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**CYBORG RHETORIC AND REVELATION OF SELF: IDENTITY,
WRITING, AND THE INSTANTIATION OF THE
CYBORG IN DIGITAL TEXTS**

**A Thesis
Presented to the
Faculty of
California State University,
San Bernardino**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
English Composition**

**by
Thomas Keywon Cho
June 2011**

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Approved by:



Juan Delgado, Chair, English



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ABSTRACT

The cyborg has always been part of society and today it is more visible than ever. I propose that in this digital age, wherein technology continuously proliferates, cyborg rhetoric abounds. This thesis examines three “digital texts” and explores the ways writing, technology, and narratives embedded in popular culture reveal cyborg language. Drawing from Donna Haraway, N. Katherine Hayles, Marie-Laure Ryan, and others I focus on five main aspects within the texts: information, identity, immersion, interactivity, and reflexivity. By analyzing texts found in books, film, and online spaces, I push to uncover significant connections that reveal explicit cyborg instantiation, despite the media’s differences. P.W. Singer’s *Wired for War*, a book that sheds light on the profound impact of robotics in warfare and in our lives; James Cameron’s *Avatar*, a cutting-edge film that not only changed the way we watch movies but how we make and understand them; and identity-defining user-generated web spaces (Web 2.0) are the digital texts to which this cyborg lens is applied. Exploring what makes these specific texts “digital” will offer insight about the implications such texts have on today’s cyborgian existence. Our connections with machines and technology deepen as the cyborg is present on our battlefields, in our movies, in our homes, and within our identity-defining writing. The cyborg has become commonplace and the evidence surrounds us. The new technologies that become the platform for today’s existence reveal an evolution in human identity—the rise of the already present cyborg.

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To Mom and Dad

TABLE OF CONTENTS

ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
CHAPTER ONE: CYBORG AWAKENING	1
The Cyborg and Its Rhetoric.....	3
The Posthuman	9
The Digital Texts	10
CHAPTER TWO: ROBOTIC REVOLUTION: WAR, ROBOTS, AND HUMAN CULTURE.....	16
Robot Spaces.....	18
I, Robot.....	20
Robot Relationship	21
Robot Interaction	23
Robot Reflection.....	25
CHAPTER THREE: DRIVING AVATAR: FILMING, EXPERIENCING, AND STORING THE DIGITAL REVOLUTION	29
Lights, Camera, Information Technology, Action!.....	32
Discovering Character through Real-Time Performance and Capture	36
Immersed in an Interactive Role.....	37
Digital Reflections of a Society Gone Digital	39
Posthuman Embodiment and Thriving Cyborg Rhetoric.....	41
The Remediation Effect.....	43

CHAPTER FOUR: CAUGHT IN THE WEB 2.0: RECOGNIZING THE "I" IN INTERNET	45
Reality in Virtuality.....	47
Living the Internet.....	49
Noticing the Link to Posthuman Identity	53
Cyborg Existence	58
Conclusion.....	59
WORKS CITED.....	61

CHAPTER ONE

CYBORG AWAKENING

I wake up on a Saturday morning and check my email, Facebook, and Fantasy teams. I watch a YouTube video of a dancing Golden Retriever a friend posted on his wall. The video makes me smile so I decide to share it with the rest of my friends. I click the “share” option and by the end of the day it has over fifteen comments and likes. For lunch, I stop by a local deli to pick up a sandwich. While waiting for my order I tweet my location and check-in on Yelp. While eating lunch I check my email and Facebook again, and respond to some Twitter followers who have already shared their love for my lunch choice. In the evening, I use the GPS navigation application on my smart phone to find a friend’s birthday celebration downtown. On the way I stop by the store and send a couple texts to see if I need to bring anything to the party. I grab some beverages and chips, make my purchase at the self check-out counter, and get back on the road again. I spend nearly an entire Saturday alone and yet when my phone tells me, “You have arrived at your destination,” I join a party of friends who were virtually with me all day. About an hour in I realize I forgot to set my DVR, but my concern subsides when I am told it is my turn on the Wii. If I were to share this story with someone ten years ago much of it would make no sense at all. However, I share it with you now, today in this digital age, and you identify with most of it—probably all of it.

The only constant in this world is change—a resounding truth that is seemingly louder today than ever before. Some things change for the better, others for worse. As humans, we have always sought ways to improve ourselves: the way we think, speak, work, live. There are numerous moments in history that mark more significant change than other more subtle ones. For example, the discovery of fire, tool-making, language development, firearms, the steam engine, factories, railways, flight, the automobile, space travel, the personal computer, the mobile phone, and most prevalent in the last two decades: the internet. Changes like these not only transform how life looks on the surface, but they modify who we are as humans. It transforms, or better, evolves us from the inside out. They change the way we think and, in turn, change the way we communicate with one another. The change we experience today is so effortless it veils itself in subtlety and many of us do not realize what has already begun happening to us. Almost everything we once knew as human nature is now in question. Today we are becoming someone or something different. Today we are undoubtedly something more (or less) than human. It is possible that today more than ever we discover ourselves to be profoundly cyborg.

