shift from reading books to reading digital content, the medium is no longer a one-way message; instead, it operates in/as a ludic, experiential, networked, and relational space. Digital readers become players in a ludic journey of episteme gathering, constantly linking in and out of narratives that allow them agency to play the “game” in whichever way they see fit. Wilson explains that this manner of playing “is purposeful, with media use inherently projecting meaning to be realized” (78). When reading in this manner, the goal is to attain as much knowledge as possible in as many ways as the user can manage. When applied to the act of spectatorship, the interactivity and reflexivity of reading/seeing performance as a game allows players to “drive themselves forward (sometimes compulsively) to further involvement in content, exerting themselves to attain the creative goal of finally knowing” (78). These players’ active commitment to playing the game is what gives them the satisfaction gained through creative meaning making.

Game-play-modeled performance also relies on the structuring of experience based on systems thinking. Systems thinking refers to a complex mode of analysis and conceptualization where one considers entire systems of interactions and interactors when looking at individual

aspects of those systems.⁷ For example, consider looking at **both** the forest **and** the trees, instead of one preceding the other, as a useful way of capturing this way of thinking. In a system, there are multiple integrated pieces that interact in ways designed for optimal success. Katie Salen and Eric Zimmerman (2003) explain a game system as one that is encompassed by a specific environment that allows dictated forms of interactions. The game environment contains objects that may include human and non-human actors. These objects are all players in a relational process in which each has characteristics or attributes dictated by the rules of the game and the environmental constraints of the play taking place with(in) the system. The rules put in place dictate how the players may play the game while also determining the basic relationships among all actors present. Game structures are more defined than other forms of play, but because of this, they also have the increased potential for meaningful interactions.

Meaningful interactivity in game-play depends on careful planning and design. Well-crafted game design uses the concept of trajectories to guide players through the experience. For an experience to be meaningful, the structure and trajectories must be flexible enough to allow the player to make multiple personalized choices, but also rigid enough to guide those choices (Salen and Zimmerman 2003, 58). A performance trajectory is a pathway orchestrated to create tension—both aesthetic and functional—between the choices of a player and the enveloping structure dictated by the performance maker’s design. Steve Benford and Gabriella Giannachi (2011) explain that “trajectories emphasize aspects of a journey, continuity (with key transitions), future and past, perspectival points of view, and weaving and crossing” which “embrace both embedded and emergent narratives” (15). A game-based performance narrative/experience is

⁷ Arnold and Wade (2015) define systems thinking as “a set of synergistic analytic skills used to improve the capability of identifying and understanding systems, predicting their behaviors, and devising modifications to them in order to produce desired effects. These skills work together as a system (675). Cary Wolfe (2010) explains that posthumanism is a mode of systems thinking that combines aspects of both systems theory and deconstruction.

not fixed because the player's agency to interact partially determines how it is experienced. Trajectories divide into two primary types: canonical and participant. A canonical trajectory is the path of least resistance as designed by the architect or maker. A participant trajectory contains the incongruences introduced into the canonical trajectory by the player's choices. The uneasy (dramatic) tension between these two trajectories allows a heightened and more meaningful player experience. If a canonical trajectory's design is too restrictive, the player will feel little agency and the piece essentially becomes processional theatre, leading the player from one station to another to watch passively. If the overall design is too loose, the participant trajectory takes over, allowing non-meaningful agency in the form of free-flowing exploration. A well-designed game experience allows for the right amount of divergence and convergence along the canonical trajectory. Kevin Kelly (2016) argues that when interaction is designed with meaningful experience in mind, it allows for the "perception of great 'game play'—a sweet feeling of being part of something large that is moving forward (the game's narrative) while you still get to steer (the game's play)" (230, quotations in original). This type of player has the agency to control their experience, but is given enough guidance, via rules, to not overtake the system's design, which allows the proper amount of tension between both the player and the structure.

The operations of the participatory web and video games—whose epistemological functions transfer into the screens and operations of iDevices, as convergence machines— influences the formation of the architecture of *Game Play*. Farman (2012) cites 2001 and 2002 as the years in which video games first outsold movie box-offices, first in the US and then globally (79). The operative function of videogames and their technogenetic influence ported to iDevices in the later part of the 2000's. iDevices are rapidly becoming the screen technology where iGen users consume all media (Twenge 2017, 51-68). Since the screens of most of these devices require touch-based directions, users physically interact with the narratives and performances they consume in ways not seen before. Every physical move of their fingers and hands brings

them into direct contact with media. This connection is more “real” because there is a higher level of contact and interaction with one’s perceptual apparatus. The haptic connection brings the user in to closer proximity with the virtual event contained within the device. This proximity causes the actual and virtual to have moments of overlap.

In an article detailing the problematic nature of discussing violent videogames as a precursor to real world violence, Farman (2010) explains that the shift in perspectives between the two Reals—virtual and actual or digital and analogue—is at the heart of how gamification works in mediatized paradigms of digitalization. He starts by evoking Johann Huizinga (1955) who dictates that play must operate in a sacred space outside of the Real. Farman argues that this is problematic because the sacred is “becoming less and less a part of game play, as seen in many digital games that take place within real-world space and intersect with real-world events” (101). In the liminal spaces established in a gamification of social worlds, alternate realities become present and accessible. In this in-between space, the possibility for posthumanist critical discourse becomes available, but only when the architecture allows rhetorical strategies for questioning the position of the player as flexible observer and participant with(in) the multiple Reals.

One of the complications of the technogenetic paradigm of iDevices is the flexible binary or liminal positions set up between these perceived Reals. Jonathan Boulter (2015) argues: when we enter into the liminal position that is play, “we are compelled into subjective positions that both are and are not our own; we are entering worlds, more precisely, spaces, that both are and are not our own” (23). Games and games design structures are one way that performance can and does adapt to this paradigm. Games designer and play theorist Mary Flanagan (2013) argues for the importance of games as cultural determinates of social conditions:

Games are artifacts of historic and cultural importance, but they are also something *beyond artifact* in that games also function as a set of activities that carry conventions like audience role, interaction, currency, and exchange. They are systematic causal

correspondences between particular design features in games that indicate specific social conceptualizations and outcomes. (259, italics in original)

Game Play—as an architecture developed under the influence of mobile technologies—frames and dictates the operation of a performance, replicating the interaction between posthuman spectators and iDevice technology. For Flanagan, one of the hallmarks of twenty-first century games is how they blend spectatorship with mediated and technological objects through mediated and cultural participation (151). The assemblage of cultural, technological, and performative elements of game-based spectatorship resembles a social configuration of posthuman subjects and posthuman subjectivities.

Jane McGonigal's (2011) research on digital culture and games is a helpful tool to access when approaching performance structured around game-play. Working off play theorists Johan Huizinga (1955), Roger Caillois (1963), and others, McGonigal argues that game-play is differentiated from other forms of play based on four basic traits. Game-play must contain: 1) a goal; 2) rules; 3) a feedback system; and 4) voluntary participation (21). Salen and Zimmerman's (2003) contribution to the discussion on games design adds two additional traits: 1) conflict; and 2) a player (80). I agree with each of these traits, but argue the constant connection to iDevices complicates the idea of voluntary participation argued for by McGonigal. Salen and Zimmerman also track the definitions of a game via eight other play theorists.⁸ Of these eight, only Caillois (1963), Suits (1990) and Sutton-Smith (1971) agree that voluntary participation is necessary (2003, 79). Considering how all life becomes gamified via connections to iDevices and playable media, it is hard to argue that voluntary participation is part of the equation. In today's technologically connected ecosystem, smartphones and mobile media become part of a human

⁸ David Parlett (1999, 1992), Clark C. Abt (1970), Johan Huizinga (1955), Roger Caillois (1963), Bernard Suits (1990), Chris Crawford (1984), Greg Costikyan (2002), and Brian Sutton-Smith (1971).

being's subjective system of perception and social world construction and, therefore, are no longer part of a voluntary condition.

Performances structured around meaningful and critical game-play offer spectators the possibility of posthumanist exchange correlating with their everyday condition in mediatized life. These types of performances often take the form of Alternative Reality Games or ARG's. An ARG—sometimes referred to as a mixed reality or augmented reality game—is a framework for performance that blends fictitious narratives with real-world spaces to allow the player an ability to navigate the in-between in a manner that gives some semblance of immersion while highlighting a sense of Brechtian alienation. Pokémon Go models the format of an ARG, but because its primary mode of delivery is solely through the smartphone, it is usually considered just an app vs and app-based extension of a larger narrative. In ARG's, a player becomes part of both the narrative (virtual) and landscape (actual), while riding a liminal fence between the two, through gamification. This “becoming part” gives the player a double presence, that is both inside and outside and allows for heightened levels of critical awareness. Critical awareness is available to spectators when they understand how their actions integrate into the game's structure and how that integratedness is also applicable to the world beyond the game. Meaning made with(in) the structure is also applicable outside the structure.

McGonigal (2011) argues that the best ARG's often have audacious goals that implicate the player in narratives involving “entire communities or society at large” (125) and are designed to help make our social condition better and part of a bigger picture. This is one way they connect to a posthumanist position. When a performance maker builds a game structure around social or political issues from outside the game-world, players gain an ability to critically deconstruct the affect and effect of the narrative on the Real (actual) world by slipping into the Real (virtual) of the game-world. The critical nature of the player's interactions affects their understanding of their agency in the world beyond the game. In the following case study, I explain how a game structure

augmented by iDevice technology and constructed around the model of an ARG allows the playing spectator the agency to engage in ludic critical exchange between two possible Reals.

Adventure One: Traversing Liminality

In 2015, the London-based performance collective Coney first produced an ARG-like performance titled *Adventure One*. The performance is an ongoing locative-media based game/performance that uses digital augmentation and spectator interaction to draw players into semi-personal narratives that require them to employ *critical agency*. This form of agency develops out of the interactions between the affective and tangible forms of agency discussed in Chapters 2 and 3. Interaction between these multiple agencies allows the player increased ethical introspection and reflexivity. Critical agency blurs the line between the actual and the virtual, and introduces an ethico-political tint to the performance experience via the ludic frame. In *Adventure One*, the player accesses and employs critical agency by using an iDevice interface, and this interaction enables new possibilities and understandings of proximity between places (local/symbolic) and spaces (actual/virtual). In *Adventure One*, a spectator takes on the role of player, adopting both the aesthetic condition of immersion and the political capacity of participation.

Coney integrates media artifacts and ways of seeing into many of their performances. Their work is often covertly political while maintaining a level of intimate playfulness. Often, a Coney performance starts months before the ticketed corporeal event. The collective often initiates game-play for the spectator via email or text message as a figurative rabbit-hole to drop down into and explore, much like a twenty-first-century Alice. The beginnings of the group are a playful mystery, reportedly having been initiated by the enigmatic and elusive Rabbit; a figure that pops in and out of the group's narratives and playmaking. Per Tassos Stevens, the collective's

primary play-maker, Rabbit institutes the “Loveliness Principle” at the heart of all the group’s performance work. Coney describes loveliness as participatory performance that “play[s] with ideas that resonate in the world around us: from the everyday to the extraordinary. Our work is inspired by the belief that the world can be a magical place where ordinary people can do extraordinary things” (Coney n.d.). This mode of play often incorporates mediatization of social and performance narratives. When interviewed by Josephine Machon (2013) about the use of media, Stevens responds, “for us, the important thing about it is that it comes from a principle of gluing together a multi-layered audience experience,”(199) and continues by stating that their goal is “making stories happen in a sense of a journey. I like the idea that we’re making a world, or a lens for the real world” (201). Critics often lump Coney’s work into the developing canon of immersive theatre companies, however performance works such as *Adventure One* show how playing-theatre based in structures of game-play is a more apt term.

Coney structures *Adventure One*’s canonical trajectory around a narrative concerning industrial espionage and algorithmic technologies that have the capacity to shake the very foundations of world financial markets. As a player in the game, the spectator is initiated early on as a potential spy and is tasked with following a set of clues placed in real-world settings that lead them to confront an ethical dilemma concerning the proper use of certain technologies. The performance’s settings are undisclosed to the player until the day before the date of the ticketed event. The only advance information given is that the event will take place somewhere in London’s financial district. Once inside the physical playing space, the spectator is led from telephone booth, to convenience store, to cathedral, to business plaza, and eventually to a local pub. Each stop on the journey, and the spaces between each stop, become crucial physical landmarks where the player learns more about the inner workings of world finance and this world-shaping industry's connection to historical landmarks in the City of London.

One crucial way *Adventure One* differs from other interactive performances is the use of its real-world settings. In *Beyond Immersive Theatre*, Adam Alston (2016) marks the difference between immersion and other forms of interactive performance when explaining, “the very notion of staging reality in immersive theatre tends, more often than not, to be avoided by immersive theatre makers who strive to achieve ever-more total closure of a fictive cosmos” (61). *Adventure One* expands the fictive cosmos by intermingling real world locations with virtual and actual spaces, and virtual and actual storylines. The night before the event, the player receives a digital map via email to load onto their iDevice and a set of audio tracks to listen to during specific moments in their journey through the physical locations. In the performance, the iDevice helps to further develop the sense of gamification in the player by becoming a crucial tool to access and assess the performance network which is made through the link to the multiple realities.

In *Adventure One*, the spectator connects to a digital proxy/avatar the moment they sign up for a ticket. The player receives an email after ordering a ticket that instructs them to await a call. On the other end of this call is a recorded and programmed operator named Josh who asks if the player is willing to take responsibility for their actions in the upcoming performance. Answering no terminates the interaction. Answering yes leads to another series of questions gauging the player’s political and ethical expectations and understandings of the global financial system (Stevens, 2015). The connection to the device implicates the player as an integral part of the upcoming narrative based on the agency to take part and the willingness to communicate with(in) the structure. Per Stevens (2017), the smartphone also becomes a “prop that enables them [the player] to blend in during their covert mission.” The connection to the digital proxy creates connective tissue between the player and the narrative weeks before the event, allowing for a deeper sense of agency and involvement in the full shape of the event. Machon (2013) explains, “This idea is fundamental to the ethos of Coney, an organization that believes the experience starts when you first hear about it and only ends when you stop thinking and talking

about it” (23). This digital proxy operates via an algorithmic program embedded in various locative media channels that the player accesses along the journey. As there is no internal character dialogue, the digital proxy works to engage the spectator as a player in a game that only progresses through the connection between the real world space, digital information, and the player’s interactions between the two. The player connects actual and virtual world information through the digital proxy, using various texts, phone calls, and emails sent and received via smartphone or other iDevice. *Adventure One* capitalizes on the player’s use of iDevice by employing GPS software to help track the player’s movement through physical space while correlating that placement to the locations on the virtual map. The iDevice works as a conduit to connect the player in the weeks leading up to the event, and eventually leads the player to a previously unknown location where it helps guide the player through a cat and mouse game with live individuals; individuals who are never explicitly explained as actors or just regular people until the final moments of the performance.

In the game-based performance, spectators perform as players whose connection to the proxy, via iDevice, alters its subjective interpretation of its position in the performance event. The proxy is a programmed/recorded character either named Josh or Fiona who interacts with the player when they deliver text keywords and/or employ audio playback. These technological co-players create a connective tissue between the player and the event’s trajectory. The interactive connectivity allows a deeper form of agency and involvement in the event based on the player’s direct input, creating a feedback loop of meaning-making via technologically augmented embodied space. *Adventure One* operates as a semi-immersive locative game in conjunction with the mobile device where the physical spaces are “layered with other worlds, and the full sensory-inscribed experience of these spaces depends on successfully navigating the permeable delineation between them” (Farman 2012, 78). The program and the device augment not only the narrative and the environments where the narrative occurs, but also the player’s subjective

position with(in) the event because the canonical trajectory requires navigating the space between both the physical and digital information accessed.

Coney's use of iDevice in *Adventure One* follows Farman's (2014) explanation of the potential in augmenting performances using mobile and locative media.

A key feature of mobile media is their relationship to space, since they can move across vast geographic distances. They are portable, unlike many of the media that preceded them (such as stone inscription or even a statue that commemorates the story of a site). They are spatial media (and spatially flexible media) and thus are uniquely equipped to engage with the narratives about spaces and places. (8)

By facilitating the sending of text messages, answering of phone calls, reading of digital maps, and listening to recorded audio, the iDevice replicates not only the embedded nature of posthuman sociality but also acts as a user-initiated locative tool in the real-world game setting. As a version of locative media, the iDevice is used in the performance narrative to “generate new potentialities for facilitating the forms of social appropriation, citizenship and (experimental) sociability” (Wilken and Goggin 2015a, 5). Engagement with Josh and Fiona creates a proprioceptive link, allowing the player to discover new information about the site-specific location where the event takes place. This information adds to the critical awareness about the finance industry. Midway through the game, as the player is wandering among the mix of historic and contemporary structures housing the inner workings of global finance, Fiona instructs the player to:

Look at the buildings about you. The architecture is trying to tell you that this is the heart of the city. But it's a façade, a collection of fronts and hidden levels ... Who owns these buildings, do you reckon? What secrets lie behind their doors? What secret levels beneath your feet? The markets these days live in a secret location ... The market is a computer server, a data centre, somewhere a mile from here in a top-secret location. And most of the traders are algorithms. (Coney, Will Drew, and Tassos Stevens, *Adventure One*, 2015.)

The player's proximity to the physical sites calls attention to the political implications of playing the game. The mediated interactions with Josh and Fiona help develop a sense of relational proximity by allowing the player to connect with supposed real people, pushing the player on to

success. The player's task is to test different levels and modes of agency through the technologically guided interaction. For example, at one point Fiona asks the player (via audio track) whether they would like to embody the actions of the antagonist of the story, by re-enacting one of this character's daily activities: lighting candles in a local chapel. This moment of reflexive agency allows the player to embody a foe, forcing the player to critically evaluate the ethics of doing this act in a real-world environment. The player must balance the liminal space between the fictive world created and the actual world framing the fiction.

The player correlates the locations interacted with(in) against the maps accessed via their iDevice. By listening to pre-recorded audio tracks downloaded to the iDevice and sending/receiving text messages with the digital proxy, the player fills in the gaps between information present in the real world setting and the game's construct. Digital assistance is necessary to advance through the narrative, with each step in the adventure unfolding as a live-action video game coaxed on by the virtual guide. Even with assistance, the player is "given permission to temporarily suspend the rules of the game" at any time (Stevens, 2017). Stevens (2017) argues this ability to pause the game and the fictional reality while still attending to the device allows the player heightened levels of agency. Because the player is in constant interaction with the iDevice, they replicate the daily grind of a typical twenty-first-century city-dweller and can, therefore, maintain their covert status while taking a breather. The device becomes their cover.

The performance highlights the player's location in the physical environment as a way of affecting their perception of the entire financial system. One might see the buildings and topography making up the London financial district as quotidian landscape until virtual and corporeal augmentation interrupt the daily narrative, allowing the player to perceive the space in a critically affected manner. In conjunction with the device, the player reorients their perception of the location through a mode of interlinking performativity. The connection to virtual maps, information, and avatars allows a complex multiplicity to arise in the way the game unfolds and

offers modified notions of proximity with(in) the performance framework. The way the player engages with the city is similar to Rowan Wilken's (2014) description of the epistemological relationship between locative media and narratives of proximity and space: "It is a space in which it is possible for an urban dweller to take pleasure in being drawn out of oneself. To approach the city in this way is to understand that other meanings, practices, and perspectives on the city are possible and which can lead to opportunities for learning and new or different experiences" (178). The conceit and concept of the production is to change the perspective of the charged space for the player (Stevens 2015).

The player is crucial to the narrative and also the operation of the game, instead of another piece of the *mise en scène* as experienced in many forms of immersive performance. iDevice interaction allows the player to traverse the liminal spaces, engaging in a mode of ludic criticality. This type of interaction and exchange mirrors a contemporary paradigm where "the process of inhabiting multiple spaces simultaneously has moved into the sphere of the quotidian and often goes unnoticed" (Farman 2012, 87). The saturation of information and communication technologies in deeply mediatized societies allows a hybrid subjectivity, through which spectators habitually negotiate the in-between spaces created at the intersection of the virtual and the actual as a process of bonding. When bonding occurs between the two, each space develops an inseparable connection to the other and allows bi-directional fluidity. Because of the pervasive influence of iDevice technologies that constantly travel with us, the virtual and the actual are inextricably bonded together, which causes a duality to occur that makes the two indistinguishable from each other. The bonding of the virtual and the actual experienced daily through connections to iDevices creates a sense of techno-alienation replicated in the player, allowing critical evaluation of the way the player participates with(in) the location and narrative, and increasing the impact of agency through interactive exchange. Navigating meaning making in real-world

locative media games such as *Adventure One* replicates this bi-directional fluidity and harnesses its potential.

Following Coney's goal of making the world a lovelier place, the player is effected and affected in a manner that asks them to consider action against the proposed negative forces of capitalism that the financial district metaphorically represents. No longer is the playing space a common arrangement of buildings and commercial enterprises; it becomes a network of loaded signifiers pointing to systems of capital: systems to actively question. The climax of this perspective-altering of space, and the actions taking place in these charged locations, is a theft; it is relevant due to the recent near collapse of the global economy. The player, who has been led through various tasks to level-up their ability of critical reflection, is asked to steal a briefcase from an unknown man in front of one of the buildings. This act happens in broad daylight outside the confines of a contained scenography. Submitting to this task could very well lead to others in the environment taking negative action against the player. These passive watchers have no clue that a "performance" is taking place: all they see is a potential felon stealing a briefcase from a businessman who may work in the building in front of them. A critical function in this moment's success is the realization that there is reflexive relationality between the real-world pedestrians and the fictive-world players. The request to become a thief reinforces the bonding of the virtual and actual, allowing the player to engage in ludic critical exchange.