Donna Haraway defines “a cyborg [as] a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction” (149). Building from this, I propose that in this digital age, wherein technology continuously proliferates, cyborg rhetoric abounds. In this thesis, I will examine three “digital texts” and explore the ways that writing, technology, and narratives

embedded in popular culture reveal cyborg language. Drawing from N. Katherine Hayles, Marie-Laure Ryan, and others I will focus on five main aspects within the texts: information, identity, immersion, interactivity, and reflexivity. By analyzing texts found in books, film, and online spaces, I hope to uncover significant connections that reveal explicit cyborg instantiation, despite the media's differences. P.W. Singer's *Wired for War*, a book that sheds light on the profound impact of robotics in warfare and in our lives; James Cameron's *Avatar*, a cutting-edge film that not only changed the way we watch movies but how we make and understand them; and identity-defining user-generated web spaces are the digital texts to which this cyborg lens will be applied. Exploring what makes these specific texts "digital" will offer insight about the implications such texts have on today's cyborgian existence. Undoubtedly, this existence has an influence on who we are, what we do, and how we will/should write (and think) in the future. It is an existence that we must pay attention to, an existence that already changes the classroom as we know it. Although note-taking on laptops and online courses reveal cyborg presence, addressing the cyborg in the classroom is not my main goal for this study. For now, it is necessary to delve further into what exactly the cyborg and its rhetoric may possibly be.

The Cyborg and Its Rhetoric

Cyborg rhetoric is the language of the post-human: the way we, as cyborg beings, recognize our presence. Dictionary.com, the all-knowing and

appropriately virtual online dictionary offers “cyborg” and “rhetoric” as defined by *Random House Dictionary* (2009). The virtual reference presents “cyborg” as “a person whose physiological functioning is aided by or dependent upon a mechanical or electronic device.” This definition refers to a person whose life depends on some kind of machine (e.g. a pacemaker, hearing aid, etc.) or something artificial (like my glasses). Therefore, the cyborg is no stranger to human existence. To say the least, the modern world relies heavily on home computers, navigation systems, and cell phones to get through a single day. In “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” Haraway writes, “Social reality is lived social relations, our most important political construction, a world-changing fiction” (149), and in this fictional social world filled with imagined boundaries, “The cyborg is a condensed image of both imagination and material reality, the two joined centres structuring any possibility of historical transformation” (150). In this reality the “cyborg image” has the innate ability of “exploiting” everything we believe to be daily life (182). We are cyborgs, and today, it is more apparent than ever before.

The definitions for “rhetoric” include, “the art or science of all specialized literary uses of language in prose or verse, including figures of speech” and “the ability to use language effectively.” Such definitions lead back to Aristotle’s take that rhetoric is best described as the art of persuasion. Rhetoric is not only the study of the effective uses of language; it is in fact the name for the very usage itself. Referring to Haraway’s discussion of the cyborg’s disruptive nature, in her

book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*, N. Katherine Hayles writes:

Fusing cybernetic device and biological organism, the cyborg violates the human/machine distinction; replacing cognition with neural feedback, it challenges the human-animal difference; explaining the behavior of thermostats and people through theories of feedback, hierarchical structure, and control, it erases the animate/inanimate distinction. (84)

Such rhetoric is what reveals the already-present cyborg and its place within our imagined existence. As the cyborg continues to evolve us, we learn of this evolution by reading and writing about it. We create words to describe something new, failing to realize that we attempt to explain something that has always been there. In light of these definitions, combining the words to create a unified term, "cyborg rhetoric," brings a significance that not only enhances the meaning of each by itself but in a sense feeds off each other, giving each word an empowered purpose for existence. Splitting the term does no justice in defining the idea as a whole. Cyborg rhetoric is a package deal, and must be collectively defined.

Cyborg rhetoric is language or a compilation of language that introduces and attempts to further the existence of the cyborg. The cyborg is instantiated through cyborg rhetoric. As of now, it can be a movie like *The Matrix* or *Avatar*, an essay like "The Cyborg Manifesto," or even a book like *How We Became Posthuman*. If these are examples of cyborg rhetoric then cyborg rhetoric itself is

the language and language use that attempts to build a common terminology (and knowledge) of the cyborg. As we push further into the posthuman, the cyborg blurs social boundaries, making itself known in a human world that barely recognized its existence. Before Haraway, the cyborg was a figment of science fiction, but today, it reveals its presence already within us. According to Haraway, “The machine is not an it to be animated, worshipped, and dominated. The machine is us, our processes, an aspect of our embodiment” (180). We have always been cyborg and, in this digital age, we begin to hear our cyborg voices. The cyborg reveals itself through a self-created—and exponentially developing—rhetoric. It has adapted itself to human language, crafting that language to serve its needs. Cyborg rhetoric is what we say, think, and do that takes us further from what we once believed, to realizing what we have always been.

If Aristotle linked rhetoric to “persuasion” and Burke linked it to “identification,” then at the core values of cyborg rhetoric one can find a connection to “presence.” By presence I refer to its literal meaning: “the actual state of being present, as with others or in a place” (“presence”). Hayles talks about the assumption that, “[...] presence and pattern are opposites existing in antagonistic relation,” but reveals further that, “Entirely different readings emerge when one entertains the possibility that pattern and presence are mutually enhancing and supportive” (*How* 48). Thinking along the lines of this mutual partnership, the cyborg in each of us uses rhetoric to reveal a presence that may not have been so apparent a few decades ago. Haraway calls writing the

“technology of cyborgs.” If so, then for what is this tool being used? For the cyborg it is a tool for revealing itself in reality, its presence. The machine in us has adopted (and evolved) the human language to establish a presence, become an entity in itself—not just a technological advancement, but an advancement as a “living” being. We become who we are by making rhetoric as much our own as possible. The cyborg is making rhetoric its own and utilizing it to manifest its identity.

Cyborg rhetoric is a compilation of what we know of rhetoric to date—it is persuasion and identification. The means of persuasion is represented by the resources for making and using information. Identification is established in the way information has become a presence itself. We use terms like “cyborgian” to represent this unnamed correspondence. Informally speaking, we use “cyborg” to represent a self that is not yet fully supported by language existing today. Cyborg rhetoric is the language of our evolution as cyborgs—the conversation that fills the void between two parties once silent to each other: human \leftrightarrow machine. The cyborg is post-gender, post-race, post-social class, and post-human and cyborg rhetoric, in its development, is how we are introduced and presently the only way we can talk about (or make any sense of) it. The cyborg has acquainted itself with us through rhetorics and, as abstract and unclear much of this relationship is, one thing is absolutely clear—the cyborg is here and it is a part of us.

A new kind of existence that relies heavily on technological innovations has produced a hybrid embodiment. Our humanness combines with artificial, technological, and virtual means, creating in us a hybrid identity; by this identity we produce and define cyborg rhetoric through praxis. Essentially, cyborg rhetoric and its development signal the instantiation of the already-present cyborg. This cyborg rhetoric persists across various forms, from traditional literature to technological instruction manuals. These examples are cyborg rhetoric in their own right; they serve specific purposes in cyborg praxis and simultaneously establish and teach us the language of cyborg rhetoric itself. Haraway professes that “the cyborg is a matter of fiction and lived experience that changes what counts as women’s experience in the late twentieth century.” Still, she claims that “the boundary between science fiction and social reality is an optical illusion” (149). For Haraway, the cyborg subverts the political hierarchy of humans dominating over machines or animals, or men dominating over women, or whites over people of color. In fact, in a hierarchical world full of social constructs and gender biases Haraway prefers to be cyborg rather than woman (181). This is because the cyborg represents a truer reality than the one we have socially created. The cyborg represents a truer self than the one we believe. According to Haraway, “The ideologically charged question of what counts as daily activity, as experience, can be approached by exploiting the cyborg image” (180). By doing exactly this, she separates herself from the exploitations of a political hierarchy set on suppressing her actual being. Over the past two

decades the cyborg itself has evolved with revelations of its own presence in everything, even within the human psyche. Today, the cyborg is in fact “a creature in a post-gender world” (150) and the subversiveness of Haraway’s cyborg strengthens as we anxiously usher the digital age into our homes and the cyborg becomes commonplace. As we willingly plug our lives into more machines, the cyborg is increasingly normalized, proliferating exponentially through every aspect of society.

The Posthuman

Throughout the remainder of this study there will be much exchange between the terms “cyborg” and “posthuman.” For purposes specific to this study the cyborg stands for everything posthuman and I use the term “posthuman” as a liberal cover of everything cyborg. In *How We Became Posthuman*, Hayles suggests a list of assumptions upon which the posthuman point of view is based. First, “informational pattern” comes before “material instantiation” (2). Second, the posthuman has long considered the consciousness as the “seat of human identity” (2-3). Third, our body is an “original prosthesis” that we learn to manipulate, therefore making prosthetic changes to the body is a “continuation of a process that began before we were born” (3). Fourth, and what Hayles considers to be most important of these, the posthuman configures the body so that there may be seamless articulation with machine (3). Hayles adds to the end of this list that, “In the posthuman, there are no essential differences or absolute

demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals” (3). In other words, the connection between the posthuman and the cyborg is rather seamless itself. In “Refiguring the Posthuman” Hayles reveals that, “the integration of humans with intelligent machines has become more extensive and at the same time more diverse in its implementations, effects, and significance” (311). Although this may be the case she adds that “most versions include as a prominent feature the joining of humans with intelligent machines” (312). This study is no exception. It is my hope that the digital texts mentioned earlier will offer a plethora of opportunities to see the joining of human and machine, whether physically, emotionally, or a combination of both.

The Digital Texts

I recognize the texts explored in this study as “digital” not necessarily because they are computerized, electronic, written in hypertext, or found in only digital spaces, but entirely because of the era they represent: the digital age. In their individual ways these texts do more than just inform, entertain, and offer social networking; they beckon to the existence of something more in our lives, something we know is there but often overlook. Exploring such diverse texts in this study can proffer broad discoveries; therefore I focus on five aspects of “cyborg language.”

Information

Embodied within us, information's entire existence has changed. Information today is essentially information technology (IT). Digital texts develop and express this information as cyborgian. Hayles offers that "people become posthuman because they think they are posthuman" (*How* 6). Hayles explains how information lost its (material) body and became embodied within humans, prompting the cultural and technological construction of the cyborg. The information of the cyborg is seemingly coded in our DNA and much of what we do, say, and write informs a cyborg existence. Although the time spent on the information within each text may be minimal in comparison to other aspects, we must remember that information serves as a foundation for everything that follows. For example, if the first chapter of Singer's book suggests a human-robot co-existence then that idea is firmly rooted throughout the rest of the book—strengthened further by more information that may support the claim. The type of information discovered in the texts will be undoubtedly different, but for now let us not assume that a different package means a similar message cannot be discovered within.