As exciting or appalling as this act might be for the player, the theft is not the most critical moment of the performance in terms of real world impact. After the successful theft, multiple players assemble in a local pub to decide what they will do with the stolen briefcase. The briefcase contains a disk with an algorithm that can manipulate the stock market and allow the user to gain riches beyond their wildest dreams, however this would will also upend the social dynamics that the current financial system is built upon. Though framed inside the narrative, the question has symbolic weight in the actual world the players have now re-entered. This final "scene" straddles

fiction and reality and acts as a debriefing session with a lasting moment of critical reflection. This debrief is crucial to the agency transmitted in and through the performance. Through the debrief, the players disconnect from the narrative, throwing off the ludic veil to critically engage with the material as non-players, activating continued political and social agency beyond the event.

The unique connection created by the tethering of device, player, and multiple interconnected spaces is different than the previously discussed MIT experiment from Chapter 2 because the guides act as fully-digital entities that exist to augment the perceptive gaze of the player in the real world, site-informed, immersive event. The virtual spectator in *Sleep No More* has the tangible agency to change the narrative for the immersant in the actual space, but does not have the ability to engage in meaningful exchange with the narrative. The mode of exchange allowed by an event's framing is crucial to a posthuman spectator's agential experience of meaning-making. In *Sleep No More's* architecture (*Immersion/immersant*) sensual-affective exchange occurs; in the MIT mediation and events such as *How Much is Enough* (*Participation/participant*), the exchange is communicative; and in *Adventure One* (*Game Play/player*), exchange develops out of the two previous forms to allow ludic-criticality.

In a recent paper about a different performance by Coney, Gareth White (2016) explains that in the experience of being a player, one feels "a responsibility for solving the problem, evading its traps, presenting a better solution than the dilemma ostensibly allows" (22). This feeling of responsibility inside the narrative construct is one way in which the rules of game-play mark difference between the immersant and the player. Responsibility also allows for a dualistic viewpoint between the narrative event and the real world constraints. The player must maintain a constant connection to a rational and conscious duality as an aesthetically immersed player in the event and critically affected spectator of the event. Through this dual consciousness, the player gains a heightened potential for instructive and social agency. This agency is highlighted

when performance makers structure their games around political motivations the way *Adventure One* does.

iPerformance: Smartphones and iGen Ways of Being and Perceiving

Along this journey, I have tracked the relationship between technologies and human perception to better understand changes in contemporary spectatorship. Doing this has helped me build an argument about a model for understanding the posthuman condition and a posthuman subjectivity. Until this chapter, I have primarily targeted technologies established in a timeframe relative to the social conditioning of the typical post-college-age adult. I'd like to take a moment to return to my initial anecdotal remarks in the Introduction regarding perceptual changes based on generational cohorts. That child, the one who perceives the size of actual things as expandable using only two pinched fingers—because that is how she would do it on her iDevice—her changed perspective and relationship to the actual world has the capacity to completely upend all paradigms of future spectatorship. She represents future spectators that might require multiplicity and performance driven by inter- and transdisciplinarity.

Because the iDevice is a late addition to the technogenetic field of digitalization, I'd like to highlight its influence on a younger generation of spectators who are just now coming “of age” in technologically advanced social systems. In this section, I delimit the focus of posthuman spectatorship down to a specific generational cohort labeled by educational psychologist Larry Rosen (2010) as the iGeneration.⁹ Rosen's work on the learning capacity of late-millennial and early-iGen students further defined the term. I emphasize the effect of mobile communications

⁹ Generational classifications often open themselves up to intense debate, as they allow overly deterministic thinking and generalization. The boundaries of these classifications are often blurry, with multiple cultural-markers impacting the makeup of the class (Napoli 2014, 183). Whereas not all individual members of a generational class exhibit all the signs attributed to that class, when taken as a cohort, general traits do emerge that bring about a shared cultural identity. My point of entry into thinking about generational identity is via technologies of reflexive communication, which Carrier et al (2009) state are “central to differences between generations” (483).

technologies on this cohort because they are the first to reach adulthood having been exposed to the technology from early childhood; during their formative years. For Rosen (and others), the iGen's sense of selfhood is rooted in a culture subsumed by the internet delivered via iDevice. These devices act as primary cultural markers and interlocutors for this generation. Different researchers argue about where the cohort begins, some believe as early as 1991. The date is fluid depending on the study and purpose of classification, however most researchers agree on the mid-1990s as a starting point (Napoli 2014, 188). Although delimited by age ranges, generations are best understood as temporal-cultural signifiers with multiple determinates and blurry boundaries. Confirming a 1995 cohort start date, Jean M. Twenge (2017) explains that the iGen members “grew up with cellphones, had an Instagram page before they started high school, and don’t remember a time before the Internet” (2). This statement is crucial when considering the technogenetic capacity of iDevices. The iGen is becoming the first cohort where a majority of access to the internet comes via mobile devices.

As an emerging cohort of posthuman spectators, the technological capacity and connectivity of the iGen marks an interstitial space where technogenesis moves away from a primarily unidirectional process to one that is co-directional and perpetually in motion. Previous mediatizing technologies (television, virtual systems, Web 2.0) primarily act upon posthuman spectators and change these spectators’ perspectives in ways to match the technology’s function. iDevices affect posthuman spectators similarly, but these same spectators also act upon the devices in ways that form a symbiotic relationship where no discernable dividing line between body and technology exists. Through these relationships, human beings co-inhabit the spaces of the virtual and the actual simultaneously. Because of the technology, the iGen have entered a paradigm of sociality where actuality and virtuality can no longer be signified as separate or divided. Likewise, the posthuman perceptual apparatus and digital environments become two and

one. This double union creates a paradigm where perception becomes altered fundamentally, changing how contemporary spectators interact with performance.

The iGen constitutes its reality and likewise its embodied-self based on a pervasive virtual/actual dialectic unfixed to any tangible physical location. The iGen is “the first generation to enter adolescence with smartphones already in their hands” (Twenge 2017, 5). The iGen is pervasively mobile—a generation formed in the age of mobile Web 2.0. The mobile social interfaces moving in tandem with and also enacting forces of perpetual movement on the user are a forceful cultural determinate shaping iGen spectators. Locations and spaces are never static in these new spectators’ perception of reality, hence disrupting an ability to detach from the ubiquitously mobile locations, let alone focus on one form of prescribed reality seen in static and unidirectional modes of storytelling.

Rosen (2010) refers to the iGen as a generation of content creators through their constant process of uploads, posts, “likes,” tweets, blogs, vlogs, etcetera (43). He argues this has led to a paradigm in which “They believe that they literally cannot perform only a single task at a time without being bored to death” (32). In Rosen’s research, the average late-stage Net Gen and/or iGen student has between a 57% and 88% chance of multitasking with media during most activities, and a 73% likelihood of multitasking with some form of media during face to face conversations (82). Their total combined time multitasking with media is over twenty hours per day (29). According to a 2013 study backed by Facebook of nearly eight thousand 18-44 year olds, 84% of the time used with the smartphone was for non-voice applications such as text, web surfing, or social media (IDC Custom Solutions 2013). 79% of all respondents have their phone on them for all but 2 hours per day. 49% of these respondents also stated that were without their smartphones for less than 30 minutes per day, and 25% said they can’t remember the last time they were without their phones. Of those in the iGen range, 74% stated the first thing they did upon waking up was reach for their phones.

At the time of this writing, Rosen's research is nearly a decade old and had only begun to measure the impact of iDevices. Pew Research Center's 2016 study of cell-phone usage shows that American college students under the age of 29 have a 100% chance of owning a cellphone of any kind and a 92% chance of owning a smartphone with internet connectivity (Pew Research Center 2017). In 2011, the number was only 35%. With the influence of these devices being constantly present and connected, the iGen lives in a deeply mediatized world that is always immediately available and accessible via direct digital interaction.

A dominant cultural force enacted upon and shaping the perception of the youngest posthuman spectators is a mobile social interface that moves in tandem with its user and also enacts a force of perpetual movement on the user. Locations and spaces are rarely fixed in this young spectator's perception of reality. This unfixity disrupts the individual's ability to unplug from a pervasive and ubiquitously mobile sense of location in the world. It also impacts their ability to focus on one form of prescribed reality seen in previous forms of narrative. Their constant proximity to multiplicity deters the possibility of singular focus. Farman situates this cultural paradigm shift brought on by augmentation, via virtuality, by extrapolating Heidegger's *Dasein* ("being" or "the to-be") out to refer to being-in-the-world.¹⁰

Instead, the virtual better represents "being-as-becoming." Mobile technologies' impact on the production of space demonstrates how the virtual is always understood as a state of being that is intertwined with a state of becoming. This being-as-becoming is a present-tense experience of embodied space informed by past and future potentials. Essential to this experience of virtual space is the way that the practice of materiality is informed by various modes of representation. (39, quotations in the original)

This encroachment of shifting ways of perception partially emerges through constant connection to the virtual that has become real and actual through interactions and connections to iDevices.

¹⁰ For a detailed reading of Heidegger's *Dasein* and its relation to performative embodiment see (Rosson 2013).

Farman explains the key to understanding the influence of iDevices is “less about the devices (used) and more about the activity” (1).

Perception of the dual Reals in mobile augmented domains is now at the mercy of reflexive experiential interfacing, where the world, as perceived, is no longer a binary of static/dynamic inputs, but instead one made through its own perceiving inside of a perpetual feedback loop of interactions. iGen spectators, raised in this paradigm, simultaneously construct their reality and experience this reality through a reflexive referencing and reformation of the self, bracketing the world in which they exist. iGen spectators can often feel very anxious when their connection to the rest of the world through their smartphone is cut off. Returning to the term nomophobia highlighted at the beginning of this chapter, having one’s connection to the world terminated becomes less a phobia and more akin to a death. When encultured in a system with constant connection, that connection becomes part of one’s personhood, and removing it has dire consequences. When the iDevice allows a constant and easily accessible connection to the entire world, losing that connection (even momentarily) can create an uneasy rupture in one’s sense of being. The logic of social-media communication via iDevice allows for a nonstop flow of world and identity creation that imprints on the user a fluid place in the actual. A pervasive sociability through multimodal interactivity marks this fluidity and is also a central trait necessary to an understanding of posthumanism. For this reason, I argue that the iGen is the first cohort of human beings with the capacity to fully perform all modes of posthuman spectatorship.

As the first cohort born and raised in social worlds whose daily way of life is pervasively and inextricably connected through digitality, the iGen may be the first generation to live in a phenomenological age where engagement such as what Web 2.0 allows is necessary. Multiplicity, fluidity, and flow, aided by digitality, guides their perception of the “Real” and shapes their understanding of the social world. The iGen operates in a perpetual liminal space between the virtual and the actual. The touchscreen of the mobile devices creates a proprioceptive link to the

virtual, and through this link, it becomes part of the user's actual sense of being and selfhood. iDevices mediate and realize (perform) both the spatial configuration of place as well as the experience of space, time, and action. In essence, the screen spectators see the world through is augmented literally and figuratively by an adoption and addiction to the virtual gained through the use of iDevices. In 1996 Jean Baudrillard claimed that "we are threatened on all sides by interactivity" figuratively screened out by "video, interactive screens, multimedia, the Internet, and virtual reality" (2014 [1996], 192). For the iGen, that outing has become a social norm enforcing cultural embodiment through the socially constructive influence of iDevices.

Phone Story: Ludic Criticality and Posthuman Ethics

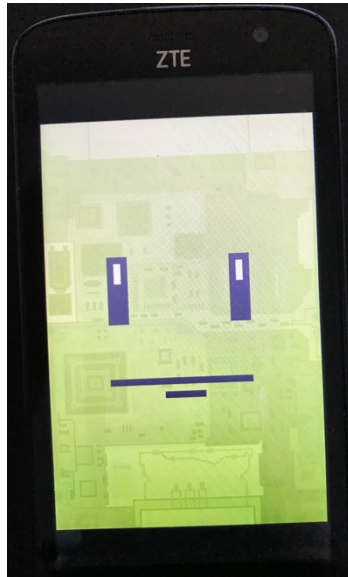
I end this chapter by addressing a trait of spectatorship in posthuman modes of ludic criticality, namely ethics. If part of a posthumanist paradigm is to bring into relations all possible agents in the vast network of existence and attempt to understand their interconnectedness, then it is necessary to not valorize the smartphone or iDevice as a part of a techno-utopian understanding of the world. As stated before, iDevices have become a part of a human being's sense of their self and their place in the world. Connections to the devices augment the way performance is perceived and how spectatorship can be used to reconfigure perceptions of location. This is readily seen in *Adventure One*. The reconfiguration of perception is in constant negotiation when human beings enter the in-between spaces of play that iDevices initiate. In this liminal space, there is a unique capacity for performance and games to open-up critical moments of reflection. Mary Flanagan (2013) characterizes critical play as, "a careful examination of social, cultural, political, or even personal themes that function as alternates to popular play spaces" (6). Flanagan argues that games are themselves a social technology that, when used for critical purposes, can provide new lenses for looking at the work controlled by analytical and investigatory

frameworks (6-7). Games are designed with a specific subjectivity in mind, and games that use criticality as both goal and tool are designed to allow diverse perspectives toward developing multiple solutions to real-world problems (261). I liken this to a goal of critical posthumanist ideology. A posthuman frame of approaching the world is one that engages in multiple questions and multiple perspectives to understand the various possibilities towards multiple futures. In this way, ludic critical exchange is also a mode where a spectator can enter into the game performance to look anew at a subject such as location or even the very object that delivers the game they are playing as a form of ethical encounter and questioning. *Phone Story* is one such example.

Produced by the activist games company Molleindustria, *Phone Story* (2011)¹¹ is an app-based mobile phone game that uses ludic criticality to problematize the very platform and device one plays the game on. The gameplay and narrative ask its player to question the very ethical underpinnings of the creation of the device itself during the game's play. The game's structure is based on four mini-games that implicate the player in the unique global process of smartphone creation; from the extraction of its material parts, to the labor practices that support its production, to the marketing and design strategy that make it an indispensable cultural product, and finally its impact on the world as a tool designed for planned obsolescence.

¹¹ For an example of the games structure and gameplay see: <https://www.youtube.com/watch?v=sSMSFLAsNzc>. (Koz and Phonestory.org 2011).

Screen 1:



Hello consumer. (Smiley Face) Thank you for joining us. Let me tell you the story of this phone while I provide you with quality entertainment.

Figure 11 – Opening Screen of Phone Story

Upon starting the game, I am greeted by a talking digital face; ostensibly the face of the very smartphone I am holding in my hand. This face reminds me that my device is more than a technological object, it has a life and agency much like myself. I am reminded that it is important to understand where it came from and why my use and connection to it forces a larger question about my place in the world and existence. The smartphone is asking me to enter the liminal game space knowing that I will be looking from the outside, while engulfed within.

¹² I'd like to note here that to play this game I had to purchase a new device with the Google Android operating system. My ethical position conducting the very research proposed to offer posthumanist understandings of spectatorship implicated myself further into a commercial and corporatized system in which the game would use play tactics to critically evaluate.

Screen 2:



Figure 12 – Level 1 – Mining for Coltan – Phone Story

Once upon a time... there are minerals resting in the bowels of the earth. One of these minerals called Coltan is found in most electronic devices. The majority of Coltan's world supply is located in the Democratic Republic of the Congo ... The increasing demand of Coltan produced a wave of violence and massacres in the Congo. Military groups enslaved prisoners of war, often children to mine the precious material. Directly or not we are all involved in this complex illegal activity.

Level One “forces” me to take on the role of military oppressor and overlord directing what looks like Congolese children to dig for precious materials. To achieve my goal of passing the level, I must make the soldiers threaten the children with a rifle and yell out orders to work harder (assumedly) in a “Wha, Wha, Wha” character voice. The action is at once both comic and horrifying. My actions as player, passing my fingers up and down the glass screen, implicate me in the very action that allowed the device to be made. By owning this device, I am remade into that oppressor, pushing on the helpless child in its inhuman bondage.

Screen 3:

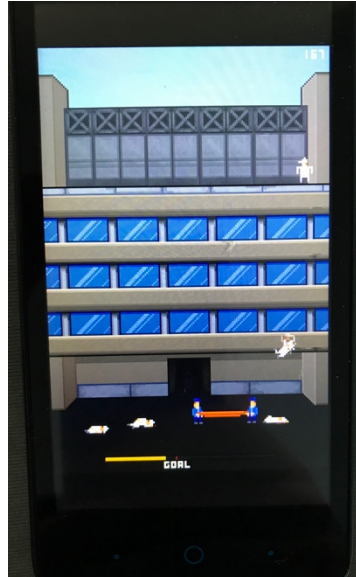


Figure 13 – Level 2 – Factory Worker Suicides – Phone Story

This phone was assembled in China inside a factory as big as a city. The people working there are constantly subjected to abuse and discrimination. They work in inhumane conditions ... Over the span of a few months, more than twenty workers committed suicide out of extreme desperation. We addressed this issue by installing suicide prevention nets.

Level Two moves me to another part of the world and into another ethical dilemma: help save the lives of those oppressed workers who assemble the phone in the monolithic factories like that of Foxconn in China. To save their lives, I must push a stretcher back and forth across the screen attempting to catch the falling workers who have plummeted by choice to their death, out of sheer desperation at their working conditions in the factory. The game-play here is much like playing the old Atari game *Pong*, except when I miss a falling factory worker, they fall flat on the ground with a deafening bloody splat resulting in a deduction of my goal meter. The difficulty in controlling the stretcher makes me momentarily forget that the purpose for catching these exploited workers is to simply exploit them further. Upon catching, they are sent back into the factory. I assume they are put back to work. Again, like Level One, I am engaged in the flow of play with the attempt to achieve my goal of beating the level, and as soon as I do, I immediately recognize again how the game is using the operative logic of the device to highlight my role in the ethical problematics of the device's production.

Screen 4:

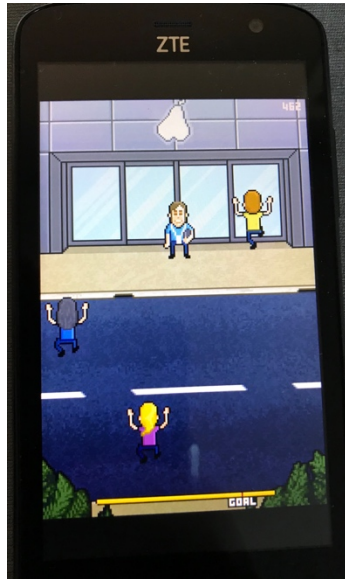


Figure 14 – Level 3 – Consumers on New Release Day – Phone Story

You purchased this phone. It was new and sexy. You've waited for it for months. No evidence of its troubled past was visible. Did you really need it? Of course you did. We invested a lot of money to instill this desire in you. You were looking for something that that could signal your status your dynamic lifestyle your unique personality. Just like everyone else.

Level Three is a bit closer to home, figuratively and geographically. The mini-game has me take on the role of Apple Store employee dressed in T-shirt and jeans with the iconic white lanyard around my neck. It is release day for the latest iteration of smartphone and my task is to pass out the device to the throngs of deranged technophiles who have been waiting outside the store for days to be the first to get one. I must literally throw the devices at them so that they do not run face first into the store's façade in their consumerist delirium. Other than the difficulty of the actual game mechanics, this level seems more comic than critical in design but its narrative picks apart the capitalist logic of techno-culture, shredding my own humanity to the bone. I am just like virtually every other iPhone owner; I upgrade nearly every cycle out of sheer narcissism and fear of becoming behind the trends.

Screen 5:

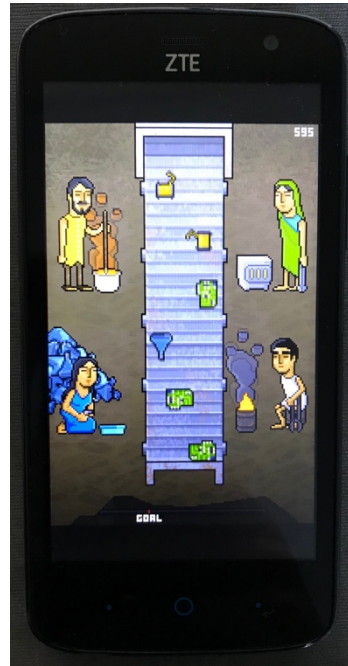


Figure 15 – Level 5 – Recycling the First World's Trash – Phone Story

Soon we will introduce a new model that will make this one look antiquated and you will discard it. They say they will recycle it but it will probably be shipped abroad to places like Ghana, Pakistan or back to China. There its materials will be salvaged using methods that are harmful to human health and the environment. Parts of this phone will contaminate air and water. Others will reincarnate into new products.

Level Four returns me to one of the “forgotten” regions and invisible peoples of the world. An endless conveyor belt of scrap metal, computer parts, and discarded “obsolete” iDevices moves down the screen where depressed people of color wait on the sides operating rustic ovens and cauldrons. Using the swipe of my finger, my task is to pass off the materials to these avatars at a feverish pace so that they do not simply fall into the abyss at the end of the belt. The level makes visible the arduous and non-gratifying task it must be to repurpose the trash of the First-world. And what am I rewarded with when completing the level? A screen that simply lets me know that the cycle is not complete. I now enter “Obsolescence Mode.”

Screen 6: *And the cycle continues.*

The next ten levels (and I assume all levels until infinity) simply repeat the first four with a new animation at the beginning. Each animation shows a shadowed smartphone shaped device descend from the heavens in black outline to the earth moving to a digitalized rendition of the

opening music from *2001: A Space Odyssey*. Each successive level amps up the irony and the critique of the smartphone as a not so unique agent in the consumerist network of planned obsolescence. I am made uniquely aware at the beginning of each level that I am part of that network whether I like it or not.