Identity

We must recognize our identities in the things we do, say, write, and even read—as more and more text is becoming digital. It has been traditionally recognized that the identity of a person can be best discovered within his or her writing, so why should this case be any different? In *The Performance of Self in*

Student Writing Thomas Newkirk emphasizes that the act of writing is a performative expression of self. When writers decide upon what “turns” to make in their writing the writing itself becomes a personal representation of its author. According to Newkirk, our personal writing is actually more than just a presentation of self, but a creation of self. In her book, *Writing and Identity: The Discoursal Construction of Identity in Academic Writing*, Roz Ivanic affirms that the self is connected to social struggles through the act of writing. To Ivanic, there is a strong relationship between identity and social contexts, saying that, “if people entering higher education experience an ‘identity crisis’, it is not because of any inadequacy in themselves, but because of a mismatch between the social context in which they have constructed their identities in the past and the new social context which they are entering” (12). The identity in writing helps to construct the discourse of society, just as society plays a role in the “discoursal” construction of identity in academic writing. Although the construction of identity discovered in this study is found outside of academia and within digital texts, the connection between self and society through writing remains.

Through writing there is identity construction in books, movies, and user-generated internet, but the diverse technological ties reveal identities that extend beyond the texts themselves. By analyzing such identities, I hope to find a common thread, an overarching, undeniably cyborg identity. In her book, *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*, Marie-Laure Ryan approaches virtual reality as a “semiotic

phenomenon,” suggesting that we “rethink textuality, mimesis, narrativity, literary theory, and the cognitive processing of texts in the light of the new modes of artistic world construction that have been made possible by recent developments in electronic technology” (1). This “rethinking” can (and should) lead to a rethinking of identity construction.

Immersion and Interactivity

Good narratives have immersive qualities that create forums for interactivity with readers. Digital texts take the virtual reality of immersion and interactivity to a new, more palpable virtuality. Exploring the holistic immersion afforded by digital texts may reveal a new kind of interactivity that encapsulates today’s cyborg reality. Ryan explains a virtual interaction as “nothing more than the encounter between words and the reader’s imagination,” but when coupled with the “feature of interactivity” the “semiotic phenomenon” fulfills a whole new conception of meaning (5). It is surprising to experience the immersiveness of a non-fiction book about robots, but not only because of the author’s prose but because of what his writing reveals about society and its future. Furthermore, the interactivity exemplified in a blockbuster movie shakes me as I participate in every scene, watching intently in 3D.

Reflexivity

Immersion and interactivity reveal reflexivity between creators and created; these texts ultimately encompass the creators themselves, becoming representative of our indelible connection to digital-age technologies. As Hayles

puts it, "Reflexivity is the movement whereby that which has been used to generate a system is made, through a changed perspective, to become part of the system it generates" (*How* 8). As Singer's book continually reveals himself as writer, and Cameron's movie brazenly walks the line between creator and created, the reflexivity that I hope to realize most is one between our human nature and that of the cyborg. This may be most clearly seen in the study of Web 2.0 and a look at not necessarily what the internet is doing to us, but what we are doing with it.

These five characteristics (information, identity, immersion, interactivity, and reflexivity) do not constitute my entire research, but rather serve a foundational role in revealing and analyzing the cyborg rhetoric within a collection of digital texts. In the chapters to follow I will use this lens to look closely at P.W. Singer's book, *Wired for War*, James Cameron's 2009 film, *Avatar*, and a variety of avenues representative of Web 2.0, i.e., web blogs, video sharing websites, and online business. A study of these texts will collectively represent a study of our presence within the digital age. I hope that a focused look at these digital texts will reiterate that writing in the digital age exemplifies the rhetoric of cyborg identity and that this rhetoric instantiates its own existence.

The following chapter examines the language, narrative, and social context of a recent book on robotic warfare. Ideas once deemed science fiction continue to become reality and appear on today's battlefields. Innovations in IT and the robotics revolution have afforded societies this new face of war.

Necessarily, these advances also evolve the ways in which we write (and read) about them.

CHAPTER TWO

ROBOTIC REVOLUTION: WAR, ROBOTS, AND HUMAN CULTURE

The world evolves as the machine finds its way deeper into our lives. It discovers niches where its presence soon becomes paramount. It is present in our homes, workplaces, and schools—even on our battlefields. Since 9/11 the U.S. military has gone massively robotic. Whether it is the PackBot, TALON, SWORD, MARCBOT, Predator, etc., unmanned robots in battle are becoming more commonplace with each new mission. With over forty countries now developing similar “soldiers,” the never-ending war between humans must now be recognized as the war between humans as well as robots.

Any concern I may have had before committing to use a nonfiction book to represent the literature chapter of my project was addressed rather efficiently. P.W. Singer opens his New York Times Bestseller book, *Wired for War: The Robotics Revolution and Conflict in the 21st Century* with an author’s note appropriately titled, “Why a Book on Robots and War?” and answers it with the opening line, “Because robots are frakin’ cool.” This opening and the following introductory pages filled with clever candor had me turning pages as if Singer’s childhood obsession for anything war was always my own. While reading I am mesmerized at the ingenuity of the first robot soldiers and find myself categorizing the two major robotics engineering companies as one “good” and

another “evil.” Although it is premature to jump to any major conclusions, the immersive nature of the book and its topic is undeniably evident. Even the history of the little disc robot that vacuums the floors of so many homes has me intrigued. But ultimately, this is a book about war and Singer believes that we are both repulsed and entranced by the idea of war. He explains:

In my mind, there are two core reasons for humankind’s seeming obsession with war. The first is that war brings out the most powerful emotions that define what it is to be human. Bravery, honor, love, leadership, pity, selflessness, comradeship, commitment, charity, sacrifice, hate, fear, and loss all find their definitive expressions in the fires of war. (6)

Whether we are presently repulsed or entranced by it there seems to be no escaping it and, in these powerful ways, war helps to “define what it is to be human.” We create it and, in turn, it creates us as well. This book is more than appropriate for this project. In fact, it fits perfectly. It offers everything a science fiction book can and more: reality. Everything in this book does not always seem real or even believable, but it is absolutely real, and to me *that’s* “frakin’ cool.” For a multitude of reasons, P.W. Singer’s *Wired for War* represents the cyborg in us all.

Robot Spaces

The information within this book creates a story in itself. Next to many of the watershed moments in human history, be it literary, scientific, or the arts, there was often some kind of war or conflict before (or after it). According to Singer, "Many of our great works of literature, arts, and science either are inspired by war or are reactions to it." He even goes as far to say that "much of what is written in human history is simply a history of warfare" (5). So this book, being a book about warfare, falls cleanly into the description of a book about human history. In talking about the present and future of robotics and warfare Singer is in fact keeping log of our changing history.

When could a nonfiction book about robotics and warfare possibly be any fun? What possible correlation could there be between robots, the military, and our growing cyborg nature? This study is packed full of possibilities and it is my intention to entertain as many of them as possible. In order for this to work we must take a look at what information in this book could place it in the category of "posthuman." In "Posthuman geographies? Biotechnology, Nature, and the Demise of the Autonomous Human Subject," Fiona Coyle offers that "posthumanism refers to a series of reconceptualizations of the rapidly changing relationships between the conditions of human embodiment and technoscience" (506). In other words, when experiences, particularly inner ones (mental, emotional, even spiritual) begin to interweave with advancements in science and technology in the physical world, the various combinations offer an altogether

different type of experience, or embodiment. This book presents the exponential growth of robotics in the military and thoroughly displays the impact such rapid and radical change has not only on war, but within the soldier as well. In many situations soldiers begin nicknaming their robot partners, personalizing them, and creating emotional ties as they would with a human friend; this book succeeds in showing how a robot can easily become "one of us." After all, Coyle continues, "the posthuman opens up a space in which we can investigate what it means to be human and non-human, and how these categories are created and stabilized" (507). This book is not responsible for opening up any new spaces, but reveals what can be found within the spaces that already exist, rapidly growing and in no hurry to taper.

These spaces are important to investigate because war is an integral part of all cultures whether directly or indirectly. In fact, war has the ability to create or destroy entire societies. Conflict is often so distant that we feel removed from it altogether. We have this idea that what we do not see does not really affect us in any profound way. Military terms, orders, and missions are things we recognize from movies and CNN. Even the local and world news can feel like distant blurbs of nonsense that matter as much as what you had for yesterday's lunch. Still, the information about war and involved societies in this book touches base right at the core; it triggers an extra kind of interest. This added attention stems from a basis that the book encapsulates more than just changing conflict. It is a book about what war is becoming and what we are becoming amidst this evolution.

I, Robot

A recent massive increase in acronym usage exemplifies one of the more obvious changes in war. Necessarily, most of the new technology has a catchy name skillfully whittled from something long, descriptive, and overly scientific. For example, a series of military robots known for being the first armed robot in battle is named SWORDS (Special Weapons Observation Reconnaissance Detection System). The introduction of such robots changes the face and overall identity of who or what we consider military soldiers. According to Singer, "PackBot, Talon, SWORDS, Predator, Global Hawk, and all their digital friends are the first signs that something big is going on. Man's monopoly of warfare is now dismantling. We are entering the era of robots at war" (41). To claim robot roles in war includes the assumption that they are at war with someone (or something) else. Affording robots this human trait—going to war—links them closer to what it actually means to be human after all.

Adding the robot to war triggers another kind of identity shift. Singer entertains the argument that, "the rise of these digital warriors is more significant, in that robotics alters not merely the lethality of war, but the very identity of who fights it" (10). In addition to the introduction of new "soldiers" to the battlefields, the identities of human soldiers fighting alongside the robotic experience interesting changes. Issues of attachment and emotional distress during times of loss have become common occurrences in and around battle. Human soldiers not only accept their robot partners, but recognize them as peers—a reaction that

could not have been foreseen when war robot ideas were in developmental stages. Singer discovers that these changes are more than mere reactions to befriending robots, but that soldiers “are truly bonding with these machines” (338). Soldiers find themselves immersed not only in work that each robot can accomplish in the field, but in the personality they feel each individual robot expresses. It turns out a loose bolt or wobbly wheel contributes to the personality of robot soldiers.