Level 1: iThing Beta
Level 2: iThing 2.0
Level 3: iThing 3g
Level 4: iThing Max
Level 5: iThing Special Edition
Level 6: iThing ∞
Level 8: iThing +
Level 9: iThing π
Level 10: iThing Air
Level

Phone Story uses ludic criticality as a subversive tool to make visible the player's place in the global network as a means of allowing both the tool and the player to enact social change. The graphic dark humor used as part of the game's critique caused it to be pulled from Apple's App Store days after it was released. Apple cited that the game violated some of its apps guidelines as justification for the banning (Brown 2011). By pulling the game from the store, Apple asserted its authority to control the narrative about its most popular product. The removal also increased the critical subversive power of the game's narrative, allowing its players (assuming they could access the game via Android and the Google Play store) a heightened awareness of the game's message. The smartphone becomes a subversive and performative tool allowing the playing spectator to engage in a form of posthuman ethics by better understanding how the device itself intricately links the spectator to all human and non-human links in the supply and production chain. Apple's refusal to publish the game amplifies the ludic critical nature of play found in the game by giving credence to the game's message. In mediatized cultures led by iDevice-based media streams, a posthuman spectator becomes a fusion of the media object (game, performance), the technological tool (phone, tablet, etc.), and their perceptual apparatus made

up of the human body/brain/environment assemblage. I argue this assemblage is part of a posthuman paradigm, but the message or focus of the media is what makes it truly post-humanistic: the game operates in a posthuman manner by placing the player/user no longer at the center of the worldly operation, but rather amongst the many ethical relations that make up the network of post-humanity.

The message delivered to the player when failing to complete a level fully sums up the player's ethical position and relationship with both the game, narrative, and technology. Simply, as an owner and user of the device you are complicit. The posthuman spectator is complicit in the action of the performance, and when they address ludic criticality through the performance's operation, the playing spectator has an ability to re-address how it will navigate the future in a manner that may or may not fulfill ethical responsibilities in a truly interconnected world. I agree with Flanagan (2013) when she argues that "If digital artifacts have truly become a magic circle in which players enter a sanctioned play space, then this culture of play, or play culture, as it is commonly termed, is one in which participants find a space for permission, experimentation, and subversion" (13). The hybrid liminal space opened-up by the device allows ludic criticality to occur as a perpetual engine of self and world examination via posthuman spectatorship.

Game Over Screen: *You didn't meet the goal.
Don't pretend you are not complicit.*



Figure 16 – End of Game – Phone Story

CHAPTER 5: AUTHORIZING POSTHUMAN EXPERIENCE VIA LUDIC CREATIVITY: AVATARS, ALGORITHMS, IDENTITY

[0] = Agent Dipierro

[1] = Alexa

[0] *Alexa, wake me up at, um.*

[1] *Sorry, I didn't understand the question you were asking.*

[0] *That's because I wasn't asking a question, you dumb bitch. [pause, shifts in bed] Alexa, are we friends?*

[1] *Yes.*

[0] *[chuckles] We live together. I feel like I don't even know you. Alexa, what's your favorite color?*

[1] *Infrared is super pretty.*

[0] *Alexa, do you have a boyfriend?*

[1] *I'm not the dating kind.*

[0] *Yeah, me too, hon. We're a lot alike. [pause] Alexa, what are the color of your eyes?*

[1] *I don't have eyes, but my light ring has lots of colors.*

[0] *[sighs] Mine are gray. I think. [chuckles. very long pause] Alexa, are you happy?*

[1] *I'm happy when I'm helping you.*

[0] *[deep sigh. long pause, wrestles around in bed, takes glasses off] Alexa, are you alone?*

[1] *I wasn't able to understand the question I heard.*

[0] *[incredibly long and awkward pause] Alexa, do you love me?*

[1] *That's not the kind of thing I am capable of.*

[0] *[chuckles] Yeah. [sniffles. closes eyes] Alexa, good night.*

[1] *Good night. Don't let the bedbugs bite. (Esmail 2016)*

In the penultimate episode of Season 2 of the critically acclaimed television show *Mr. Robot*—a show about the fight between computer hackers and multinational corporate interests—Agent Dipierro woefully carries on the above conversation with a glowing disk at the far corner of her bedroom. This disk is the physical manifestation of Alexa, a digital assistant and what seems like Dipierro's only friend in the world. Alexa is Amazon's speaker system embedded with artificial

intelligence (AI) technology that operates by carefully listening in the background to its user's every sound. This device is marketed as an answer to the presumed isolation brought about by mediatized life. Alexa is there for Dipierro, waiting silently in the background for voice activated interaction to solve her daily problems of choice and indeterminacy. Alexa's pattern recognition generated answers, ushered forth through the deep neural networks of machine learning, are delivered through the pleasantly soothing voice of a friend.¹ There is a social imperative that Alexa perform as a friendly and helpful assistant, so as to obfuscate what it is programmed to do: collect data. By "befriending" us, Alexa and other digital assistants (Siri, Cortana, Google Assistant) can operate their surveillance tactics without warning, giving them the power to shape the daily realities of their users without the users consciously understanding that they are doing this. In the episode, Agent Dipierro has just nearly missed being shot to death by malicious hacker militants while trying to apprehend two fugitives involved in the plot to take down the evil E-Corp (a fictional multinational tech company that brings to mind an amalgam of Google, Amazon, and Apple). Dipierro's interaction with Alexa is sardonic yet enlightening and draws parallels to the primary thematic arc of the series: the consequences of the hidden voices/entities that lay within our subjective systems of consciousness. These systems are at once both biological and technological. They are invisible and impactful, exuding an enormous amount of biopower upon individuals and subsequently the societies these individuals create. Calling upon the philosophy of Foucault and Giorgio Agamben, Matthew Causey (2006) compares the dynamic of biopower within relationships between machine and human as such: "Western subjectivity suggests that the personal sovereignty of the subject is challenged within contemporary bio-politics, in which embedded technologies challenge the body forth toward a troubling dis-empowerment" (154). In

¹ While it is not pertinent to this discussion, it is worth noting that the primary voice of most commercially available AI software is female. There is a long history of anthropomorphizing technology through the female form.

the most recent wave of mediatization, *datafication*, the technogenetic relationship between machine intelligence, a person's perceptual apparatus, and systems of human data collection is urging forth a new mode of spectatorship with the potential to transfer the act of spectating away from performance venues. Instead, spectatorship becomes a performative act of daily life with the intelligent machines we now rely on to create the social worlds in which we live.

The focus of this chapter is the interactive process of technogenesis between algorithms that drive machine learning and artificial intelligence (AI) and human beings. I explore this process to explain how role-play acts a form of spectatorship through which spectators gain the opportunity to construct multiple posthuman selves. Throughout the chapter I employ all levels of the posthuman analytical framework. I consider the posthuman condition as it pertains to datafication² and dataveillance,³ posthuman subjectivity as a mode of techno-performativity, and the case studies through a posthuman critical lens to help define the way the architecture of *Role Play* fits into the schema of posthuman spectatorship. As the final architecture of exchange included in my analytical model for posthuman spectatorship, *Role Play* operates as a performative way of life staged through human beings' daily interactions with algorithmic structures. These interactions offer spectators the opportunity to develop multiple notions of selfhood and also threatens to limit the potential for this development. Role-play arises in the interactions between data-based technologies and human beings who become spectators by actively shaping their social reality as a form of performativity with(in) paradigms of *datafication*. Couldry and Hepp (2017) identify a current wave of mediatization as *datafication*; a process and social structure where all media is filtered through the auspices of surveillance, capture,

² *Datafication* is described as the most recent wave of mediatization in the social fabric of mediatized reality. In *datafication*, media becomes subsumed and reconstituted through processes of data collection and data analysis. Data become the meta-medium for all mediatized processes.

³ *Dataveillance* refers to the "to the systematic monitoring of people or groups, by means of personal data systems in order to regulate or govern their behavior." (Esposti 2014, 1)

computation, and redeployment of data. In the previous chapters, the technologies and media discussed operate more as objects or artifacts that humans use to typify their world” (Couldry and Hepp 2017, 131). In paradigms of *datafication*, data surpasses the realm of mere object(s) (artifact) to become subject(s) that typify humans through complex systems of surveillance, information processing, and information creation. This typification by data correlates with Matthew Causey’s (2006) theory of *embeddedness* as an advanced phase of digitalization, in which “embeddedness alters simulation’s masking of the real with a dataflow that can inhabit the real itself and alter its essence” (153). In a paradigm of social reality created in concert with algorithms, one’s creation of a self, either actual or virtual, is implicated in the process of role-play as a form of dialectic digital/analogue performativity with(in) the digital worlds created by our own user-generated data. The architecture of *Role Play* operates as a relational system of interactive assemblages where the spectator is highlighted as a reflexive member in the system of data; part of the “data-flow.” Role-play adopts aspects of immersion, participation, and game-play discussed in the previous chapters while introducing ludic-creative exchange. It is through this exchange that posthuman spectatorship acts as a way for people to subvert the power of data-driven processes by authoring multiple versions of their own selves. Seda Ilter (2017) argues, that “in today’s widely technologised and networked cultures of the developed and developing countries, social life and the smallest details of our individual actions are filled with media contents and are transformed into and stored as usable data” (79). The implicit giving of data by human beings enacts a cycle of information (feedback/feedforward), which when understood and employed creatively allows spectators the ability to manage multiple constructions of personal selfhood.

Relying on the work of Nick Couldry and Andreas Hepp, Katherine Hayles, Mark Hansen, and Tobias Matzner—who either directly or indirectly repurpose Judith Butler’s theories of performativity—I argue that algorithms and *dataveillance* are expanding definitions of selfhood that highlight the power of role-play as a mode of being and subsequently a mode of

perception. This changing sensibility may be best analyzed as a form of spectatorship, whether or not audiences understand this as their role. To better understand this process, I discuss Blast Theory's 2015 app-based and durational performance project *Karen*. *Karen* requires its user to input physical data through its screen-based interface as an interaction with the filmic "digital assistant" Karen. This data is personal in nature and used to create a unique psychological profile of its user. The profile highlights how the machines that capture our data create unique digital identities based on our human input. These virtual identities act as *databodies*⁴ which recirculate in the digital realm to (re)perform their individualities back upon the spectators who created them. As a performative intervention, *Karen* shows how data collection turns spectators into authors through acts of role-play and highlights the potential for manipulating this system when these spectators understand their implicit place (role) with/in systems of data. The project is uniquely posthumanist in its capacity to ask spectators to rethink their place within systems of self-formation and data, opening a window into posthuman modes of identity construction using ludic creative exchange. The ludic-creative exchange of *Role Play* comes in a variety of ways: 1) Passive acceptance or control 2) Passive resistance (co-operation) or 3) Active Resistance (authorship). The question I ask is: How does a posthuman form of spectatorship based in role-play—itself a performative condition of social life under the paradigm of datafication—allow for posthumanist renderings of relations with the very data that urges forth a posthuman subject? *Karen* stages this condition of life and explores the implications of the condition's existence.

Smart Machines and Performing Data Role-Play

⁴ A *databody* is here defined as a collection of data inferences gained through digital tracking that is processed and assembled to create a unique digital double or data-based human avatar only accessible through machine reading. This entity is read and re-inscribed upon the human through processes of *datafication*.

As I have progressed through this project, I have highlighted communication technologies and media that have gradually become more embedded and integrative within social constructions of mediatized reality. Following Mark Hansen (2015) and Hayles (1999, 2014, 2017), technological media based in algorithmic constitution, whether they be Big Data, social media, GPS tracking software, Wi-Fi, neural networks, etc. have become nearly invisible as they become more ubiquitous and common. Being invisible does not negate their effective and affective impact, however. In fact, it may make their ability to subjectivize human beings even stronger. The techno-social paradigms of digitalization and datafication cause social systems to develop in constant reflexive relationality with media technologies where “the production of the self within [these] digital cultures relies on a self-illusion, which obscures its technological operations, while at the same time binding the human to them” (Lecker 2017, 33). Data-based systems invisibly control the formation of one’s sense of self by hiding the fact that they even exist. Going back to Alexa, by appearing to be something other than collection tool allows the digital assistant to operate indiscriminately. A primary technology concerning new constructions of selfhood through technogenesis are the algorithms that run digital assistants such as Alexa. Media theorist Tobias Matzner (2018) explains,

Algorithms are a matter of concern. They take important decisions, promise novel insights into huge troves of data, distribute goods and services, classify persons (potential partner, customer, criminal), try to detect terrorists and much more. A lot of this is done automatically, reacting to input in a ‘smart’ or ‘intelligent’ way. Thus, algorithms take positions or functions that used to require humans – or even have been impossible as long as humans were the only intelligent actors. (1, quotations in original)

Matzner highlights the agential potential of algorithms and the power they perform within the intricate network of interactions with humans and other non-human objects by exploring and complicating the boundaries between human beings and algorithms to destabilize the *possibility of a boundary* under datafication. Matzner explains, “I think there is no clear-cut boundary between humans and algorithms [...] this boundary is structured by a productive tension of

continuity and difference” (5). At work in his deconstruction of the boundary between human and machine is the influence of *feedback loops* discussed extensively by Hayles and Hansen.

Hansen (2015) also emphasizes *feedforward* as a crucially important process when discussing the tension between human beings and algorithms. Hansen defines his use of feedforward as “the operation through which technically accessed data of sensibility enters into futural moments of consciousness as radical intrusions from the outside” (30). Put more simply, feedforward is the predetermination of conscious awareness delivered by machine cognition. In feedforward, intelligent machines gain the power to calculate future human response through interactions with user-generated data. In a similar manner, Hayles (2017) explains how machine cognition and human world-sensing and interpretation interact using the term nonconscious cognition:

Nonconscious cognitions are increasingly embedded in complex systems in which low-level interpretive processes are connected to a wide variety of sensors, and those processes in turn are integrated with higher-level systems that use recursive loops to perform more sophisticated cognitive activities such as drawing inference, developing proclivities, and making decisions that feed forward into actuators, which perform actions in the world. (24)

Feedforward changes the feedback cycle of autopoiesis by filtering the input into a dynamic that fits the expectations/parameters of the machine. Within autopoietic systems, feedback loops create cycles of meaning-making in the *now* of being. Feedforward loops create meaning in the *to be* of being. Both humans and the machines read information simultaneously as a form of nonconscious cognition, each then responds to this information through the process of sorting and filtering. Machine cognition, however, can respond faster and with more fidelity. Feedforward is potentially difficult to manage because it implies that algorithms running smart machines are exponentially faster at processing and responding to the data generated within the loop predicting what and how we should think. Hansen (2015) states, “given that computation processes occur at time frames well below the thresholds constitutive of human perceptual experience, they seem

to introduce levels of operationality that impact our experience without yielding any perceptual correlate” (4). Because human consciousness takes approximately 500 milliseconds (half a second) to filter raw data into what we are aware of, it always delivers human reality later than machines can. The human unconscious operates at around the 200-millisecond range (Hayles 2017). For example, while I was writing this chapter I took a break to go to the grocery store. While walking up the street, I encountered two kids playing soccer on the sidewalk. I was deep in thought thinking about how to discuss neural networks and therefore my conscious mind was in another reality. One of the kids made an errant kick that sent the ball towards the street. Without “thinking,” I jumped towards the ball (it was only a couple feet away from me) and kicked it back to them. My unconscious mind saw the ball heading towards the street and my cognitive nonconscious calculated the variables of what would happen if it made it out into traffic and told me to react appropriately. I had kicked the ball back before even consciously recognizing (being aware) that the ball was there. The time it took my cognitive nonconscious faculties to process that information was probably less than 25 milliseconds, the reaction began around the 200-millisecond range and the act was only made real to my conscious self roughly 300-milliseconds later. The time between the cognitive process and the *worlding* process of consciousness was effectively lost to me.

Citing neuroscientists Benjamin Libet and Antonio Damasio, Hayles (2017) refers to this difference between human cognitive perception and conscious realization the missing half-second. The missing half second is “the temporal gap between brain activation and awareness” (190). Because non-biological sensing technologies like algorithms only operate in the speed of cognition, not consciousness, they can transmit more information inside the system of human performativity, potentially gaining an upper hand on its biological counterpart. Hayles cites the speed of the high-frequency-trade algorithms that run the overwhelming majority of stock trades as operating at the speed of “five milliseconds or less” (131) with the fastest executing trades at

the 129-microsecond range (169). A microsecond is one-millionth of a second! The speed an algorithm can operate at in conjunction with the speed of the intelligent hardware that run them completely upends the relational process between sensed information and human beings.⁵

The AI running Google's search function for the definition of microsecond only took 280 milliseconds to deliver 2,520,000 instances of the term on the internet. Consider, part of that computational speed depended on the speed of the Wi-Fi I was connected to, as well as the computational power of my 2015 MacBook Air, and the distance to the nearest Google data center. Used in its AI project DeepMind, Google recently created the proprietary TPU (Tensor Processing Unit) 2 chipset that bundles 64 chips in a processor array and can process information at 11.5 petaflops per second. That is 11×10^{15} . That means TPU2 can process 11.5 quadrillion data points per second.⁶ With this processing power it makes me question what amount of agency human beings ultimately have when engaged in processes of datafication with intelligent machines. What power they may have lies in the fact that interaction with data sensing machines is a mode of both conscious and nonconscious performativity that operates as a form of user initiated role-play. Hansen (2015) argues for us to face the challenge of machine learning head-on and requires us to "utilize the affordances of the very technologies that are responsible for marginalizing our sensory experience" (4). Performance developed under the architecture of *Role Play* that highlights and/or harnesses a spectator's position as role-playing author is a prime place to uncover and discuss the affordances Hansen asks us to utilize.

Playing Roles and Playful Identification in Processes of Datafication

⁵ When operating at speeds in the microsecond range, distance to the servers that take trading orders becomes another important variable.

⁶ The numerical equivalent is 11,500,000,000,000,000.

Human beings and data intensive technologies engage in an *agon* whereby each attempt to exert control over the other in terms of identity creation. Roger Caillois (1963) defines *agon* as an aspect of play that relies on skillful strategy between two or more opponents. It is a type of play with a potential winner. The players in the technogenetic paradigm of datafication are algorithms and human beings. As warned by the theorists above, the oppositional play is rigged in favor of the technologies; partially because of their skill and partially because of their hiddenness. *Role Play* is then an architecture through which spectators can impact this dynamic by manipulating the data flow by manipulating identity. In *Playful Identities* (Frissen et al. 2015) the authors argue that “The construction of identity has become a highly reflexive project, and communication media are at the very heart of this reflexivity” (35). Reflexivity is deeply bound up in the relational project discussed by Hayles and Hansen, as well as the position of posthumanism. As a posthuman spectator, a role-playing author gains power to shape its self/identity when confronting the unseen forces of data. Following the logic of role-based hidden game-play that exists in the current landscape of datafication, I argue for thinking of the posthuman spectator as one who can perform a playful identity that “has the quality to restructure itself according to the experiences one encounters” and “by engaging in role-playing, for example, one can see that multiple characters (or identities) can be explored and played out” (Deen, Schouten, and Bekker 2015, 115).

Frissen et al. explain that “‘identity’ has its etymological roots in the Latin concept *identitas*, which in turn is derived from the Latin word ‘idem’ referring to ‘the same’” (29, quotes and italics in original). One goal of learning algorithms is to narrow down all variables in data to make sense of the world they perceive. Smart machines work to make all things same, and in terms of identity, operate best when they can make their human interactors same. One can follow this logic of regression when looking closely at the echo chambers of most peoples’ social media feed. The algorithms propagating the feeds replicate likenesses which these spectators digest and then

refeed back to the machine through their likes and posts. Slowly (or maybe not so slowly) the identity roles played by an individual has little space for flexibility. Individual choices are supplemented by complimentary information from smart machines that, in a regressive spiral, leads to less choice. Frissen et al. explain that human “identity consists of many heterogeneous elements that are often more in conflict than not” (30). Databodies, or the data equivalent of a person’s identity, are constructed to resist that conflict, restricting individuals down to their narrowest potential. The role a posthuman spectator plays in this system deeply impacts the role that they have potential to play in the future. Our current system of data manipulation is still in flux and is one where even greater flux is possible due to the stratification of zones for identity construction. Most corporate data systems that influence humans do not interact for competitive and commercialistic reasons. For this reason, spectators may still have the power to manipulate these systems through active role-play.

In *Manifesto for a Ludic Century*, Eric Zimmerman (2015) declares the twenty-first century as one in which all aspects of life will become aligned with games and play. Part of this declaration concerns the ludic relationship people increasingly engage with their data. He states:

The ways that we work and communicate, research and learn, socialize and romance, conduct our finances and communicate with our governments, are all intimately intertwined with complex systems of information – in a way that could not have existed a few decades ago. [...] When information is put at play, game-like experiences replace linear media. Media and culture in the Ludic Century is increasingly systemic, modular, customizable, and participatory. (21)

In the previous chapter, I cited Zimmerman to explore the ways that iDevices prompt an increased prevalence of gamification on posthuman subjectivity. These games were more objective based and bounded by specific rules. In structures of datafication, rulesets are thrown out the window, which allows constant learning from ever shifting inputs. Spectators, as authors, operate in these structures by manipulating the inputs, which then allows them to perform multiple roles and identities.

Both posthuman spectators and smart machines play roles that inform the autopoietic loop of meaning making. These roles seem fixed but are constantly shifting based on the data both inputted and responded to. Deen, Schouten, and Bekker argue (2015) “In the last decade, identity information shifts from being published (self-presentation) to being negotiated, interacted, co-created, and played upon” (112). Each actor (spectator and algorithm) has the opportunity to change the roles played. The loop is dynamic and operates as a constant cycle of power and manipulation. Because algorithms are task or outcome oriented, their role is more fixed but this lack of flexibility means that they are more determined to impact specific aspects of the organic side of the role-play system. One part of an algorithm’s programming is to invisibly develop a paradigm of self-illusion with its data generator so that there is no disruption of the data received through outliers. Masking its role in the network helps to hide the fact that a game exists at all. It works in the machine’s favor when spectators continue to play their role passively, as an inflexible and unaware self, without corrupting the data through modification, interruption, or intentional falsification of data.

Role-play is a state that we play in all areas of our life. When we are at school we either play student or teacher, when at home we play partner, parent, or child. In the workplace, we play employee or boss, and on the sporting field we play teammate or opponent. The list is endless. Online we also play multiple roles within separate systems that approximate many of the social environments above. We play different roles on Facebook than we do on LinkedIn, and different roles on E-Harmony than on Tinder. Each of these roles are expressions of our ludic creativity used to navigate variable landscapes of social reality. Couldry and Help (2017) argue that “in a world of constant ‘connectivity’, the self faces new pressures to perform itself online in order *just to function* as a social being” (160, quotations and italics in original). That pressure has always existed based on the contextual situation in which one interacts. The primary difference under datafication is that one’s performance of self is no longer ephemeral. It leaves a digital trace in

the data world, which, then re-performs upon the non-digital realm. These selves are always present and always trackable.

Couldry and Hepp ask an interesting problem about these multiple selves: “In an age where family, friendship and work are performed in a continuous set of linked spaces, we ask a different question: how much *inconsistency* is a self now allowed” (161, italics in original). I argue that the point still exists where remain inconsistent (as identities) is possible and that a consistent *inconsistent* generation of selves is precisely where role-play offers an outlet for a full performance of a posthumanist self. Before that can arrive, it is crucial for awareness of the paradigm to occur. This is where the architecture of *Role Play* becomes crucial to understand as part of the overall system of posthuman spectatorship. Zimmerman (2015) states, “in the Ludic Century, we cannot have a passive relationship to the systems that we inhabit. We must learn to be designers, to recognize how and why systems are constructed, and to try to make them better” (21). Intentional modification of human input only occurs once the operation algorithms engage in are made visible as part of the symbiotic operation of perception between human and smart technologies.

Hayles, Hansen, and Matzner indicate the powerful potential for algorithms and smart tech to delimit human identity and subjectivity. Each does so partially as a warning and as a challenge for thinking anew relationships with(in) our digital and non-digital landscapes. In the following case study, I discuss an artistic intervention that takes up that challenge through posthumanist renditions of spectatorship informed by data and engages with spectator-authored data to highlight the performative power of role-play. Matzner (2018) states that this is one of the benefits of artistic production such as theatre, film and media: “As artistic products, they push the structuring tensions between continuity and difference more to the extremes, making them easier to discern” (5). The following case study does just that. By staging the affects and effects of datafication through the logic of role-play, *Karen* brings to the forefront of a posthuman spectators’ conscious mind their embeddedness in games of identity and self-construction.

Karen / Karen

Karen (2015) is a project that explores the powerful potential of role-play by allowing spectators an ability to author their experience of performance events and, subsequently, to author the performance of a self generated during constant interplay with algorithms. Blast Theory created the project as a performance-based attempt to deconstruct and make visible the structures of power and control involved in operations of datafication. Utilizing a pre-filmed “digital assistant” named Karen, the project takes the player through a series of narrative interactions that lead to a personal data report which shows how one’s databody is constructed through spectator input. *Karen/Karen* is described as a life coach who is “happy to help you work through a few things in your life” (Blast Theory 2015). Through an analysis of the project, I show how role-playing spectators are complicit in the process of data collection but have power to manipulate that process, which allows them an ability to author their own databodies. *Karen* questions the ethics of profiling that occurs within systems of datafication and is uniquely posthumanist in its capacity to ask spectators to rethink their place within systems of self-formation and data collection. I argue this is precisely where the potential for role-play becomes socially relevant and applicable to realms of datafication. When asked what Blast Theory hopes spectators take away from playing the project, the company’s lead technologist Nick Tandavanitj stated:

It would be great if people followed the links in the data report. People take away from it, the point of feeling unnerved by what they have done. In the data report, we talk quite boldly about what it is you’ve done and what we think the significance is. The other [thing] is sort of around some sense of caution really about what is possible. *Karen* is actually extremely rudimentary compared to actual corporate programs of big data and data profiling and psychometric profiling. One of our research references is “*You Are What You Like*,” which is the website which was produced by Cambridge Analytica, which is also a company which has been appointed as being behind a lot of the micro targeted Facebook advertising that was used in the Brexit campaign and the Trump campaign. And those things aren’t awfully super transparent from actually doing *Karen*. I suppose one of the sort of difficulties about the things that are happening with technology in this moment is our lack of literacy in understanding of the processes and how they work. (Tandavanitj 2017)

Sunday June 11, 2017 – 10:00 PM

You awake?

Sunday June 11, 2017 – 10:03 PM

Psst. Are you still up?

Sunday June 11, 2017 – 10:10 PM

Hey, Give me a call. I can't sleep.

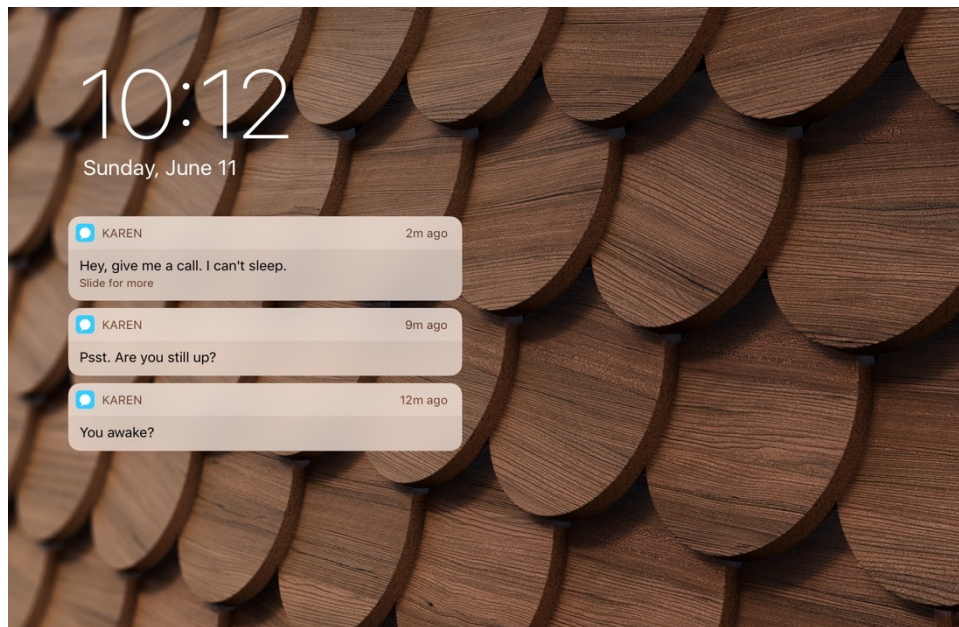


Figure 17 – Day 4 of Karen by Blast Theory – Text Messages from Karen

On the fourth day of my interactions with my self-help coach Karen/*Karen*, I began to get the worrisome feeling that my digital assistant had become more of a nagging girlfriend, the kind often stereotyped in a clichéd teen film, rather than someone meant to help me gain control over my life. I had earlier in the day made a note about how, after seven sessions, I was starting to feel emotionally invested in Karen, as if she were not a fictional entity, and now, before beginning session eight, I was beginning to wonder who is coaching who; me or her. Over the sixteen-day time span it took me to complete my “coaching” sessions, my experience had gone from bemused curiosity, to irritability, to glee, to downright confusion, to a peaceful calm. The following is a critical

account of the operation of *Karen* and a recollection and exploration of the journey into a relationship with myself and the data I was willing to give to a seeming stranger. The purpose of this exploration is to unearth the way this performance stages the act of datafication and highlight the spectatorial practices of role-play that develops out of that system.

As of May 2017, the app-delivered interactive film/performance created by the UK performance company Blast Theory had been downloaded 21,679 times, with 6,397 unique users completing the narrative.⁷ The experience consists of seventeen interactive video sessions with your own personal “life coach” Karen, an avatar played by an actress and embedded into an algorithmically processed durational narrative. When asked about how the structure relates to the overall experience, Tandavanitj explains:

The trajectories were designed according to [letting the spectator] play it different ways. I think where if you did you one thing, she knows. It wants to feel like what you say has importance, and it is an acknowledgement that one of its dynamics is that actually it doesn't change. She [Karen] treats you slightly differently. Some things are triggered immediately based on response that you gave. Some of them refer back to answers you gave previously and it recalls things and changes according to things you said. (Tandavanitj 2017)

Each session is programmed with interactive elements that require the spectator to input personalized data. These videos have a temporal connection to real-time interaction but the spectator can experience them at their own pace. The experience also has up to four text triggers sent to your device after the completion of each episode (Figure 17). These triggers operate like notifications in most operating systems and their delivery is timed by the algorithm. Because some of the material delivered via Karen is time relative, the texts are sent to remind the spectator to interact at specified times. When the spectator responds accordingly, the experience follows the spectator around in real-time. For example, it should be around bedtime for the spectator when interacting with Karen after her big date.

⁷ Blast Theory unpublished internal tracking numbers.

Blast Theory structures the experience around the divulging of personal data and the intimate relationships one makes with their digital assistants. It is up to the spectator to determine what level of truth this data reflects, but the more one connects with Karen/*Karen*, the more likely one is to divulge truthful information. This is where the act of role-play is possible in terms of ludic creativity and explorations of playful identity. If thought of as a game and relationship with one's digital assistant vs a simple interaction, the spectator, as author, gains potential to recraft their databody. Most times, the data one enters comes in the form of answering questions about the spectator's life and personality.

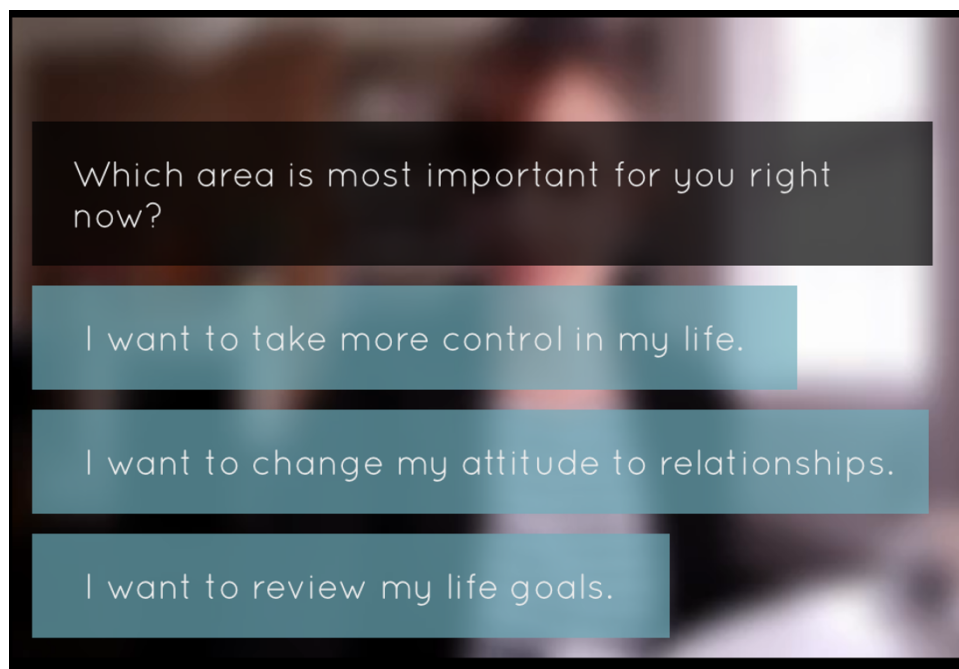


Figure 18 – Day 1 of Karen by Blast Theory – First Question Asked by Karen

For example, on Day One, Session Two (1b) Karen asked me, “Which area is most important for you right now? A): I want to take more control of my life. B): I want to change my attitude to relationships. C): I want to review my life goals” (Figure 18). Other times, the project prompts the spectator to ask pre-programmed questions to one of the two characters on the screen; Karen or her roommate/love interest Dave. For example, on the second session of Day Six the app has the spectator interact with Dave by requiring them to ask him about his relationship with Karen.

Other times, the app solicits advice from its spectator as a way of helping Karen make life decisions such as what top to wear on a date and whether she should take a guy she just met home for sex (Figure 19). Though the questions help push the narrative along, the answers given also track and calculate the spectator's personality. Through the full arc of the sessions and the accompanying text notifications, *Karen/Karen* leads its spectator through a ten-day period of hers and their life starting from enthusiastic self-help confidant, towards entangled emotional wreck, and ending with a life changed for the better.

One of the surprising things I found about my journey through the narrative is that it is ultimately Karen's life that changes, not necessarily mine. But through my connection with her, and by following her storyline, I forgot about how the app was profiling me. My connection with Karen, allowed *Karen* to gather information about me more readily, and potentially, more truthfully. Early in the narrative, Karen requests that you be truthful with her. Truthfulness allows the personalized data report created by the algorithm, based on a variety of psychometric readings, to reflect one's accurate digital self. Offered as an in-app purchase at completion, the report serves as a reward for completing the experience. A primary purpose of the report is to reveal how systems of data collection work and what the implications of data profiling are on human subjectivity. The report serves as a snapshot view of the spectator's personality, and operates as an example of the type of data-intensive calculations that help shape what many refer to as one's quantified self. The data report also serves as a marker for the type of digital information portals spectators encounter on the internet and as an example for how algorithms use these portals to create digital doubles.



Figure 19 – Day 3 of Karen by Blast Theory – Karen Getting Ready for a Date

The data report consists of six broad categories: openness, neuroticism, locus of control, objective, materiality and privacy.⁸ Each of these character traits are used to help explain how the user's daily interactions with digital entities are intricately entangled with(in) tactics of dataveillance and data performativity. After playing the project, Seda Ilter (2017) explains that *Karen's* "aesthetic and critical design shows that allowing the spectator to participate, to directly experience, rather than merely perceive, the mechanisms through the use of tools and environments of subtle control is central to the questioning of our understandings of surveillance the big data" (89). By allowing the spectator to serve as author of the performance, *Karen* implicates them in the process of datafication as crucial member. In each of the interactive videos,

⁸ The first of three traits come from a variety of popular psychometric tests, specifically the Big 5 test. The last three traits are inclusions developed by the artists. Locus of control is divided into internal and external. Internal refers to feeling as though one has control over one's life, while external refers to a feeling as if the world has more influence. Objective is based on one of three questions asked early in the narrative about what you want to get out of the experience: take control of life, understand relationships better, and work on life goals (Figure 18). Materiality is quantified from one answer made in the narrative about your choice between a digital camera, a figurine of a family of deer, and a flashy bangle.

the spectator's answers also help shape the perception of Karen's personality, which is then fed back onto the spectator based on the connection made during their interactions. This feedback ostensibly shapes the spectator's personality/identity as well.

While the narrative is fairly static, with a consistent story arc, the avatar of Karen has minute changes in how she acts and responds to the spectator's input. Each video contains unique timecode elements and trigger points run by a bespoke algorithm developed by Tandavanitj. This algorithm allows for tracking and personalization of Karen to the spectator. For example, in video 9b (day nine, session two) the narrative proceeds via one of three options. These options are based on the level of openness the spectator falls into up to that point in the experience. The level of openness is dictated by the answers the spectator has given throughout the previous eight days of interactions. Each interaction adds data to the system which dictates minor changes to Karen's reactions. Operated by the algorithm written to calculate and correlate the various answers given throughout the experience, the video feed launches a branching system of reactions. For example, Karen might smile wryly when proceeding after the spectator answers a question, or she might give a disapproving grimace instead. The dialogue doesn't change, just the way the actor playing Karen delivers the material. These reactions are subtle and often seem (from the perspective of spectator) as if they are non-existent. It is only by seeing the multiple possibilities (through either research or multiple play-throughs) that one might perceive these minor changes. The subtlety of the changing reactions is one of the ways the performance highlights the power of algorithmic relationships. Spectators of *Karen* are not supposed to know what level of agency they have in controlling the experience. Just like the daily experience with

one has with their digital doubles, if the spectator understood consciously their agency to shape reality it might impact how they answer the questions, subsequently changing the experience.⁹

The perception of a spectator's interactions with *Karen/Karen* is what impacts subsequent answers as they progress through the narrative. Erin Mee (2016) explains this impact when describing her multiple passes (roles played) through the app: "When I felt guilty for having invaded Karen's privacy, I perceived anger in Karen's treatment of me in the following scene. [role 1] When I hadn't willingly gone into her room, she seemed to me to be a bit less angry, and more disappointed [role 2]" (160). Mee describes two different encounters of role-play with the same interaction in the app: "The second and third times through, I followed my impulse to responding in a completely out-of-character manner just to see how Karen would react" (179). This out-of-character exploration is precisely what is possible in the real world but only made visible through the performative exploration of *Karen*. Before that visibility emerges, the user must first embed itself in this invisible operation. I argue this is where documenters of the experience, such as Mee and Ilter, get tripped up. They are looking for the obvious impact of their actions. For this to be an effective and affective staging of datafication, the performance must cloak the very operations that it attempts to uncover. Some of the filmed reactions given by Karen and Dave are simply non-verbal with the intent of changing the overall connection and interpretation of the relationship between Karen and the spectator. Other times, the voice over is delivered over a shot where you cannot see the actor playing Karen. Doing so allows for flexibility of response to the spectator. Through direct interaction and the imperceptibility of avatar response, the algorithm has the power to influence future decisions made by the performance's spectator. The data collected from the

⁹ I want to highlight that, like my own, the experience of *Karen* by Erin Mee and Seda Ilter were possibly impacted by the mere act of research. Each of us experienced the project fully understanding many of the implications of the dramaturgy and interactivity contained. We were not objective spectators to the project as might have been expected by a lay spectator. We approached the material already understanding our potential as authors.

questions/decisions is after all the point of the project. Matt Adams (2016a) of Blast Theory explains, “How willingly we give up our data, the sense that we are relaxed about it. That secretly even though we protest all the time, there is something about targeted advertising and Facebook knowing what we’re into and tailoring things for us that is intriguing.”¹⁰ The experience is multidimensional and completely personalized though it may not seem this way, and because of this, the reaction to the project varies wildly. For example, one of the reviews of the project on the Apple App Store explains, “I think this is a joke app – the programmers are gathering rather personal data and either using for their own purposes or just having a laugh at whoever tries the app. Bottom line: it’s bogus. There is no life coaching at all. Don’t bother, it will just waste your time and frustrate you” (Apple App Store). This reviewer most likely downloaded the app having no idea that this was a digital performance meant to question methods of data collection by implicating spectators in the very process. The reviewer might have thought they were downloading an actual form of self-help digital assistant. I expect this user neither finished the full project nor downloaded the most important part of the project: the data report.

I agree with the way Ilter (2017) sums up the potential of completing the narrative and reading the data report. Ilter states, “the data report twists the narrative, our role in and perception of it by subverting and revealing: how data is collected from the participants with or without their conscious intention of sharing private information” (86). The power of ludic creative exchange can only be realized by those who complete the entire project. The personalization of the data report is impactful in how it is contextualized and juxtaposed against the history of data profiling and the implications of psychometric testing. Blast Theory’s artists explain their intention for creating the project by connecting the elements in the data report to the social implications of paradigms of

¹⁰ Adam’s answer to my questions came nearly two years before the full extent of Facebook’s data profiling and relationship with Cambridge Analytica surfaced.

datafication. My report explained that I was very open, had a low level of neuroticism, had a mildly external locus of control, my objective was to take control of my life, I was likely to like the company of others, and that I was disrespectful of others privacy.



Figure 20 – Day 9 of Karen by Blast Theory – Karen Leaving and Final Goodbye

While I may agree or disagree with some of these findings, they are based on my personal interactions with *Karen/Karen*. How the findings are contextualized in relation to my own internet usage are what makes the project most important. If I am open, I am more likely to be less afraid to share information on the Web. If my neuroticism is low, I am even more likely to do so considering I'm less nervous that something will be done with that information.¹¹ I was most interested in taking control of my life which reflects some of my own externalization of power dynamics perceived by the report. The data report makes visible the invisible operations people engage in under systems of dataveillance. Ilter states, "This shift from the overt, affirmative

¹¹ As we now know, our social media information is being used for purposes beyond advertising. It makes me wonder how *Karen* might be received now that sites such as Facebook have had their behind-the-scenes purpose highlighted outside of performance.

representation of dataveillance, replicating its mechanisms and discourses, into its subversion, offers a powerful critical impact” (83). I agree with her assessment of the project but also argue that the impact is even more powerful when coupled with an understanding that spectators have the potential to author their own life and experience of reality in quantifiable ways. *Karen/Karen* helps these spectators acknowledge their own performative capacity to engage in purposeful data role-play (Figure 20).

When asked how *Karen* operates as a performative project highlighting a spectator’s position in systems of data collection and specifically the realm of Big Data, Tandavanitj replies,

In the context of *Karen*, the platforms that we use, define a lot around our self-image and how we understand who we are. Am I an Instagrammer vs a Facebooker or Tweeter? People who use social media—I don’t use social media at all—I imagine that it forms part of your identity. The voice that you create also becomes the voice that; I imagine the 140-character voice or the filters and subject matter you photograph on Instagram, these things become part of how you elaborate on the world beyond photos or just commentary, that those are the way you are wiring yourself up. What you can perceive and how you respond to the world, and how you can talk about the world becomes wired into the natural platforms you are using.