Robot Relationship

In a section titled, “For the Love of a Robot,” Singer includes the report of a fallen soldier:

The EOD soldier carried a box into the robot repair facility at Camp Victory, Iraq. “Can you fix it?” he asked, with tears welling in his eyes. Inside the box was a pile of broken parts. It was the remains of “Scooby-Doo,” the team’s PackBot, which had been blown up by an IED. On the side of Scooby’s “head” was a series of handwritten hash marks, showing the number of missions that the little robot had gone on [...]. Unfortunately, the robot could not be repaired. The news left the soldier “very upset.” He didn’t want a new robot but “wanted Scooby-Doo back.” (337-338)

The extent to which the soldier shows emotion in the “death” of his robot partner is extraordinary. These robots are more than just immersed into military

missions; they are immersed into the lives of soldiers they so loyally accompany, serve, and save. This relationship goes further: Singer reveals, "When one robot was knocked out of action in Iraq, an EOD soldier ran fifty meters, all the while being shot at by an enemy machine gun, to 'rescue it'" (339). In addition to the emotional distress brought by the loss of their robotic companions, soldiers willingly risk their own lives to save them from harm.

Although this type of immersion somewhat differs from the kind posthuman theories speak of, I see it as pertinent nonetheless. Soldiers name their robots, create bonds with them, and grieve when they break. In regards to this changing dynamic in battle Singer writes, "Yet while new technologies are breaking down the traditional soldierly bonds, entirely new bonds are being created in unmanned wars. People, including the most hardened soldiers, are projecting all sorts of thoughts, feelings, and emotions onto their new machines" (338). This change creates a whole new aspect to the experience of war. The developing relationships between soldier and robot clearly demonstrate the distinction of today's war. To bring this relational evolution closer to home, many owners of the little robot that vacuums floors admit to naming their cleaning companions. Singer reports that iRobot, creator of the PackBot (Scooby-Doo) and the household vacuum, "has found that 60 percent of Roomba owners have given names to their robot vacuums" (338).

As if bringing robots to the battlefield is not enough, the military is doing all it can to bring soldiers even closer to the physical nature of combat without

putting their lives in any actual danger. Borrowing from the typical soldier's familiarity with video game controllers and the various sensors and cameras used to create movie magic, the military has developed an innovative way for soldiers to fly UAVs (Unmanned Aerial Vehicles). "Taking it to the next level, researchers are integrating such systems into immersive virtual environments, taking the human operator of a UAV out from behind a computer and into a 3-D virtual world like Second Life, controlling as many as eight real world UAVs at the same time" (69). Singer explains that immersion in such 3-D worlds enhances the ability of each individual operator, achieving the most overall progress as they multitask through various missions.

Robot Interaction

The essence of existing within the posthuman includes increased interactivity between human and machine. These changes in warfare express the prevalence of such interactivity within our society today. The UAV operators who fly planes from virtual worlds are also subjected to *haptics*, "technologies that use the body's sense of touch as another portal for interfacing" (69). This new link allows a human operator to actually feel certain aspects of the flying plane. For example, an issue with the wing may send a tingling sensation to the operator's corresponding arm. Through such connections the plane also has a heightened ability to monitor its operator. A plane and its operator become more connected than ever: "It will really make a complete fusional relation between the plane and

the pilot" (70). Through this fusion human and machine become one unit, working together to accomplish a mission with the most efficiency.

We discover an excellent example of the growing interactivity within this cyborg era in our ability to network via the Internet. Although this topic will surface in later discussions surrounding user-generated online spaces, its relevance reaches into our study of the changes of war. In his discussion of "revolutions in military affairs" or RMAs, Singer writes about Vice Admiral Arthur Cebrowski's expanded vision of the future of war. Before even the profound impact of robots in battle Cebrowski attributes information technology networks as the first significant twenty-first century revolution in war. Singer explains that the connection the internet provides opens a whole new way for participating in war. Ship captains, planes, and soldiers in the field can all look at the same online image while simultaneously sending emails to each other in regards to what they are looking at. Imagine a soldier at the front lines taking a cell phone picture of an enemy compound and emailing it to a commander hundreds of miles away and waiting for further reconnaissance and command. Singer reports, "This ability to 'network information' would allow various military units to 'self-synchronize' their efforts. They could operate with a speed and cohesion that would 'dramatically increase force effectiveness'" (184). The networking made possible by our interactivity within the internet serves as a clear RMA. As the network revolution changes what we know as warfare today, this same interactivity revolutionizes what we recognize as society.

Robot Reflection

We are changing the face of war both figuratively and literally. The way we read about and explain war differs with the addition of robotic soldiers and unmanned vehicles. We begin to recognize more of our own human history interweaved within the newfound history of robotics and warfare. Soldiers pin up playboy models to personalize their PackBots (27), manufacturers develop controllers modeled after the PlayStation video game controllers we use at home (68) and, though proven to be rather ineffective in design, robot manufacturers continually lean toward creating humanoid robots (89). From various angles we see ourselves within these new creations and realize our part in this massive change. Singer writes that, "In some cases, robot engineers might mix and match different elements from the various forms to create a 'hybrid.' For example, the Office of Naval Research (ONR) is working on a robot that has a humanoid torso mounted on a Segway bottom" (92). In a twist of irony all its own this hybrid robot may come to represent significantly more than progression in robot design. This hybridity is captured in the cyborg nature of the humans behind the design in the first place.