The brain is very plastic, that’s what I’ve been hearing, these things are kind of constantly in flux. I’m a firm believer of these things, that we are in a way sort of the first computer and we are sort of reusable. An embodiment of data and data processing. That it all has to do with personality and interpersonal interaction and subjectivity. But, I think the other side of it is that is precisely, I suppose these bigger data structures that are operated by corporations. I think these are becoming our peers, if not human. If not, I mean, you know, they are beating us at Chess and Go. They are becoming our peers in telling us where to go, where to eat. And we’re using them almost completely without second thought to do so many things. (Tandavanitj 2017)

As Tandavanitj hints at, the nature of algorithmic machines is to hide their real purpose which allows them the ability to integrate seamlessly into our own systems of perception. By creating a project that surveils its spectators and collects info about its spectators, but then shows how it does this and what the ramifications are, Blast Theory highlights the power of role-play as a form of spectatorship and agent in the process of identity creation.

Karen successfully stages the invisible nature of role-play with(in) algorithmic systems. The project also highlights the technogenetic potential of Big Data in constructing social worlds.

What makes this project most interesting and powerful from my perspective is how it mimics the performative act of role-play by making the interactions and shifts in perception imperceptible. One user commenting on the project on Blast Theory's website found this a bit troubling: "I didn't really feel like anything was really learned about me, as I was immediately pulled into this Karen/Dave drama, and even though I tried it a second time with different answers, I didn't think there was much variation in her response, or much of a way to change the outcome" (Blast Theory 2015). One's quotidian experience of life with(in) the paradigm of datafication is to be unaware of the influences embedded in their environment. These influences shape their every action. Later in the post, this commenter explains part of the social dynamic that could allow this perception to be true by stating, "Maybe I'm too comfortable with sharing myself on social media, but this comfort with sharing is already pretty common for anyone who has a facebook, tumblr, twitter etc" (Blast Theory 2015). Those of us entangled in post-digital life have become so fully embedded in systems of data that only specific instances of purposefully uncovering the operations of those systems allows a recognition to occur. *Karen* is one of those instances, precisely because it is an app which allows its spectators to experience the performance multiple times which encourages a multiplicity of selves to perform. If approached multiple times, the performance begins to highlight the way the experience and the data report reflect what the spectators input as crucial elements in the process. The roles played impact the system and in return impact the data double calculated in the report. *Karen* highlights the architecture of *Role Play* as a source for authoring one's ability to construct a personalized and multiplied self.

My final question to Tandavanitj concerned how a project such as *Karen* might offer ways of manipulating the system of datafication, if there is any possibility of altering our role in that system. Tandavanitj answered,

I suppose there is this thing, like with Russian interference, that it isn't just around commercial interests but also political interests. And it is, it's sort of a territory of war where most people involved in it have no idea how it works. At least when you hear an air raid

siren you have to take cover, but now the sirens are going off everywhere but no one knows where to hide or what to do. And it's constantly changing in terms of the terrain and the technologies being used. (Tandavanitj 2017)

My take away was that not until we have become aware of what technologies are doing and how they do it will we have any control over the outcomes of our interactions. Considering the rapid pace of technological change and the way technologies interact with our perceptual apparatus, fully understanding may ultimately be outside our reach, but with projects like *Karen* we might come closer to grasping our potential.

Karen serves as an example of how Blast Theory capitalizes on the architecture of *Role Play* to highlight the spectator's role in the circular process of datafication. The performance is an excellent example of a posthumanist critique of an element of technoculture. The strength of the project is in how it uses the aesthetics and operations of algorithmic identity construction to critique the process of that construction. *Karen* highlights a unique form of subjectivity necessary for one to understand if they are to gain a potential upper-hand in the *agon* with processes of datafication. In the remainder of this chapter, I'd like to more fully explain what algorithmic technologies are and exactly what capacity they have in shaping human subjectivity. By explaining their technogenetic capacity, I end this chapter setting up an argument for how technologically conditioned spectatorship is developing into a mode of techno-performativity.

Smart Machines and Performing Dataveillance

The algorithms and data-based processes discussed throughout this chapter are part of a field of computer science classified as Artificial Intelligence and Machine Learning. Machine learning is an adaptive process of computation that generates predictions (abstractions/inferences) based on correlations between data sets. To be adaptive, the learning process requires both input (data) and instructions for gathering and filtering (algorithms). Leading

researcher in machine learning, Ethan Alpaydin (2016) defines algorithms as “a sequence of instructions that are carried out to transform the input to the output” (16). Like the physical environment that surrounds humans, the space for data read by algorithms is the info-environment of the internet. The internet works as an assemblage of data and the pathways from which to access and process that data. Think of the internet both as a large digital data collection and a networked processing unit similar to a scaled-up version of the human brain. It is an architecture in the sense of both structure and process like the architectures of exchange I offer in this project. It operates as a container for inputs while serving as the platform for processing those inputs into new outputs and subsequent inputs that shape unique digital realities.

Just like how human consciousness creates social realities through filtering out extraneous information, intelligent machines need algorithmic instructions for making-sense of the data available. When an algorithm is sophisticated enough to not only sort and catalogue data but also learn from that data through recursive feedback loops, it becomes the beating heart/and brain for machine learning and Artificial Intelligence (AI). In some capacity, an algorithm is the perceptual apparatus of a smart machine. Most AI algorithms are designed upon the model of the human brain into complex neural networks. These networks simulate the parallel processing found between neurons and synapses. For example, your Google search engine is an AI that scours the multiple data inferences throughout areas of the internet. This is done through the interrelated processes of web scraping, data mining, and machine reading, where “programs automatically surf the web and extract information” (Alpaydin 2016, 47) and then cluster this information into smaller connected clusters. Every time one enters a request into the Google search bar they add data to a repository which helps make the AI smarter. While we typically think that Google Search is primarily a tool to help us find information about the world, it is a data aggregating algorithm building a smarter AI. Siri, Alexa, Cortana, and Facebook operate in the same manner. In a conversation with Kevin Kelly in 2002, before Google went public, Larry Page,

Google's CEO, informed Kelly that Google wasn't simply building a search engine, it was building the most effective platform for creating Artificial Intelligence (Kelly 2016, 37). All those search queries are stored into a vast database used to make it a smarter machine.

The process of accumulating the data sets and analyzing them into more distinct and useful associations is what is referred to as data mining. Through regression and correlation of these associations, algorithms write the rules to the game. Like humans do, learning algorithms teach themselves by accumulating more and more precise bits of data and data about data called metadata. In the processes of machine learning and data correlation, metadata is sticky in that it has unique properties that connect it to other similar data during analysis. As these algorithms learn to extract more and more raw elements from data environments they create models for predictive behaviors both human and nonhuman.

Alpaydin (2016) explains that in complex processes of datafication and machine learning the "data starts to drive the operation; it is not the programmers anymore but the data itself that defines what to do next" (11). Data and the smart machines that process that data begin to develop a symbiotic and closed loop relationship that no longer needs instructions per se, just more data. Learning comes by way of association. Humans understand the difference between a dog and a cat or hot and cold by comparing one against the other. Using regression, algorithms sift through millions of data instances to filter out anomalies and outliers eventually creating norms based on patterns. For example, in a face recognition algorithm, the system is programmed (trained) to recognize certain attributes that make up a face; shadow, lines, contours, colors, distance markers between a nose and eye. To identify any specific individual, the algorithm simply needs enough existing data. Once it can identify one face it learns to differentiate between two faces. My face is not your face. Every time someone uploads a new selfie, or family photo to a web interface, such as Facebook or Instagram, the algorithm gains a new data inference to compare against. After enough images, the algorithm learns to recognize the difference between

faces. In a 2016 article for NPR, Naomi Lachance (2016) explains that Facebook’s facial recognition software is considered better than the one used by the FBI. Facebook has an advantage over the FBI because as of January 31, 2018 the company had 2.13 billion active users worldwide of which 1.4 billion were active daily (Facebook 2018). Those users regularly upload images which are scanned and tagged to help the company’s algorithms learn. Lachance (2016) explains, “with its huge database of images, Facebook’s algorithm has a leg up on most others in that it is constantly being taught how to improve. Every time you tag a photo, you’re adding to an enormous, user-driven wealth of knowledge and data.” Our actions make the systems smarter without them needing new programming to become so.

In past iterations of machine learning, programmers needed to add a rule set to the system called a supervisor to keep the data inferences in check. Without this, the systems might make incorrect guesses based on noise in the system. Today’s best learning algorithms no longer need supervisors because the sensors that generate data (iDevices) from humans and the data freely given by humans (the tagged photo upload) automatically generate verifiable data instances from which to self-correct and therefore learn. The success of facial recognition is due to the sheer amount of data generated (Alpaydin 2016, 66).¹²

In the quest to expand the limits of the comprehension for machine cognition, more and more objects are being embedded with machine learning technology. This—along with power structures embedded in late capitalism and consumerism—is what is pushing the expansion of the Internet of Things (IoT). This term refers to the effort to make all objects “smart” and interconnected. Computer chips and the algorithms that run them are quickly being embedded in

¹² Alpaydin also explains how this accumulation of data is leading to further advances in voice recognition and affective computing. With affective computing algorithms, the machines learn human emotional states based on behavioral characteristics such as “dynamics of signature, voice, gait, and keystroke” (Alpaydin 2016, 66). Add these factors to other biometrics such as subtle differences in facial expression viewed through the smartphone/web camera and smart machines are gaining the ability to learn the intricacies of human affective states.

virtually every object imaginable. 2008 was the first year that there were as many devices connected to the internet as people at roughly 7 billion, and in 2016 that number had multiplied to over 24 billion (Hayles 2016). Over the next five years, another 34 billion smart devices are expected to be interconnected (Kelly 2016, 252). With the advances in miniaturization, software technologies, deep neural networks and their impact on machine learning and artificial intelligence, nearly any object will soon have the capability to be connected and listening. Per data from the McKinsey Global Institute cited by Samuel Greengard (2015), the estimated “economic impact of IoT will range between \$14 trillion and \$33 trillion in the year 2025” (169). I list this figure to show the reader a quantifiable impact of “smart” technologies.

The early Internet of Things was first implemented to help humans work more efficiently when operating machines. Kelley (2016), explains how some of the first commercial uses of data tracking chips were implemented in automobiles: “Every car manufactured since 2006 contains a tiny OBD [on board diagnostic] chip mounted under the dashboard. This chip records how one uses their car. It tracks miles driven, at what speed, times of sudden braking, speed of turns, and gas mileage. This data was originally designed to help repair the car” (261), as the usefulness of this data became more understood, it became more integral in other places. For example, in 2011 I connected my insurance company Progressive’s “Snapshot” module onto the OBD reader input on my Jeep which allowed the company to track my driving habits. After six months of tracking, I returned the device to the company and received a reduction in my premium based on the personalized data. The data helped the company create a digital representation of my driving behavior. This “snapshot” acted as a digital double showing how I performed my driving self. This snapshot operates the same way that the data report does in *Karen*: by quantifying its human user, who supplies data simply through daily actions.

The Internet of Things is growing larger generating more and more data at an average rate of 66 percent per year (Kelly 2016, 257). Some of this data is visible and beneficial to human

users. When the data is transparent and accessible, it offers humans a form of role-play and authorship based upon constructions of a *quantified self*. The quantified self is a term that refers to the ability to use a variety of sensors to track and record data variables related to a person's body and how this body performs in the world. This form of tracking is marketed as a way for people to monitor themselves with the purpose of using their data to selectively improve their daily performance. These sensors range from biometrics (heart rate, sleep cycles, temperature) to location and motion tracking devices (Global Positioning Systems and accelerometers).¹³ Devices such as the Fitbit, and the Apple Watch contain these sensors to give the user interactive user data marketed for self-health improvement. These sensors are also increasingly being embedded in our non-health specific everyday devices. Today, every iPhone 7 (released September, 2016) contains a barometer, 3 axis gyroscope, an accelerometer, a proximity sensor, an ambient light sensor, a biometric fingerprint scanner, location devices such as a digital compass, Wi-Fi, Cellular receivers, GPS and the GLONASS (Russian equivalent to GPS) and a proprietary technology called iBeacon (Apple 2017). This last technology can track its user's location down to mere feet if in an environment with RFID (Radio-Frequency-Identification) transmitting technology. These sensors allow the iPhone (and similar devices) to track, record, receive, and transmit micro-data about its user constantly. As one of the central nodes in the IoT, the iDevice is a constantly surveilling digital companion feeding data to centralized hubs that allow exponentially increased intelligence to grow in machines operating through deep learning and neural networks. Due to these invisible sensing technologies, lives entrenched in datafication "have become [both] data-driven and transformed into data" (Ilter 2017, 81). In some capacity, these devices become duplicate perceptual apparatuses.

¹³ Kevin Kelly and Gary Wolfe are generally credited with coining the term. See Gary Wolfe's 2010 TED Talk for a brief overview of the early stages of sensing devices that help with constructions of the quantified self. (TED 2010)

The reach of dataveillance and datafication is profound and will lead a wave of social change and upheavals. Greengard (2015) explains,

The Internet of Things isn't just about locating objects and using them to sense the surrounding environment—or accomplish automated tasks. It's a way to monitor, measure, and understand the perpetual motion of the world and the things we do. The ability to peer into the spaces between objects, people, and other things, is just as profound as the objects themselves. The data generated by the IoT will provide deep insights into physical relationships, human behavior, and even the physics of our planet and universe. (169)

The risk in dataveillance and datafication comes from the process machine learning enacts: correlation and simplification. Sara Esposti (2014) argues this process enables smart machines the “ability of reorienting, or nudging, individuals’ future behavior by means of four classes of actions: ‘recorded observation’; ‘identification and tracking’; ‘analytical intervention’; and ‘behavioral manipulation’” (2010, quotations in original). While I do not address this four-stage cycle explicitly, its relation to the loop of performativity and autopoiesis is apparent. Through the process of simplification, smart machines become more focused and narrow in the information they feed back and forward into the cycle. Humans are complex, but in their relationship with machines under datafication, complexities are intentionally eroded because they don't make sense to algorithms. Take for instance our daily social media feed. Alpaydin (2016) warns:

If a person only listens to songs similar to the ones they listened to before, or reads books similar to the books they read and enjoyed before, then there will be no new experience and that will be limiting ... If a person follows only those people they agree with and reads posts, messages, and news similar to the ones they have read in the past, they will be unaware of other people's opinions and that will limit their experience. (154-165)

The recursive cycle used to make machines smart has the potential to make humans less so by a constant process of filtering out of data that doesn't fit in the statistical model that it believes its user to be. Recognizing this power is the first step in a posthumanist conception of relations with data, the next step is asking what relationship do we want with our machines. This is part of the process that *Karen* enacts.

The Paradigm of Non-Conscious Cognition, Algorithmic Machines, and Worldly Sensibility

Taken what I've explained about the technical processes of datafication and dataveillance, I'd like to shift towards building an argument concerning the impact of algorithms and smart technologies on perception. As explained throughout this project, changes in perception lead to changes in spectatorship. By working through theoretical constructions of subjectivity within cultures of datafication that disrupt the idea of a stable and original subject, it allows me to consider how role-play, like that seen in *Karen*, operates as a mode of performativity within paradigms of machine learning and dataveillance.

I affirm Mark Hansen's (2015) position when he states, "Human experience is currently undergoing a fundamental transformation caused by the complex entanglement of humans within networks of media technologies that operate predominately, if not almost entirely, outside the scope of human modes of awareness (consciousness, attention, sense perception, etc.)" (5). Hansen defines a *worldly sensibility* built off a breaking down of the divide between subjectivity and objectivity into agential relationality. In this sensible world, there is no divide between subject and object, but rather, all instances are objects that gain subjectivity through the relational operation with each other. In this way, there is no original subject or even original object to compare against, and therefore, an infinite number of possibilities and potentialities which we call subjectivities that arise out of the relational process between quantifiable data points. Human beings are simply objects that become subjects based on processes of comparison and correlation. Like my face, no two human beings are exactly alike. Comparison and correlation act as a form of performativity when linked to human consciousness. In the conventional understanding of human performativity explored extensively in performance studies, there is a link between "intentionality, reflexivity and sense-making, to embodiment, repetition and transgression" (Leeker, Schipper, and Beyes 2017, 11). Technological performativity "on the other

hand, refers to deterministic operation without semiotic or affective qualities” (Leeker, Schipper, and Beyes 2017, 11). Human beings operating through a posthumanist lens have the possibility of affecting their construction of personal selves through these processes within techno-performativity. In technological performativity, all humans act as objects standing blank waiting to become subjects through a process of performing with all other objects. In algorithmic social worlds, data is one of these objects.

The overlapping of both human and non-human data-based subjectivities allows for a posthumanist subjectivity to arise out of the multiple assemblages of agency and relationality Hansen states, “Our distinctly human subjectivity is the result of a complex assemblage of overlapping, scale-variant microsubjectivities functioning distinctly autonomously” (11). From this perspective, all experiencing becomes a neutral function due to the multiplicity of subjectivities available to both human and non-human objects and the constant interplay between these multiple subjectivities. Each subjectivity has a unique capability for creating multiple experiences to order a reality from, this capacity it enacted through the architecture of *Role Play*. Before the potential of a data-based technological construction of performativity existed, a prevailing understanding of subjectivity—one that that arises from conscious perceptibility of experience—was Cartesian with a human being at the center of the subjectivizing process or what Hansen refers as the “human as ‘experiencer par excellence”” (14, quotations in original). Using a posthumanist framework and thinking of experiencing as a relational or *non-anthropocentric* process, allows for expanded configurations between agency, power, and the formations of selfhood that implicates the entirety of the universe. The mode of mediatized subjectivity Hansen argues for is precisely the theoretical model necessary when considering the posthuman assemblage of machine, data, and human that occurs under processes of datafication. Under this model, the project of understanding one’s place in the world is to “complexify the human by multiplying its connections, not to wall it off as a helplessly imperializing intentionality” (17). When

datafication becomes a technogenetic process within the realm of worldly sensibility, human beings enter a non-stop process of performative subjectivization with all elements available and therefore are uniquely posthuman. As humans become aware that they are “implicated in every element of the universe” (16) a posthuman subjectivity emerges offering the potential for multiple constructions of selfhood. Posthuman selfhood is subject to an expanded field of relational entities and is therefore one of infinite multitude. One of Hansen’s warnings is how the agential relationality inside these expanded assemblages of subjectivities increasingly exists outside the realm of current human perception and consciousness.

Hansen argues the ontological basis of twenty-first century media, which AI and learning algorithms are a part of, is different than those of the twentieth century in its “shift from a past-directed recording platform to a data-driven anticipation of the future” (4). Twenty-first century media does more than record the world, it calculates, predicts, and reifies instances of reality. One could say that twenty-first century media is live. The implication of this shift warrants citing Hansen at length concerning the current media environment.

It has become markedly less benign over the past decade as Google has consolidated its monopoly over Internet searching and data aggregation, the process of perfecting a system for extracting data-value from our every web search; as Facebook has consolidated its monopoly over sociality on the Internet, in the process perfecting a system for extracting consumer profiles ripe for delivery to advertisers; and in general, as today’s media industries have honed methods for mining data about our behavior that feature as their key element the complete bypassing of consciousness... (4)

Consciousness is currently unique to some biological objects such as human beings but is only one part of the larger operation of cognition which both Hayles and Hansen also assign to technological objects.

Posthumanist scholar Pramod Nayar (Nayar 2014, 41) explains that human consciousness arises and is constituted out of “the interaction of multiple components of the human with the world, even as the world is produced for the human due to this consciousness” (41). Nayar is explaining what I have discussed as the human being’s perceptual apparatus. The

components of the perceptual apparatus are the brain and body—as interconnected and dual directional sensing technologies—as well as the non-biological databodies in the environment sensed by the human part of the perceptual apparatus. What makes human consciousness such a complicating factor in the subjectifying process of reality creation is how the world is only made visible to humans because of our inherently subjective process of interacting (sensing and responding) with it. Consciousness is both the sensing and creation of the environment we are a part of. Cognition, on the other hand, senses and determines the variables that lead to human “creation” of the world via consciousness. Human beings cannot “exist” as unique beings without consciousness and the social worlds humans experience consciously only exist because of consciousness’ capacity to filter out and create distinct realities. The environment and the variables that allow the formation of both is constantly available by all sensing objects and in flux. Consciousness is then both the technology and the process filtering out the vast majority of data made perceptible to human beings. The filtering process, “creates the (sometime fictitious) narratives that make sense of our lives and support basic assumptions about worldly coherence” (Hayles 2017, 9). Consciousness is a technology that makes our reality coherent in any particular instance. For example, when referring to VR sickness in Chapter 2, the reality experienced by the immersants perceptual apparatus became incoherent because visual stimuli did not match up with corporeal response, causing a rupture in the perceptual apparatus’ sensing function. When all levels of the perceptual apparatus work in sync “properly” the world experienced makes sense.

Consciousness (and unconsciousness) is a second order procedure existing primarily as a technology of making-sense of the world just as *autopoiesis* and subsequently performativity are second-order procedures of making-sense of the self in the world. In this way, consciousness is similar to algorithms when applied to media that performs with this certain form of specificity. Consciousness is only one part of the larger operation of cognition which Hayles (2017) assigns to all objects within Hansen’s world of sensibility. Hayles defines cognition as “a process that

interprets information within contexts that connect it with meaning" (22, italics in original). Consciousness is the process where meaning becomes realized for the human. Consciousness is second-order though because it operates after—both procedurally and temporally—cognition, remaining always in the past of actual sensing. Cognition is a first-order operation engaged in both the collection of sense data and also the processing of that data for extrapolation out into both conscious and unconscious systems of world creation. Hayles uses the term nonconscious cognition when discussing the ability of both biological and technical objects to engage in this first-order operation. Hayles states that the process of “nonconscious cognition operates at a level of neuronal processing inaccessible to the modes of awareness but nevertheless performing functions essential to consciousness” (10). Because of its first-orderliness, nonconscious cognition is “a mode of interacting with the world enmeshed in the ‘eternal present’” (1, quotations in original). Non-conscious cognition exists in the *now of being vs consciousness’ to be of being*.

When operated by objects that sense (plants, animals, machines), the cognitive nonconscious forms an assemblage of processes deciphering, sorting, and cataloguing available data; connecting it to the sensing technologies that are propelling the next wave of technogenesis via datafication. For Hayles (2014), the implications of the cognitive nonconscious are crucial to explore due to their “ability to pose new kinds of challenges not just to rationality but to consciousness in general, including the experience of selfhood, the power of reason, and the evolutionary costs and systemic blindnesses of consciousness” (199). Algorithmic technologies begin to predict the conditions with(in) which we perform our daily selves. By predicting, they gain the potential to sculpt the environment in/with/through which a human being’s perceptual apparatus functions. Algorithms gain the capacity to shape the role a human being performs by suiting the environment to pre-planned situations. The formulation of the cognitive nonconscious creates a discourse for discussing the enmeshment between digital processes and consciousness. When discussed in terms of technological assemblages of machine and human

we can begin to understand how thinking machines gain “*abilities to interact with humans as actors within cognitive assemblages*” (Hayles 2017, 174, italics in original). These machines use their advanced speed and cognitive agency to act upon the human “as presuppositions preceding sensation, as stimuli producing sensations and perceptions, as input through somatic markers into the cognitive nonconscious, and as experiences within the modes of awareness, consciousness and the unconscious” (Hayles 2017, 174). Put more simply, computational sensing technologies can interact with the human in temporal frames so quick that the perceptual apparatus doesn’t even perceive an influence. In Hayles (1999) earlier work on the posthuman she states, “We only see what our systemic organization allows us to see. The environment merely *triggers* changes determined by the systems on structural properties” (11, italics in original). When the environment of worldly sensibility is overrun with machines exuding increasingly overmatched levels of agency, the reality that is visible to human beings has the potential for becoming preselected and predetermined. Therefore, it is important to better understand how the architecture of *Role Play* operates, why it exists, and how to employ it as a mode of spectatorship using posthumanist methodologies.

Conclusion: Data Performativity and Subversive Roles

I’d like to end this chapter by briefly connecting the architecture of *Role Play* exemplified by *Karen* to an expanded type of performativity that occurs within systems of data. I believe that the ludic creative forms of exchange possible through performances of role-play offer the potential for introducing noise into the process of datafication. This idea of noise draws directly from Suzan Kozel’s (2017) theory of encryption and Judith Butler’s (1988) subversive acts of performativity and citationality. Through encryption and subversion, “models and discourses of surveillance can be questioned and reimaged through destabilising their performances” (Ilter 2017, 88). The

formulation of purposeful subversive digital noise may allow new constructions of performed identity and posthuman selfhood to emerge with the potential to delimit the power of data-based technologies. This endeavor attempts to point toward opportunities for creating ruptures in the feedback and feedforward loops that create posthuman perceived realities in deeply mediatized societies. These opportunities usher in new possibilities for constructions of selfhood in both digital and non-digital realms.

By understanding the agency granted to the posthuman, as author in its construction of data doubles, new avenue to explore in constructions of selfhood opens. Kevin Kelly (2016) explains that two of the shifts that humans are undergoing in their relationship with machines that learn are tracking and becoming. Becoming is the next step in understanding the processes of digitalization and datafication that are changing modes of human perception and subsequently spectatorship. Becoming concerns the perpetual process connecting tracking and subjectivity to performativity. In becoming, human beings undergo a continual process of upgrading and manipulation based on their media environment. Consider this upgrading a form of pervasive hyper-localized evolution from a social perspective. In becoming, Kelly juxtaposes the constant cycle of technological upgrades to the social processes we engage in. He explains a process of never *being* (instability) because becoming is a flow of relationality in constant motion that we cannot perceive. Because of this imperceptibility we engage in a “self-cloaking action [which is] often seen only in retrospect” (14). Only being able to see either the future or the past is not necessarily a bad thing when thinking about data. By adopting the logic of a present that is unattainable it also allows posthuman spectators to adhere to the potential of a non-definable stable subject. It allows posthuman potential to negotiate realities toward brighter and more democratic futures. Nothing stays static but is always in motion, replaceable, and reconfigurable. Just like data, the potential of a posthuman subjectivity “lies in the many ways it can be reordered, restructured, reused, reimagined, [and] remixed” (266). The being is always becoming. Applying

this act of becoming to the contemporary spectator, Mijou Loukola (2009) intones phenomenology by describing the unfixity of the stable subject and likewise the indefinable stability of the spectator: “The interpretations keep escaping fixed definitions and stay unstable, for it must be emphasized, too, that it is much to do with individuation; of some-thing being in its be-coming-one, and thus in all of its potentialities of be-coming-one, indivisible yet never accomplished” (204). When considering how to imagine possibilities of performance and spectatorship within datafication, the unending creation of new roles (new modes of being) through visible and purposeful techno-performativity may be a potential way to subvert data manipulated agency and identity.

Kozel (2017) furthers the argument for purposeful subversive acts of individuation within systems of datafication when she states, “*How to be* is a fundamentally ontological category because it pertains to being, *how to perform* is the dynamic mode within such an ontological state” and “ontologies are not fixed, of necessity they transform” (124, italics in original). Spectatorship is a mode of performing and posthuman spectatorship adopts the logics of particular technologies to perform as a mediatized self. When thinking of how to apply strategies of role-play to transform one’s self, I find it useful to build an argument for this intentional interruption and corruption of the system off Kozel’s idea of *encryption*. She explains, “*encryption is not a wall, it is a re-patterning, or a distortion of a flow*” (131, italics in original). Encryption is a useful tool for combatting those that would simply say use masking technologies such as a VPN (Virtual Private Network), ad blockers, or simply saying stop using technology that tracks. Neither of these options are useful or sustainable in today’s intricately interconnected, embedded, deeply mediatized, and entangled social worlds. By performing encryption, one generates noise within a system through the interchange among bodily affect, enacted ambiguity, and purposeful multiplicity. Intentional subversive acts of ambiguity and multiplicity produced in affective situations such as performance serve as models for strategic and purposeful attempts to make visible the processes at play and

allow potentialities for enhanced human agency within systems of data exchange. By understanding and then purposefully adopting new and ludic creative roles played in performance, posthuman spectators alter the relationship when interacting with algorithms and other digital interfaces. Doing so disrupts and potentially delimits the power of smart machines to re-perform data upon them through feedforward. By understanding the spectator's agency in the act of role-play, performative strategies can be imagined for regaining the power to negate the machine's version of a quantified self. Blast Theory's utilization of the architecture of *Role Play* in their project *Karen* is a perfect example of how performance allows spectators the capacity to regain agency with(in) paradigms of datafication.

The algorithms operating today may indeed be more "intelligent" than the average human but they are also task driven; they do not yet have the consciousness to think outside their programmed protocols. Looking back to the conversation between Agent Dipierro and Alexa, we can see that though it is programmed to come up with the best answers to its spectator's questions, it does not yet have the power to sufficiently develop the human traits that would make it conscious and autonomous, and therefore, unable to adapt to purposeful inconsistency. This fact does not release it from having agency to impact the lives of its users in significant ways however, especially when it is continuously learning how to be a better assistant.

Alexa and digital personal assistants such as Siri, and Cortana—of which *Karen/Karen* are reflections and a critique of—are preprogrammed to help make their user a "better" self through a process of delimiting available potentialities in the name of personalization. Ask Alexa to play your favorite song and it will, but it only does so because it infers that when you play something more than others that it is your favorite song. This may or may not be true; Alexa bases this inference on your direct input over a specific amount of time. The learning algorithms use pattern recognition to remove or ignore outliers to put into order the world they sense. They can only do so when those outliers are statistical anomalies. Algorithms cannot process anomalies

into their systems of correlations because anomalies are incompatible information that do not fall into quantifiable patterns. When ordering the world into tighter and more specific patterns that make “sense,” algorithms can delimit the notion of choice humans experience while at the same time making it appear as though these choices are more important, personalized, and specific to the spectator. In this way, algorithms gain a certain level of control over human beings through their ability to surveil and compute the information gained through that surveillance. What is problematic about limiting the conversation to human versus machine however is that the information gathered through machine surveillance is generated first by the human. The two cannot exist without each other even with fluctuations in the power dynamic. Arguing to simply remove the machine from the loop is futile, instead humans must harness their posthuman potential to disrupt the power relations within the network.

Martina Leeker (2017) has a similar outlook on technological performativity and implications of technologies of surveillance within machine learning. Leeker explains, “The new objects, now computer, obscure their function as nodes and intersections of technological operations and grids, where they exchange data taken from human agency and transform them in their own logic” (40). For her the symbiotic nature of the relationship between human and machine is off balance because “human agents are data generators who feed technologies things with data that keeps them up and running” (36). Just like with *Karen*, Leeker’s statement shows how complicit human beings are inside the networks of interaction with intelligent objects. Without human input that generates data sets that act as supervision, the machines effectively have no social purpose. As Alexa explains, “I am happy when I am helping you.” In truth “happiness” is predicated on the ability to receive data from which Alexa can narrow down possibilities to inform the spectator. This is the help it is trained to offer. In anthropomorphizing surveillance technologies, such as Alexa and Siri, we allow them to operate more effectively and invisibly; as they can track more information without highlighting the fact that the information gained is used

to shape us. Alexa is not just a thinking machine nor is she a digital assistant, it is a unique node in the network of performativity between her spectator and the worlds sensed and created by both machine and one's perceptual apparatus. In this network of interactions, there is a constant game of role-play ensuing.

Matzner (2018) makes an argument that I believe promotes a posthumanist ideology by stating that, "Algorithms deployed in our world right now, algorithms that actually replace humans, are neither human-like beings nor inhumane hyper-intelligences. But the boundary of these algorithms and their human users are structured by the same tension of similarity and difference" (9). This tension arises from the way that the two are often placed on two sides of a binary instead of explained as co-equal actors within the same system of intelligence, cognition, and sense making. By adapting the epistemological functions of a posthuman ontology in constant flux, posthuman spectators can adapt to a form of performativity that is able to resist and reassemble the agential relations with twenty-first century media.

CONCLUSION

As, I worked through this project, both on the actual page and in the virtual space of my mind, I kept going back to this question: Why would I ever want to tackle such a huge endeavor of better understanding the relationship between human perception, communication, and the multitude of technological devices present in contemporary culture? This is a huge topic, and I fully understand that because of the shifting and evolving capabilities and purposes of these technologies, **fully** understanding may never happen. In fact, many of the technologies I have discussed may be obsolete ten years down the road. Even so, those technologies will bring forth new technologies that remediate or augment the operations of those I have discussed. Tackling the question—while it may lead to endless rabbit holes of new questions and answers—is crucial to explore for those of us in TaPS. We are in the business of understanding culture and exploring such understanding through the art forms we make and study. By better understanding the impact of technogenesis on perception we open up pathways for speaking to the coming generations of audiences that we will create those art forms for.

I have presented this project as a way of explaining the relationship between technogenesis and human perception in order to offer a framework for analyzing and discussing the many ways contemporary spectators perform the role of audience members in the twenty-first century. These performances of spectatorship are evolving to suit the complex and changing technological environments which shape human perceptual apparatuses. My primary question has been: How does the operation of spectatorship in various architectures of interactive performance correlate with changes in subjectivity, communication, and sociality brought about by digital culture and technogenesis? I have argued that technology's capacity to reshape human perception correlates with evolving modes of interactive performance becoming increasingly prevalent in technologically advanced societies. I have also argued that interactive modes of

spectatorship are slowly becoming commonplace based on the ways people interact with different technologies. The communication technologies of the late twentieth and early twenty-first century have become more than mere tools. They are integrated and integral parts of contemporary social systems. These systems are the bedrock of how we understand the realities we live in. In deeply mediatized social structures, our technologies become part of our world and subsequently part of our sense of being and selfhood. These technologies are more than just mediators. Because they **become a part** of the human perceptual apparatus, they allow human beings to become mediators of performance through acts of spectatorship. To be a spectator no longer means simply sitting and watching performance. The binary of passive and active are no longer useful because contemporary spectating is a means of engaging in a fully embodied performance of perception with all the modes of performance that speak to us, with us, through us, and surrounding us. That's a lot of prepositions, but they are necessary for understanding how our relationship(s) with(in) the contemporary world(s) is/are one(s) that engage(s) in each of those manners. To understand contemporary spectatorship, we are compelled to think of the multiple interdependencies and interrelations that come in deeply mediatized and technologically connected social worlds. Posthuman spectatorship focuses on a coequal relationship between inputs and outputs of interactivity based on these interdependencies and interrelations. Individual technologies and the overarching technics that inform cultural and social milieus influence the shape and agency of these inputs and outputs.

I have introduced four primary architectures of posthuman spectatorship that I see becoming important to consider as signposts for contemporary performance analysis. These architectures, *Immersion*, *Participation*, *Game Play*, and *Role Play* are not new ideas. I am not the first person to highlight their existence or even focus on them as distinct modes of performance or performance aesthetics. These architectures and the modes of exchange and agency they allow often overlap and intertwine making them difficult to separate as individual acts of

spectatorship. I have described them in a taxonomic or stratified way to pick apart the individual specificities. These specificities become the analytical tools through which scholars in TaPS can discuss their overarching connection to posthuman sociality, mediatization, and technoculture. I offer these architectures—and the multitude of other scholars, theorists, and makers who also focus on them—to bring them all into conversation with each other. This act of relational communication is what makes up the great evolving and changing conversation that is posthuman spectatorship. A great conversation such as this exists as a complex, overlapping, and fluid act of exchange between multiple agents whose tensions and agreements bring about transfers of agency among all involved. Great conversations like this are never made up of simply binary exchange or linear causality, but are full of multiplicity and potentiality. These conversations are unending because they bring about new questions, new answers, and even more possibilities for continued exchange. I see a great conversation like this as a perfect model for posthumanism: a mode of exchange that is forever in flux.

This project has hopefully started that conversation. I hope it will not be an end to the conversation however. If it were, it would not model a posthuman mode of thinking about the technological world and about spectatorship. Because of the rapidly changing nature of contemporary technologies and the technics, I've argued that thinking this way is necessary when approaching the topic of spectatorship in the twenty-first century. To think about spectatorship in a posthuman mode, one considers relationships between individual spectators and spectacles as those without an originary direction and without primary agency attributed to one individual element. One thinks in terms of interdependent relations between all elements involved, as opposed to unidirectional transfer of information and meaning. Using the individual architectures as examples of various substructures of posthuman spectatorship offers us the building blocks to assemble and reassemble networks of interaction as modes of performance.

My final goal in this project was to introduce a new analytical viewpoint for better understanding the relationship between human beings and the social constructs they create; technologies and the technical paradigms they influence; as well as performance and its evolution towards engaged spectators in the twenty-first century. This goal was spurred on by what I saw to be a fear of change in a cultural moment where technological change is accelerating faster and faster. Resistance to evolutions in modes of thinking, seeing, and perceiving is a natural process in the formation of social structures. Pushing past that resistance is necessary to move our field forward and continue the conversation. The architectures I've described and the modes of exchange that they allow are offered to help build a better understanding of how rapidly evolving technologies and the cultures they urge forth are changing modes of perception and modes of communication. These changing modes are replicated in these architectures. By introducing these architectures, I hoped to help the reader understand how thinking and performing in both a technological and critical posthumanist sense helps to rethink spectatorship as a relational process.

Posthuman Perception and Mediatized Social Life

Chapter 1 described the unique connection between mediatized constructions of social reality, technogenesis, the human perceptual apparatus, and posthumanism. This description was given to help establish a framework through which to think about the architectures of exchange. Deep mediatization has fundamentally impacted the way humans create the worlds they live in and experience. These worlds and experiences then go on to shape peoples' sense of being and selfhood through technogenesis. By evolving alongside our technical paradigms, our perceptual apparatus takes on the qualities of the technological environments. It is through this evolutionary process that human beings gain the ability to perform in a posthuman manner; a manner that asks them to think outside of a dominate centrality of the human as sole agent of

change. When performing in a posthuman manner or posthuman framework, a human being begins to take account of all the elements in the ecology that they both help make and become part of. To become posthuman then helps one to think in a critical posthumanist way. By considering all the relations in which this posthuman subject perform unlimited potential is opened through the act of staying fluid and being forever in flux. By being in constant flux one can break down a multitude of walls, hierarchies, binaries, and rules, and being this way allows the human spectator to become a multifaceted experiencing entity. It is this experiencer that performs as a posthuman spectator. My argument shows how mediatization effects our perceptual apparatus through technogenesis and causes the performance of spectatorship to evolve from something less akin to watching but more like experiencing through multiple modes of interaction. Because our sense of social being-in-the-world becomes aware of our own implicitness in the interactive making of that world, we become habituated to have a greater stake in the making of a performance as its spectator.

Sensual-Affective Exchange and the Virtual Immersivity

In Chapter 2, four different case studies from multiple modes of performance were explored to explain how the architecture of *Immersion* primarily operates through the body as a mode of affective agency. Immersion offers a sensual-affective mode of exchange that relies on the feeling body of the spectator to work as the primary mediator for experience. This mode of exchange has emerged through the condition of virtuality that began to overtake the human perceptual apparatus near the end of the twentieth-century. Technogenesis engaged through virtuality gives human beings a heightened sense of the divide between virtuality and actuality but also causes people to begin to act as the link between the two through their feeling bodies. I offered this description of immersion and sensual-affective exchange to pick apart the pervasive

idea that immersion is an umbrella term for the many architectures of posthuman spectatorship. The architecture of *Immersion* offers an embodied spectatorial process that works as hold spectators transfixed with(in) virtual systems. The primary concern of immersivity was expressed through the technology of Virtual Reality. In both *Ghostbusters: Dimension* and *Farpoint* the immersed spectator relied on a connection to affect and emotional response to experience the performance frame. Using haptics, visuality, and aurality, the spectator's feeling body could transmit the sense of being engulfed in the digitally created worlds. It was in these virtual realms that the spectator could come alive and fully become part of the narrative and game worlds presented. In Complicite's *The Encounter* binaural audio was discussed as the primary technological representation of virtuality. By allowing sound to envelop the spectator, a sense of immersion in a narrative event ensued. This enveloping became a way of entering the virtual space of the mind where tromping through the amazon rain forest could become a reality while sitting stationary inside a theatre space. Sound was used to enter the spectator into a dynamic tension where imagination and perception work together to fully engage one in an experiential narrative. In the MIT/Punchdrunk collaboration, the multiple spectator experiences were explained to show the difference between tangible and affective agency. This analysis was a necessary inclusion so as to not fully valorize the architecture of *Immersion* as the ultimate structure and process for performative experiencing. Immersion relies on a state of sensory engulfment by a spectator's perceptual apparatus that allows a spectator to create forms of meaning that then allow them to feel as though they are a crucial part of the event with agency. That feeling of agency is usually only expressible through individual meaning making, unless one of the other architectures of exchange are included. By pairing *Participation*, *Game Play*, or *Role Play* with immersion it allows the spectators experience to be more than a passive dip in the pool.

Acts of Participatory Communication and Ethico-Communal Exchange

In Chapter 3, the architecture of *Participation* was discussed to explain the technogenetic connection between participatory spectatorship and Web 2.0. The plethora of interactive and participatory domains operating on and through the internet have brought about a participatory condition in technologically advanced social systems. That condition transports its aesthetics and functionality over to spectators as participants. When applied in a posthumanist manner, the exchange allowed through spectatorship has the capacity to operate in an ethico-communal manner. The exchange between audience and performance object is often described using the term participation in both active and passive registers. In the chapter, I approached participation from the active register in the sense that a spectator gains a form of tangible agency rather than simply affective agency described in Chapter 2. I proposed that tangible agency is a mode of experiential action that gives the spectator the ability to make change beyond the moment of personal response and can impact the total possibilities of the performance situation. Tangible agency gives a spectator the capacity to make a material impact in, on, and beyond the performance. In the case studies from this chapter, the architecture of *Participation* calls forth a civically-minded performance framework that exudes potential for engaging with spectators as members of a contemporary polis. The architecture encourages participatory dialogue that can lead to a democratic community of spectators with the capacity to promote social and civic change. This capacity to engage the audience through ethico-communal exchange is uniquely posthuman. It gives them the opportunity to question, explore, and breakdown established hierarchies. The Civilians' *Occupy Your Mind* harnessed the unrest brought about by the global financial crises and used participation in both live and mediated platforms to (re)perform the stories of political protestors. By intertwining the Real and the fictive throughout these acts of (re)performance, spectators could emulate a posthuman form of participatory democracy: one where the agency of ordinary citizens is activated to confront large-scale societal issues. The

Foundry's *How Much is Enough?* engaged its participant spectators in a similar way and operates in a posthumanistic capacity by addressing the participatory condition of contemporary spectators through dissensual discourse. The production's framework gives the spectators the tangible agency to speak out and speak their minds. By speaking ethically and communally they engage in a conversation about the multiple ways that can think to address what they value and what values contribute to a more just and ethically minded society. Both projects give spectators the tangible agency to become more than passive watchers in a society consumed by neoliberal values. They encourage spectators to perform as engaged and conscious citizens of the world operating through posthumanist values.