This book speaks of an exponential change in warfare. Singer explains that Ray Kurzweil, one of today's foremost inventors, argues that the "overall flow of the future" is more predictable than "individual components" (95). One thing Kurzweil is certain of is the exponential technological change upon us today. He believes there will soon be a moment when robotics and AI (Artificial Intelligence)

will change human life socially, politically, and technologically—even changing the way we value human life (96). When something grows exponentially, it grows faster as it gets bigger. According to Singer, “Exponential change is most evident perhaps in technology products” (97). He supports this point with a brief history of the cell phone’s journey in the last few decades. In an exponential world, you have to be quick in order to keep up with doubling trends:

Wireless capacity doubles every nine months. Optical capacity doubles every twelve months. The cost/performance ratio of Internet service providers is doubling every twelve months. Internet bandwidth backbone is doubling roughly every twelve months. The number of human genes mapped per year doubles every eighteen months. The resolution of brain scans (a key to understanding how the brain works, an important part of creating strong AI) doubles every twelve months. And, as a by-product, the number of personal and service robots has so far doubled every nine months. (99)

The current rates of doubling mean that we have experienced more technological change and advancement in the last twenty years than the entire century before it. Thinking exponentially, another twenty years from now, things, including human existence, will be vastly, maybe even unrecognizably different.

By studying the nonhuman changes occurring within warfare we are in fact studying the human changes that occur with them. Singer affirms that, “the revolution in robotics is forcing us to reexamine what is possible, probable, and

proper in war and politics. It is forcing us to reshape, reevaluate, and reconsider what we thought we knew before. That is the essence of revolution” (430). I would go further to add that such a reexamination forces us to reconsider everything we know about ourselves as human. The term “revolution” signifies some kind of independence or liberation, and if this revolution is in fact a robotic one, what is it these robots are revolting against? Could it be our human nature that subconsciously suppresses a further, more evolved existence? No matter what the root, the revolution is certainly here as nonhuman creations infiltrate what it means to be human. Singer concludes, “the systems and stories captured in this book are just the start of a process that will be of historic importance to the story of humanity itself” (431). It could be that this process is one of posthuman nature; one that brings us closer to understanding the cyborg within us, adding to the rhetoric that represents it.

The concurrence of the robotics and digital revolutions is not coincidental. Both revolutions sprout from roots set deep within the digital age. Today, the books we write and read are different. They epitomize a changing breed of human: one that has advanced beyond boundaries broken by technology. The soldiers on the battlefield (human or robotic) and the artificially intelligent help cleaning our floors represent a shift in identity that all of humanity must undergo. The cyborg exposes itself in books like these, yet has no intention of stopping there. In the following chapter we follow the cyborg into the world of Sci-Fi

.cinema: exploring innovations in movie production, meta-narratives of identity,
and the immersive interaction of a digital film.

CHAPTER THREE

DRIVING AVATAR: FILMING, EXPERIENCING, AND STORING THE DIGITAL REVOLUTION

I put the book down and decide to go with a movie instead. Standing in front of a big red box, pressing my finger to a touch screen, I make a selection, swipe my debit card, and a DVD ejects into my waiting hand. Over the past few years, as walk-in video stores we have been going out of business, red machines like these have been appearing in various locations: supermarkets, malls, and convenience stores to name a few. The video store employee, a person I could always turn to for information on a rental status or a movie review has been replaced by a computer, one that offers rental availability in an instant and gives me a paragraph-long movie synopsis when needed. It is a computer linked to a network accessible from home, a network that links my own computer to every available red box. Although plenty of digital services let us watch our favorite movies and shows without going out at all, the red box takes advantage of an interesting window of opportunity. Just as many of us refuse to give up physical books for electronic ones, we prolong giving up the familiar ritual of holding a movie, putting it in the player, and getting cozy on the sofa with a loved one. However, just as we made the shift from VHS to DVD, there will soon be a day when every movie we watch will come straight from the cloud in cyberspace. For

now, machines like the red box serve as stark reminders that we are amidst such change, that entertainment has evolved.

As the red box and other new technologies change the way we rent entertainment, a recent film has changed the way movies are made, experienced, and discussed. James Cameron's 2009 blockbuster movie *Avatar* broke two major records upon release: It is currently the most expensive movie ever made and the highest-grossing film in the history of filmmaking. Reasonably, assumptions can be made that more people have seen the movie than not. During the time of its release the movie represented entertainment and pop culture at the core: whether reviews were good or bad, watching the film was the thing to do. I watched the film three times in the theater, not necessarily because I loved it and enjoy spending the money, but because circumstances worked out that way: once with family, with friends, and one final time to see about the 3D hype. Possibly passed off by most as another expensive movie that made a killing at the box office, I noticed a stark difference during my first viewing. As an avid movie watcher I can tell you all about the particular ones I have seen and enjoyed—explaining the most enjoyable aspects of each. The best way to explain this movie is to describe it as something to be experienced rather than merely watched. *Avatar* is an experience; whether in 3D or not, it is unlike any other movie. Beyond the story, characters, or even the action, the film's overall experience sets it apart. Not since George Lucas's *Star Wars* has there been such a stir in the industry. *Avatar* not only represents an evolution in

movie making, but on a larger scale may serve as the perfect digital text, exemplifying the kind of change we experience through the pop culture and entertainment within this digital age.

For those yet to experience the film, its synopsis is fairly simple: Decades into the future humans discover an invaluable mineral (Unobtainium) on the planet Pandora. In order for humans to obtain this material they must first get through an indigenous humanoid population called the Na'vi. In an attempt to civilize the natives, learn about them, and ultimately gain diplomacy an avatar program is set up, allowing trained scientists to "drive" life-like avatars created in the image of the tribal race. A digital link between the driver's brain and the avatar allow for scientists to think and move within an otherwise lifeless body. The program reasons that trust might be easier obtained if the Na'vi deal with life forms more like them: ten feet tall with cyan skin. Despite efforts, diplomacy fails so the humans turn to mercenary guns-for-hire to protect the mining process and force out the indigenous when necessary.