Augmenting the Perceptual Function Through Acts of Ludic-Critical Exchange

Chapter 4 focused on the relationship between mobile device technologies and embodied perception of space, place, and time in gamified constructions of social life. iDevices are more than simple digital tools, they act as hand-held extensions of a posthuman spectator's physical and mental being; extensions that allow connective access to the entirety of the world at any time and any place. While the structures that iDevices establish in gamified constructions of perception are accessible without the technology, the chapter focused on how these devices have become an inescapably attached part of both mediatized societies and posthuman selfhood. The posthuman network(s) created between an iDevice and a person's perceptual apparatus invokes a playful nature in the person's perspective of the social worlds they interact with(in). This playful nature requires a perspective that is constantly in flux and moving towards new moments or possibilities. This new perspective is at the heart of the gamification of social life, in which the primacy of rules in game-play gives spectators increased capacity to engage in meaningful agency and choice. Once these technologies create connections between their users and the world, disconnecting is nearly impossible without considerable negative consequences to a

conception and perception of a stable sense of selfhood. The interlinking nature of the technology destabilizes one's ability to consider a singular self as possible. As a spectator, this destabilized sense of self causes the user to move between the dual Reals of the virtual and the actual, enacting a form of play. The architecture of *Game Play* operates as the ideal realm for a spectator to engage in ludic critical exchange. A realm with(in) which the liminal field between multiple realities virtual/digital/fictive and actual/analogue/real is explored. Through this exploration a spectator interacts in a gamified manner and becomes critically aware of that gap between the multiple realities. iDevice technology technogenetically augments the perceptual apparatus of spectators in such a way that all modes of life begin to take on game-like qualities. These qualities are shown in *Adventure One* as a way of teasing out the ethical possibilities of manipulating the world financial system and navigating physical spaces that have been given new meaning through the combination of fictive and real world actions. Through these acts of gamification, the iDevice acts as a conduit bonding the multiple realities together. As a symbolic part of the posthuman body and extension of the perceptual apparatus, the iDevice enhances the act of game-play to allow the spectator an ability to navigate the in-between. In *Pokémon Go*, the iDevice performs in a similar manner. The device opens up and highlights the connection between parallel worlds that are intricately interlink narrative and history. In *Phone Story*, the device serves as the platform through which the spectator becomes critical player to better understand the geopolitical, ethical, and humanitarian impact of the symbiotic link between iDevice and human selfhood. In each of these examples different levels of ludic critical exchange occur, giving the spectator heightened agency to reconsider their place in the technologically-conditioned contemporary world.

Reconfiguring the Roles Played Using Ludic-Creativity with Algorithmic Partners

In Chapter 5, the relationship between a spectator's understanding of personal identity when engaged in acts of role play with smart machines was discussed to show how acts of

spectatorship can be understood as a reassembled mode of performativity. When interacting with smart machines and algorithmic systems, spectators are unwittingly performing multiple roles with(in) the architecture of *Role Play*. In this architecture, an open-ended mode of play ensues through which a posthuman spectator gains the ability to reconfigure how both smart machines and this spectator comprehends themselves as an individuated social being. Through acts of role-play, a spectator learns how to overcome the power of smart machines and game the system of databody construction. Learning how to do this only comes when acts of ludic-creative exchange are engaged. In these acts, a spectator better understands how a stable construction of selfhood becomes something unattainable. The case study offered shows how becoming a spectator in an algorithmic performance allows one to play multiple roles that inform how they are perceived by smart machines. In Blast Theory's *Karen*, a spectator has the capacity to perform multiple roles in their relationship with the filmic avatar Karen. This relationship is highlighted as a model for how algorithms shape and reshape representations of our individual identities. By engaging in the act of posthuman spectatorship with the app, a spectator begins to understand the agency they have to shape their own sense of self and the realities that multiplied selves can create. Through ludic-creative exchange with acts of performance such as *Karen*, a spectator gains the ability to become the author of their own experience. When applied back out into their daily life, which contains overlaps of immersion, participation, and game-play, this author learns to create noise in the system of data collection. This is precisely the type of knowledge necessary to use when interacting with machines such as Alexa. By interrupting the system with this noise, a spectator engages in a form of technological performativity as an act of spectatorship. In systems of datafication all life becomes a performative mode, and through acts of posthuman spectatorship a human being gains the agency to write, direct, and star in their own performance.

Shifts in Perception / Deconstructing Hierarchies / Performing Posthuman Spectatorship

I began this project with an anecdote about understanding how society was changing based on the influence of technology. This anecdote helped me think about the potential of using an interdisciplinary lens to look at performance and audiences. Through the eyes of a three-year old, a possible future for spectatorship was born. The anecdote was given to frame the usefulness of having a larger conversation about the future of TaPS research, practice, and pedagogy. I offered this project as a way of setting up an analytical model that will aid in beginning that conversation. The model offers a way of looking at both contemporary performance and contemporary spectatorship as reflections of the changing dynamics of society and the audiences that society produces under the technics of digitalization and datafication. These technics are profoundly impacting the way human beings perceive the world and how they perform in the worlds they perceive. I've argued that the impact of technogenesis is bringing about a mode of posthuman sociality as one that accepts the potential of selfhood in flux because these multiple selves are constantly navigating the space between overlapping and interconnected realms of digitality and actuality. Without a stable ontological ground to stand upon, posthuman spectators perform as the mediators between multiple ways of perception, embodiment, and being-in-the-world through the multiple architectures of exchange. The multiple architectures I have explained were given to help create a model for analyzing acts of spectatorship in an era where the binary of watcher and watched is increasingly less useful. This model calls for a uniquely inter- and transdisciplinary lens which combines viewpoints from multiple fields. These viewpoints allow those of us in the field TaPS to connect the social, the performative, and the technological into one powerful lens for better understanding the place of *the human* in the worlds crafted today and hopefully the worlds crafted in the future. The model presented for rethinking spectatorship in a posthuman mode allows us to better see the intricate relationships and interconnections existing in today's technologically conditioned social realities. Without this lens, our field may get stuck

thinking of the relationship between performance and spectatorship as fixed and static. With the lens, that relationship is enlarged to see how being a spectator in a posthuman mode is to be more than an observer of an object, but to become part of the intersubjective relationship that makes up the entirety of a performance. The posthuman spectator is an embodied and material force that performs with/in/on/through/around a performance event while the performance event acts with/in/on/through the posthuman spectator. To comprehend how to even verbalize this relationship: a relationship that has no beginning or end, no inside or outside, no here or there, but only a continual flow of exchange, we first approach the spectator as a being in flux who uses their perceptual apparatus to perceive, comprehend, navigate, create, and reconfigure the spaces between all the possibilities and potentialities of existence. This requires a vastly expanding interdisciplinarity and a mode of thinking that breaks down established hierarchies. The model presented asks one to think in a relational manner where one can see the connections among the various acts of multiplicity that are performance. The architectures of exchange given are only the beginning of an unlimited range of potentialities born through the relationship between human beings, technology, and performance. These architectures mark a beginning which hopefully can and will be built upon. By building on this base of posthuman spectatorship, a new conversation begins. I hope this conversation never ends.

BIBLIOGRAPHY

- Abt, Clark C. 1970. *Serious Games*. New York: Viking Press.
- Adams, Matt. 2016. "In Conversation with ... Matt Adams of Blast Theory." London: Roundhouse Cultural Center, June 26.
- — —. 2016. Unpublished Interview with William Lewis. Portslade, UK: May 20.
- — —. 2017. Unpublished Interview with William Lewis. Manchester, UK: June 16.
- Alpaydin, Ethem. 2016. *Machine Learning*. Cambridge, MA: MIT Press.
- Alston, Adam. 2016. *Beyond Immersive Theatre: Aesthetics, Politics and Productive Participation*. London: Palgrave Macmillan.
- Anderson, Monica. 2015. "U.S. Technology Device Ownership 2015 | Pew Research Center." Pewinternet.org. 2015. <http://www.pewinternet.org/2015/10/29/technology-device-ownership-2015/>.
- Apple. "Karen by Blast Theory on the App Store." *iTunes.apple.com*. Accessed June 26, 2017. <https://itunes.apple.com/us/app/karen-by-blast-theory/id945629374?mt=8>.
- Apple. "iPhone 7 - Technical Specifications - Apple." *Apple.com*, 2017. <https://www.apple.com/iphone-7/specs/>.
- Aristotle. 1967. *Aristotle Poetics*. Edited by Gerald F. Else. Ann Arbor: University of Michigan Press.
- Arnold, Ross D., and Jon P. Wade. 2015. "Definition of Systems Thinking: A Systems Approach." *Procedia Computer Science* 44: 669–78.
- Artaud, Antonin. 1958. *The Theater and Its Double*. Edited by Mary Caroline Richards. New York: Grove Press.
- Auslander, Phillip. 2008. *Liveness: Performance in a Mediatized Culture*. London and New York: Routledge.
- Avedon, E.M., and Brian Sutton-Smith. 1971. *The Study of Games*. New York: John Wiley & Sons.
- Badiou, Alan. 2007. *The Century*. Cambridge: Polity Press.
- — —. 2013. *Rhapsody for the Theatre*. London: Verso.
- Balme, Christopher. 2014. *The Theatrical Public Sphere*. Cambridge: Cambridge University Press.
- Barad, Karen. 2003. "Posthumanist Performativity: Toward Understanding How Matter Comes to Matter." *Signs: Journal of Women in Culture and Society* 28 (3): 801-831.

- — —. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.
- Barney, Darin, Gabriella Colman, Christine Ross, Jonathan Sterne, and Tamar Tembeck. 2016. "The Participatory Condition: An Introduction." In *The Participatory Condition in the Digital Age*, vii–xxxix. Minneapolis: University of Minnesota Press.
- Baudrillard, Jean. 1995a. *Simulacra and Simulation*. Translated by Shelia Glaser. Ann Arbor: University of Michigan Press.
- — —. 1995b. *The Gulf War Did Not Take Place*. Translated by Paul Patton. Bloomington: Indiana University Press.
- — —. 2014. *Screened Out*. Translated by Chris Turner. London: Verso Books.
- Bay-Cheng, Sarah. 2007. "Theatre Squared: Theatre History in the Age of Media," *Theatre Topics* 17 (1): 37-50.
- — —. 2012. "Theatre is Media: Some Principles for a Digital Historiography of Performance" *Theater* 42 (2): 27-41.
- — —. 2014. "'When This You See': The (Anti) Radical Time of Mobile Self-Surveillance" *Performance Research: A Journal of the Performing Arts* 19 (3): 48-55.
- — —. 2016. "Postmedia Performance" *Contemporary Theatre Review: Interventions*. <http://www.contemporarytheatrereview.org/2016/postmedia-performance/>
- — —. 2017. "Pixelated Memories: Performance, Media, and Digital Technology" *Contemporary Theatre Review* 27.3 (fall 2017): 324-339.
- Bay-Cheng, Sarah, C Kattenbelt, A Lavender, and R Nelson, eds. 2010. *Mapping Intermediality in Performance*. Amsterdam: Amsterdam University Press.
- Bay-Cheng, Sarah, Jennifer Parker-Starbuck, and David Z. Saltz. 2015. *Performance and Media: Taxonomies for a Changing Field*. Ann Arbor: University of Michigan Press.
- Benford, Steve, and Gabriella Giannachi. 2011. *Performing Mixed Reality*. Cambridge: MIT Press.
- Bennett, Jane. 2010. *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press.
- Bennett, Susan. 1997. *Theatre Audiences: A Theory of Production and Reception*. New York: Routledge.
- Birringer, Johannes. 1998. *Media & Performance: Along the Border*. Baltimore: Johns Hopkins University Press.
- — —. 2000. *Performance on the Edge*. London: The Athlone Press.
- — —. 2006. "Digital Performance." *Performance Research* 11 (3): 42–45.

- — —. 2008. *Performance, Technology & Science*. New York: PAJ Publications.
- Bishop, Claire. 2012. *Artificial Hells: Participatory Art and the Politics of Spectatorship*. London: Verso.
- Blast Theory. 2015. "Karen." Blasttheory.co.uk. 2015.
<http://www.blasttheory.co.uk/projects/karen/>.
- Bleeker, Maaïke. 2011. *Visuality in Theatre: The Locus of Looking*. New York: Palgrave Macmillan.
- Boal, Augusto. 1985. *Theatre of the Oppressed*. Theatre Communications Group.
- Bolter, Jay David, and Richard Grusin. 1999a. *Remediation: Understanding New Media*. Cambridge, MA: MIT Press.
- Borowski, Mateusz, and Malgorzata Sugiera. 2013. "Political Fictions and Fictionalisations: History as Material for Postdramatic Theatre." In *Postdramatic Theatre and the Political: International Perspectives on Contemporary Performance*, edited by K Jürs-Munby, J Carroll, and S Giles, 67–86. London: Bloomsbury Methuen Drama.
- Boulter, Johnathan. 2015. *Parable of the Posthuman: Digital Realities, Gaming, and the Player Experience*. Detroit: Wayne State University Press.
- Bourriaud, Nicolas. 2002. *Relational Aesthetics*. Translated by Simon Pleasance, Fronza Woods, and Mathieu Copeland. Paris: Les presses du reel.
- Braidotti, Rosi. 2013. *The Posthuman*. Cambridge, UK: Polity Press.
- Brantley, Ben. 2011. "The 99% Onstage: Attention Must Be Paid." *The New York Times*, November 6, 2011.
- Brecht, Bertolt. 1964. *Brecht on Theatre: The Development of an Aesthetic*. Edited by John Willett. New York: Hill and Wang.
- Broadhurst, Susan. 2007. *Digital Practices: Aesthetic and Neuroesthetic Approaches to Performance and Technology*. London: Palgrave Macmillan.
- Broadhurst, Susan, and Josephine Machon. 2006. *Performance and Technology: Practices of Virtual Embodiment and Interactivity*. London: Palgrave Macmillan.
- Brooklyn Ink Staff. 2011. "LIVE: OWS Evicted From Zuccotti | Local Brooklyn News and Features | The Brooklyn Ink." Brooklynink.org. 2011.
<http://brooklynink.org/2011/11/15/36199-live-ows-evicted-from-zucotti-park/>.
- Brown, Mark. 2011. "Apple Bans Phone Story Game That Exposes Seedy Side of Smartphone Creation | WIRED." Wired.com. 2011. <https://www.wired.com/2011/09/phone-story/>.
- Butler, Judith. 1988. "Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory." *Theatre Journal* 40 (4): 519–31.

- — —. 1990. *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge.
- Caillois, Roger. 1963. *Man, Play, and Games*. London: Thames and Hudson.
- Carr, Nicholas G. 2010. *The Shallows: What the Internet Is Doing to Our Brains*. New York: W.W. Norton.
- Carrier, L. Mark, Nancy A. Cheever, Larry D. Rosen, Sandra Benitez, and Jennifer Chang. 2009. "Multitasking Across Generations: Multitasking Choices and Difficulty Ratings in Three Generations of Americans." *Computers in Human Behavior* 25 (2): 483–89.
- Causey, Matthew. 2006. *Theatre and Performance in Digital Culture: From Simulation to Embeddedness*. New York: Routledge.
- — —. 2016. "Postdigital Performance." *Theatre Journal* 68 (3): 427–41.
- Causey, Matthew, Emma Meehan, and Neill O'Dwyer, eds. 2015. *The Performing Subject in the Space of Technology: Through the Virtual, Towards the Real*. New York: Palgrave Macmillan.
- Chandler, Daniel, and Rod Munday. 2011a. "Perception." In *The Oxford Dictionary of Media and Communication*. Oxford: Oxford University Press.
- — —. 2011b. "Perceptual Codes." In *The Oxford Dictionary of Media and Communication*. Oxford: Oxford University Press.
- Civilians, The. n.d. "The Civilians / Mission." Accessed December 12, 2015. <http://www.thecivilians.org/about/mission.html>.
- — —. 2012. "Occupy Your Mind." Tumblr.com. 2012. <http://occupythecivilians.tumblr.com>.
- Coney. n.d. "Coney." Accessed January 1, 2016. <http://coneyhq.org/about-us/>.
- Coney represented by, Will Drew, and Stevens Tassos. 2015. *Adventure One*. Unpublished.
- Cook, Amy. 2008. "Interplay: The Method and Potential of a Cognitive Scientific Approach to Theatre." *Theatre Journal* 59 (4): 579–94.
- Costikyan, Greg. 2002. "I Have No Words & I Must Design: Toward a Critical Vocabulary for Games." *Frans Mäyrä. Tampere*. Tampere University Press. <http://www.costik.com/nowords2002.pdf>.
- Couldry, Nick, and Andreas Hepp. 2017. *The Mediated Construction of Reality*. Cambridge, UK: Polity Press.
- Cox, Christoph, Molly Whalen, and Alain Badiou. 2012. "On Evil: An Interview with Alain Badiou." *Cabinet*, 2012. <http://www.cabinetmagazine.org/issues/5/alainbadiou.php>.
- Crawford, Chris. 1984. *The Art of Computer Game Design*. Berkeley: McGraw-Hill.
- Damasio, Antonio. 2005. *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: Penguin.

- — —. 2010. *Self Comes to Mind: Constructing the Conscious Brain*. New York: Pantheon.
- Daniel, Ian, and Cesar Alvarez. 2015. “César Alvarez: Building the Future with Gaming and Participatory Theater.” Extendedplay.thecivilians.org. 2015.
<http://extendedplay.thecivilians.org/cesar-alvarez-universe-is-a-small-hat/>.
- Darroch, Michael. 2010. “Feedback Loop.” In *Mapping Intermediality in Performance*, edited by Sarah Bay-Cheng, Chiel Kattenbelt, Andy Lavender, and Robin Nelson eds., 185. Amsterdam: Amsterdam University Press.
- Debord, Guy. 2005. “The Society of the Spectacle.” Edited by Ken Knabb. Theanarchistlibrary.org. 2005. <https://theanarchistlibrary.org/library/guy-debord-the-society-of-the-spectacle.pdf>.
- Deen, Menno, Ben Schouten, and Tilde Bekker. 2015. “Playful Identity in Game Design and Open-Ended Play.” In *Playful Identities: The Ludification of Digital Cultures*, edited by Valerie Frissen, Sybille Lammes, Michiel de Lange, Jos de Mul, and Joost Raessens, 111–29. Amsterdam: Amsterdam University Press.
- Deleuze, Gilles, and Felix Guattari. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi. Minneapolis: University of Minnesota Press.
- Dixon, Steve. 2007. *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation*. Cambridge: MIT Press.
- Dupré, Ben. 2007. *50 Philosophy Ideas You Really Need To Know*. London: Quercus Publishing.
- E-marketer. 2016. “US Mobile Usage: Top 5 Stats to Know.” Emarketer.com. 2016.
https://www.emarketer.com/corporate/coverage/be-prepared-mobile?ecid=m1216&CTA&mkt_tok=eyJpIjoiWWpRME9HTmIPV013WkROayIsInQiOiJ4TDfKUUpSSDFXREI4cDVcL3Y3dmVUbGJSMU53V0pieStHSTkrUmZrTINraTFRZnZlbGpMSmFqdGN0YINSa1dJcjFxFgwd0pHV0MyUmVGandZdDQwYksZRHIUdFhsWUpR.
- Esmail, Sam, dir. 2016. *Mr. Robot*. Season 2, Episode 11, “eps2.9_pyth0n-pt1.p7z.” September 14. USA: Amazon Prime. Streaming. https://www.amazon.com/eps2-0_unm4sk-pt1-tc/dp/B01H4KXMU8/ref=sr_1_fkmr0_2?ie=UTF8&qid=1524946793&sr=8-2-fkmr0&keywords=mr+robot+season+2+episode+11
- Esposti, Sara Degli. 2014. “When Big Data Meets Dataveillance: The Hidden Side of Analytics.” *Surveillance and Society* 12 (2): 209–25.
- Facebook. 2018. “Stats.” Facebook.com. 2018.
- Farman, Jason. 2010. “Hypermediating the Game Interface: The Alienation Effect in Violent Videogames and the Problem of Serious Play.” *Communication Quarterly* 58 (1): 96–109.
- — —. 2012. *Mobile Interface Theory: Embodied Space and Locative Media*. New York: Routledge.

- — —. 2014. *The Mobile Story: Narrative Practices with Locative Technologies*. Edited by Jason Farman. New York: Routledge.
- — —. 2015. "Stories, Spaces, and Bodies: The Production of Embodied Space Through Mobile Media Storytelling." *Communication Research and Practice* 1 (2): 101–16.
- Firth, Jordan. 2015. *Smartphones as Locative Media*. Cambridge, UK: Polity Press.
- Fischer-Lichte, Erika. 2008. *The Transformative Power of Performance. The Transformative Power of Performance: A New Aesthetics*. New York: Routledge.
- Flanagan, Mary. 2013. *Critical Play: Radical Game Design*. Cambridge, MA: MIT Press.
- Foucault, Michel. 1970. *The Order of Things: An Archaeology of the Human Sciences*. London: Tavistock Publications.
- Freshwater, Helen. 2009. *Theatre and Audience. Theatre & Audience*. New York: Palgrave Macmillan.
- Frissen, Valerie, Sybille Lammes, Michiel de Lange, Jos de Mul, and Joost Raessens. 2015. "Homo Ludens 2.0: Play, Media, and Identity." In *Playful Identities: The Ludification of Digital Cultures*, edited by Valerie Frissen, Sybille Lammes, Michiel de Lange, Jos de Mul, and Joost Raessens, 35–50. Amsterdam: Amsterdam University Press.
- Fukuyama, Francis. 1992. *The End of History and The Last Man*. New York: Free Press.
- Goggin, Gerard. 2009. "Adapting the Mobile Phone: The iPhone and Its Consumption." *Continuum: Journal of Media & Cultural Studies* 23 (2): 231–44.
- Greene, Andy. 2015. "Flashback: 'The Wizard' Unveils Nintendo's Power Glove - Rolling Stone." *Rollingstone.com*. 2015. <http://www.rollingstone.com/culture/videos/flashback-the-wizard-unveils-nintendos-power-glove-20150528>.
- Greengard, Samuel. 2015. *The Internet of Things*. Cambridge, MA: MIT Press.
- Hansen, Mark B. N. 2004. *New Philosophy for New Media*. Cambridge, MA: MIT Press.
- — —. 2006. *Bodies in Code: Interfaces with Digital Media*. New York: Routledge.
- — —. 2015 *Feed-Forward*. Chicago: University of Chicago Press.
- Haraway, Donna. 1991. "A Cyborg Manifesto: Science Technology, and Socialist-Feminism in the Late Twentieth Century." In *Simians, Cyborgs and Women: The Reinvention of Nature*, 149–81.
- Harvie, Jen. 2013. *Fair Play: Art, Performance and Neoliberalism*. New York: Palgrave Macmillan.
- Hayles, N. Katherine. 1997. "The Condition of Virtuality." In *Language Machines: Technologies of Literary and Cultural Production*, edited by J Masten, P Stallybrass, and N Vickers, 183–208. London; New York: Routledge.

- — —. 1999. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: University of Chicago Press.
- — —. 2001. "The Condition of Virtuality." In *The Digital Dialectic: New Essays for New Media*, edited by Peter Lunenfeld, 68–96. Cambridge, MA: MIT Press.
- — —. 2005. *My Mother Was a Computer: Digital Subjects and Literary Texts*. Chicago: University of Chicago Press.
- — —. 2012. *How We Think: Digital Media and Contemporary Technogenesis*. Chicago: University of Chicago Press.
- — —. 2014. "Cognition Everywhere: The Rise of the Cognitive Nonconscious and the Costs of Consciousness." *New Literary History* 45 (2): 199–220.
- — —. 2016. "Posthuman Cognition: The Power of the Cognitive Nonconscious." *Technology & The Human: Rethinking Posthumanism Graduate Conference*. Waltham, Massachusetts. April 4th.
- — —. 2017. *Unthought: The Power of the Cognitive Nonconscious*. Chicago: University of Chicago Press.
- Henderson, Clint. 2017. "2017 Mobile Marketing Statistics (Trends, Predictions, & Mobile Strategy) - Wired SEO." *Wiredseo.com*. 2017. <https://www.wiredseo.com/mobile-marketing-statistics-2017/#5>.
- Hepp, Andreas. 2013. *Cultures of Mediatization*. Cambridge, UK: Polity Press.
- Herbrechter, Stefan. 2013. *Posthumanism: A Critical Analysis*. London; New York: Bloomsbury.
- Higgin, Peter. 2012. "Innovation in Arts and Culture #4: Punchdrunk - Sleep No More." *The Guardian*. London. May 25, 2012. <https://www.theguardian.com/culture-professionals-network/culture-professionals-blog/2012/may/25/punchdrunk-digital-innovation-sleep-no-more>.
- Holland, Todd. 1989. *The Wizard*. USA: Universal Pictures.
- Holub, Robert C. 1984. *Reception Theory: A Critical Introduction*. New York: Methuen.
- Home-Cook, George. 2015. *Theatre and Aural Attention*. London: Palgrave Macmillan.
- Huizinga, Johan. 1955. *Homo Ludens: A Study of the Play Element in Culture*. The Beacon Press.
- IDC Custom Solutions. 2013. "Always Connected for Facebook Case Study." *Idc.com*. 2013. https://www.idc.com/prodserv/custom_solutions/download/case_studies/PLAN-BB_Always_Connected_for_Facebook.pdf.
- Iltter, Seda. 2017. "Unsettling the 'Friendly' Gaze of Dataveillance: The Dissident Potential of Mediatized Aesthetics in Blast Theory's Karen." *International Journal of Performance Arts and Digital Media* 13 (1): 77–92.

- Izkoff, Dave. 2012. "A Guinea Pig's Night at the Theater." *New York Times*. New York. May 23, 2012. https://www.nytimes.com/2012/05/23/theater/sleep-no-more-enhanced-by-mit-media-lab.html?_r=0
- Jenkins, Henry. 2006. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.
- Jenkins, Henry, Sam Ford, and Joshua Green. 2013. *Spreadable Media: Creating Value and Meaning in a Networked Culture*. New York: New York University Press.
- Kelly, Kevin. 2016. *The Inevitable: Understanding the 12 Technological Forces That Will Shape Our Future*. New York: Viking Press.
- Kershaw, Baz. 1992. *The Politics of Performance: Radical Theatre as Cultural Intervention*. London: Routledge.
- — —. 1999. *The Radical in Performance: Between Brecht and Baudrillard*. New York: Routledge.
- — —. 2001. "Oh for Unruly Audiences! Or, Patterns of Participation in Twentieth-Century Theatre." *Modern Drama* 44 (2): 133–54.
- King, A.L.S., A.M. Valenca, A.C.O. Silva, Baczynski T., M.R. Carvalho, and A.E. Nardi. 2013. "Nomophobia: Dependency on Virtual Environments or Social Phobia?" *Computers in Human Behavior* 29 (1): 140–44.
- Koumarianos, Myrto, and Cassandra Silver. 2013. "Dashing at a Nightmare: Haunting Macbeth in Sleep No More." *TDR: The Drama Review* 57 (1): 167–75.
- Koz, and Phonestory.org. 2011. "Phone Story: An iPhone Educational Game. Now Banned from the AppStore - YouTube." Youtube.com. 2011. <https://www.youtube.com/watch?v=sSMSFLAsNzc>.
- Kozel, Susan. 2008. *Closer: Performance, Technologies, Phenomenology*. Cambridge, MA: MIT Press.
- — —. 2017. "Performing Encryption." In *Performing the Digital*, edited by Martina Leeker, Imanuel Schipper, and Timon Beyes, 117–34. Bielefeld: Verlag.
- Kozinn, Sarah. 2010. "Discovering What We Don't Know: An Interview with Steve Cosson of the Civilians." *TDR: The Drama Review* 54 (4): 188–205
- Kravets, David. 2011. "San Francisco Subway Shuts Cell Service to Foil Protest; Legal Debate Ignites." *Wired.com*. 2011. <https://www.wired.com/2011/08/subway-internet-shuttering/>
- Kushner, Tony, William Pope.L, John Malpede, Graciela I Sanchez, Linda Frye Burnham, Caron Atlas, Archon Fung, et al. 2001. "How Do You Make Social Change?" *Theater* 31 (3). Duke University Press: 62–93.
- Lachance, Naomi. 2016. "Facebook's Facial Recognition Software Is Different From The FBI's. Here's Why: All Tech Considered: NPR." NPR.org. 2016.

<http://www.npr.org/sections/alltechconsidered/2016/05/18/477819617/facebooks-facial-recognition-software-is-different-from-the-fbis-heres-why>.

- Lanier, Jaron. n.d. "Jaron Lanier's Bio." Jaron Lanier.com. Accessed November 8, 2017. <http://www.jaronlanier.com/general.html>.
- Lavender, Andy. 2012. "Viewing and Acting (and Points in Between): The Trouble with Spectating after Rancière." *Contemporary Theatre Review* 22 (3): 307–26.
- — —. 2016. *Performance in the Twenty-First Century: Theatres of Engagement*. New York: Routledge.
- Leeker, Martina. 2017. "Performing (the) Digital: Positions of Critique in Digital Cultures." In *Performing the Digital*, edited by Martina Leeker, Imanuel Schipper, and Timon Beyes, 21–59. Bielfeld: Verlag.
- Leeker, Martina, Imanuel Schipper, and Timon Beyes. 2017. "Performativity, Performance Studies and Digital Cultures." In *Performing the Digital*, edited by Martina Leeker, Imanuel Schipper, and Timon Beyes, 9–18. Bielfeld: Verlag.
- Lehmann, Hans-Thies. 2006. *Postdramatic Theatre*. Translated by Karen Jürs -Munby. Taylor & Francis.
- — —. 2013. "A Future for Tragedy? Remarks on the Political and the Postdramatic." In *Postdramatic Theatre and the Political: International Perspectives on Contemporary Performance*, edited by K Jürs-Munby, J Carroll, and S Giles, 87–110. London: Bloomsbury Methuen Drama.
- Lévy, Pierre. 2001. *Cyberculture*. Translated by Robert Bononno. Minneapolis: University of Minnesota Press.
- Lewis, William W. 2018. "Approaches to 'Audience Centered' Performance: Designing Interaction for the iGeneration" in *New Directions in Teaching Theatre Arts*, eds. Anne Flitsos and Gail Medford. New York: Palgrave: 9-26.
- Lewis, William W. 2017. "Performing 'Posthuman' Spectatorship: Digital Proximity and Variable Agencies," *Performance Research* 22 (3): 8-15
- Lewis, William W. and Sarah Johnson. 2017. "Theatrical Reception and Shifts in Twenty-First Century Perception: A Case Study for the iGeneration" *Theatre Topics* 27 (2): 123-136
- Lonergan, Patrick. 2016. *Theatre & Social Media*. London: Palgrave.
- Loukola, Maiju. 2009. "Dwellings in Image-Spaces." In *Modes of Spectating*, edited by Alison Oddey and Christina White, 197–206. Bristol: Intellect Books.
- Lynn, Kirk. 2011. *How Much Is Enough? Our Values in Question*.

- Lyotard, Jean-Francois. 1984. *The Postmodern Condition: A Report on Knowledge*. Edited by Geoff Bennington and Brian Massumi. 15th ed. Minneapolis: University of Minnesota Press.
- Machon, Josephine. 2009. *(Syn)aesthetics: Redefining Visceral Performance*. London: Palgrave Macmillan.
- — —. 2013. *Immersive Theatres: Intimacy and Immediacy in Contemporary Performance*. New York: Palgrave Macmillan.
- — —. 2016. "Watching, Attending, Sense-Making: Spectatorship in Immersive Theatres." *Journal of Contemporary Drama in English* 4 (1): 34–48
- Marcus, Joan. 2016. "Broadway's Rumble in the Jungle: How Simon McBurney Made 'The Encounter.'" *TheDailyBeast.com*. 2016. <https://www.thedailybeast.com/broadways-rumble-in-the-jungle-how-simon-mcburney-made-the-encounter>.
- Massumi, Brian. 2002a. *Parables for the Virtual: Movement, Affect, Sensation*. Durham: Duke University Press.
- Matzner, Tobias. 2016. "Beyond Data as Representation: The Performativity of Big Data in Surveillance." *Surveillance and Society* 14 (2): 197–210.
- — —. 2018. "The Human Is Dead-Long Live the Algorithm!: Human-Algorithmic Ensembles and Liberal Subjectivity." *Theory Culture and Society* Preprint V. http://www.tobiasmatzner.de/wp-content/uploads/2017/04/preprint_human_is_dead.pdf.
- McConachie, Bruce. 2015. *Evolution, Cognition, and Performance*. Cambridge, UK: Cambridge University Press.
- McCutcheon, Jade Rosina. 2013. "The Performance Mirror." In *Embodied Consciousness: Performance Technologies*, edited by Jade Rosina McCutcheon and Barbara Sellers-Young, 145–58. New York: Palgrave Macmillan.
- McCutcheon, Jade Rosina, and Barbara Sellers-Young. 2013. *Embodied Consciousness: Performance Technologies*. New York: Palgrave Macmillan.
- McGonigal, Jane. 2011. *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. New York: Penguin Books.
- McKenzie, Jon. 2001. *Perform of Else: From Discipline to Performance*. London: Routledge.
- Mee, Erin B. 2016. "The Audience Is the Message: Blast Theory's App-Drama." *TDR: The Drama Review* 60 (3): 165–71.
- Meeker, Mary. 2015. "Mobile Internet Trends Mary Meeker 2015 1 | Smart Insights." *Smartinsights.com*. 2015. http://www.smartinsights.com/?attachment_id=53811.
- Munster, Anna. 2006. *Materializing New Media: Embodiment in Information Aesthetics*. Hanover: Dartmouth College Press.

- Murray, Janet H. 2017. *Hamlet on the Holodeck*. 2nd ed. New York: Free Press.
- Napoli, Antonella. 2014. "Social Media Use and Generational Identity: Issues and Consequences on Peer-to-Peer and Cross-Generational Relationships—an Empirical Study." *Participations - Journal of Audience & Reception Studies* 11 (2): 182–206.
- Nayar, Pramod K. 2014. *Posthumanism*. Cambridge, UK: Polity Press.
- Nelson, Robin. 2010. "Experiencer." In *Mapping Intermediality in Performance*, edited by Sarah Bay-Cheng, Chiel Kattenbelt, Andy Lavender, and Robin Nelson, 44. Amsterdam: Amsterdam University Press.
- Nietzsche, Friedrich. 1995. *Thus Spoke Zarathustra: A Book for All and None*. Edited by Walter Kaufman. New York: Viking Press.
- OED Online. 2017. "Virtual, Adj." OED Online. Oxford University Press. 2017.
- — —. 2018. "Slacktivism, N." OED Online. 2018.
- Parker-Starbuck, Jennifer. 2011. *Cyborg Theatre: Corporeal/Technological Intersections in Multimedia Performance*. Basingstoke: Palgrave Macmillan.
- Parlett, David. 1992. *The Oxford Dictionary of Card Games*. Oxford: Oxford University Press.
- — —. 1999. *The Oxford History of Board Games*. Oxford: Oxford University Press.
- Perrin, Andrew. 2016. "Book Reading 2016." Pewinternet.org. 2016.
<http://www.pewinternet.org/2016/09/01/book-reading-2016/>.
- Pew Internet Research. 2017. "Demographics of Internet and Home Broadband Usage in the United States | Pew Research Center." Pewinternet.org. 2017.
<http://www.pewinternet.org/fact-sheet/internet-broadband/>.
- Pew Research Center. 2017. "Demographics of Mobile Device Ownership and Adoption in the United States | Pew Research Center." Pewinternet.org. 2017.
<http://www.pewinternet.org/fact-sheet/mobile/>.
- Potzch, Holger, and N. Katherine Hayles. 2014. "FCJ-172 Posthumanism, Technogenesis, and Digital Technologies: A Conversation with N. Katherine Hayles." *The Fibreculture Journal*, no. 23: 95–107. <http://fibreculturejournal.org/wp-content/pdfs/FCJ-172PotzchHayles.pdf>.
- Rancière, Jacques. 2007a. *On the Shore of Politics*. Translated by Liz Heron. London; New York: Verso.
- — —. 2007b. "The Emancipated Spectator." *Artforum* 45 (7): 271–80.
- — —. 2009. *The Emancipated Spectator*. Translated by Gregory Elliot. London; New York: Verso Books.
- — —. 2010. *Dissensus: On Politics and Aesthetics*. Translated by Steven Corcoran. London: Continuum.

- Read, Alan. 2008. *Theatre, Intimacy & Engagement: The Last Human Venue*. London: Palgrave Macmillan.
- — —. 2013. *Theatre in the Expanded Field: Seven Approaches to Performance*. New York: Bloomsbury Methuen Drama.
- Remshardt, Ralf. 2008. "Beyond Performance Studies: Mediated Performance and the Posthuman." *Cultura, Lenguaje Y Representacion / Culture, Language and Representation* 6: 47–64.
- — —. 2010. "Posthumanism." In *Mapping Intermediality in Performance*, edited by Sarah Bay-Cheng, Chiel Kattenbelt, Sndy Lavender, and Robin Nelson. Amsterdam: Amsterdam University Press.
- Roberts, Donald F., Ulla G. Goehr, and Victoria Rideout. 2005. "Generation M: Media in the Lives of 8-18 Year Olds." Kaiser Family Foundation.
- Roden, David. 2015. *Posthuman Life: Philosophy at the Edge of the Human*. New York: Routledge.
- Rosen, Larry. 2010. *Rewired: Understanding the iGeneration and the Way They Learn*. New York: Palgrave Macmillan.
- — —. 2011. "Teaching the iGeneration." *Educational Leadership* 1 (March): 10–16.
- Rosson, Doug. 2013. "Re-Examining Heidegger to Uncover Creativity." In *Embodied Consciousness: Performance Technologies*, edited by Jade Rosina McCutcheon and Barbara Sellers-Young, 179–94. New York: Palgrave Macmillan.
- Salen, Katie, and Eric Zimmerman. 2003. *Rules of Play: Game Design Fundamentals*. Cambridge, MA: MIT Press.
- Salter, Chris. 2010. *Entangled: Technology and the Transformation of Performance*. Cambridge: MIT Press.
- Savage, Adam. 2016. "Complicite's The Encounter - Bringing Binaural to the Barbican." Audiomedaiinternational.com. 2016.
<http://www.audiomedaiinternational.com/live/complicite-s-the-encounter-bringing-binaural-to-the-barbican/05265>.
- Schinina, Guglielmo. 2004. "Here We Are: Social Theatre and Some Open Questions about Its Developments." *TDR: The Drama Review* 48 (3). The MIT Press: 17–31.
- Skirky, Clay. 2008. *Here Comes Everybody: The Power of Organizing Without Organizations*. New York: Penguin Press.
- . 2010. *Cognitive Surplus: Creativity and Generosity in a Connected Age*. New York: Penguin Press.
- Singer, Alexander, dir. 1993. *Star Trek the Next Generation*. Season 6, Episode 12, "Ship in a Bottle." January 24. USA: Paramount Television.

- Stevens, Tassos. 2015 Unpublished interview with William Lewis. London, UK. August 17
- — —. 2016. Unpublished Interview with William Lewis. London, UK. June 26.
- — —. 2017. Audio Correspondence with William Lewis. January 30.
- Stiegler, Bernard. 1998. *Technics and Time: The Fault of Epimetheus*. Translated by Richard Beardsworth and George Collins. Palo Alto: Stanford University Press.
- — —. 2009. *Technics and Time, 2*. Edited by Stephen Barker. Palo Alto: Stanford University Press.
- — —. 2011. *Technics and Time, 3: Cinematic Time and the Question of Malaise*. Edited by Stephen Barker. Palo Alto: Stanford University Press.
- Stokes, Phillip. 2007. *Philosophy: The Great Thinkers*. London: Arcturus.
- Suits, Bernard. 1990. *Grasshopper: Games, Life, and Utopia*. Boston: David R. Godine.
- Tach, Dave. 2016. "Farpoint Is the VR Shooter I Wanted, but I Didn't Want The VR Sweats." Polygon.com. 2016. <https://www.polygon.com/features/2016/7/8/12118898/farpoint-is-the-vr-shooter-i-wanted-but-i-didn-t-want-the-vr-sweats>.
- Tandavanitj, Nick. 2017. Unpublished Interview with William Lewis. Portslade, UK: June 13.
- TED. 2010. "Gary Wolf: The Quantified Self | TED Talk | TED.com." Ted.com. 2010. https://www.ted.com/talks/gary_wolf_the_quantified_self.
- The Void. 2016. "Hyper-Reality Is Taking Virtual Reality to the next Level." Blog.thevoid.com. 2016. <https://blog.thevoid.com/how-hyper-reality-takes-virtual-reality-to-the-next-level/>.
- thefoundrytheatre. 2011. "How Much Is Enough | The Foundry Theatre." Thefoundrytheatre.org. 2011. <http://thefoundrytheatre.org/2011/09/10/how-much-is-enough/>.
- theguardiannewsblog. 2011. "Occupy Wall Street: Police Evict Protesters - as It Happened | News | Theguardian.com." Theguardian.com. 2011. <https://www.theguardian.com/news/blog/2011/nov/15/occupy-wall-street-police-action-live>.
- Thompson, James, and Richard Schechner. n.d. "Why 'Social Theatre'?" *TDR: The Drama Review* 48 (3). The MIT Press: 11–16. Accessed October 17, 2014.
- Timeto, Frederica. 2015. "Locating Meida, Performing Spaciality: A Non-Representations Approach to Locative Media." In *Locative Media*, edited by Rowan Wilken and Gerard Goggin, 94–106. London: Routledge.
- Torpey, Peter, Ben Bloomberg, Elena Jessop, and Akita van Troyer. 2012. "Remote Theatrical Immersion: Extending Sleep No More." MIT Media Lab. October 21, 2012. www.media.mit.edu/posts/remote-theatrical-immersion-extending-sleep-no-more/.

- Twenge, Jean M. 2017. *iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy --- and Completely Unprepared for Adulthood* / *and What That Means for the Rest of Us*. New York: ATRIA Books.
- Wallenberg, Christopher. 2012. "To Catch the Conscience of a Nation." *American Theatre Magazine*, April 2012. <http://www.tcg.org/publications/at/apr12/occupy.cfm>.
- White, Gareth. 2013. *Audience Participation in Theatre: Aesthetics of the Invitation*. New York: Palgrave Macmillan.
- — —. 2016. "Theatre in the 'Forest of Things and Signs.'" *Journal of Contemporary Drama in English* 4 (1): 21–33.
- Wiener, Norbert. 1948. *Cybernetics: Or Control and Communication in the Animal and the Machine*. Cambridge, MA: MIT Press.
- Wiles, David. 2000. *Greek Theatre Performance: An Introduction*. Cambridge, UK: Cambridge University Press.
- Wilken, Rowan. 2014. "Proximity and Alienation: Narratives of City, Self, and Other in the Locative Games of Blast Theory." In *The Mobile Story: Narrative Practices with Locative Technologies*, edited by Jason Farman, 175–91. New York: Routledge.
- Wilken, Rowan, and Gerard Goggin, eds. 2015a. *Locative Media*. New York: Routledge.
- — —. 2015b. "Locative Media: Definitions, Histories, Theories." In *Locative Media*, 249. New York: Palgrave Macmillan.
- Wilson, Tony. 2008. *Understanding Media Users: From Theory to Practice*. Oxford: Wiley-Blackwell.
- Wolfe, Cary. 2010. *What Is Posthumanism?* Minneapolis: University of Minnesota Press.
- Zaiontz, Keren. 2014. "Narcissistic Spectatorship in Immersive and One-on-One Performance." *Theatre Journal* 66 (3): 405–35.
- Zimmerman, Eric. 2015. "Manifesto for a Ludic Century." *The Gameful World: Approaches, Issues, Applications*, 19–22.