The movie begins as this corporate-funded mercenary group prepares to make an offensive push against the Na'vi. The avatar program, having now been banned from the tribal communities, serves strictly research purposes. Jake Sully, a marine paralyzed during previous duty on Earth, transfers to Pandora to replace his late twin brother, a trained avatar driver. Their matching DNA allows Jake to drive the avatar tailored specifically for his brother's mind and nervous system. Through the avatar program and the new life he realizes within his

avatar, Sully trains his way into the Na'vi family, discovers love, and leads the fight to save the planet's natural and mystical wonder from human threat. With a narrative full of interesting digital detail and potential character analysis, for now, a closer look at the making of the movie will shed light on the technology of a digital age that makes it all possible.

Lights, Camera, Information Technology, Action!

In a *Wired for War* chapter dedicated to science fiction's impact on science reality, P.W. Singer discusses the various connections between science fiction and the real world. According to Singer, part of science fiction's popularity comes from its representation of a possible future. He writes, "For a fictional genre that often takes place in settings that don't even exist, science fiction has forecast real-world technologies, as well as resulting dilemmas, with stunning accuracy" (156). For example, the remote access, touch screen technologies, and robots of 80s and 90s Sci-Fi is now a reality. In fact, in a large sense reality surpasses imagination and science fiction has more difficulty staying ahead of the game. Singer explains, "...change is coming so quickly that the creators of these imaginary worlds are increasingly borrowing from the real one" (169). Cameron's film perfectly represents what we are capable of in today's reality.

Realities of the past have allowed for technological wonders like *Star Wars* (1977), *Terminator 2* (1994), and *The Lord of the Rings* trilogy (2001-2003), but today's reality has brought us a movie unlike any of its predecessors. Like

films before it, *Avatar* uses motion-capture technology and CGI (Computer-Generated Imagery) to create the characters and world that deliver the story. However, Cameron's film takes these technologies to new heights—opening entirely new levels of possibility within the digital film making industry. In *The Making of Avatar*, Jody Duncan and Lisa Fitzpatrick write about the film's beginnings, cutting edge technologies, and record-breaking success. They record the tedious process that allowed *Avatar* to become a history-making success. This book presents an abundance of technological detail that places the film in the digital age that brought it to reality.

Cameron began work on the story in 1995, but its filming was not possible until over ten years later. Technology needed to catch up with what Cameron had in mind. Until *Avatar*, filming with CGI meant that actual filming and computer generated aspects of a movie were done separately. Understandably, it took weeks, sometimes months for a director to get a shot close to what was imagined. A scene is filmed then sent to a computer imaging company with a set of directions for the kind of computer generated images needed. If not right the first time, everything is sent back for adjustments. Still, when complete the project often strays far from what was originally pictured.

Most CG films incorporate CG images and characters into actual settings, like *The Terminator's* T-1000 or Gollum from *The Lord of the Rings*. Cameron made the decision to replace a live-action background with a virtual one. Duncan and Fitzpatrick report that "The decision to make the film using a virtual

production process meant that every leaf of every plant, every blade of grass, every bit of Pandoran rain forest would have to be CG." Not only were certain characters going to be computer generated but the scenery they were in and around was virtual as well. Duncan and Fitzpatrick add, "The movie would need CG characters in a CG world, and all done to a level of photo-reality that was unprecedented so that the CG scenes would cut in with the live-action scenes of actors on sets" (44). This innovative task called for inventive measures; a film-making endeavor requiring methods never used before.

Real-time motion capture made the film possible. Working off a rigged system developed by a peer that allows camera movement within a CG scene, Cameron invented a virtual camera that let him see, immediately, how the captured performances translated to the CG characters within the CG scenery. Various monitors and screens allowed both director and actors to see what everything looked like within the computer generated world as a scene was being shot. This virtual filming took place on a huge performance-capture stage called the "Volume", where a simple prop could be filmed as a breathtaking Pandoran tree to climb or a rock to step over. Three generations later, the virtual camera had eventually evolved into the technology Cameron was looking for and the real-time motion-capture filming finally began in 2007. Marie-Laure Ryan reveals that, "every technological breakthrough that increases the transparency of signs also increases their visibility" (350-351). Therefore, catered to this particular

study, the more advanced the CG filming, the more we can recognize its presence and significance to the era it represents.

A close look at the making of this film reveals that this technology has brought the human actor nearer to the digital aspect of a film than ever before. The actor's performance and its digital enhancing are no longer separate entities, but rather combined to form a new hybrid realm of performing art. Rob Legato, visual effects supervisor on *Titanic* and partner in developing the virtual camera revealed that the new camera "made for a very fluid, organic quality to creating CG shots" (Duncan, 46). The ability to use the term "organic" to describe a computer generated image beckons to the aspect of *Avatar* that this study focuses on: The film has successfully melded the organic with artificial, yet with the feel that it is completely natural. Cameron saw that this virtual setup could be better than shooting live action because aside from all the technological innovation, it vastly simplifies the filming process. According to Duncan and Fitzpatrick, "At its essence, virtual production would simply be actors on a stage, performing emotionally driven scenes, guided by their director" (47). Ultimately, as a byproduct of this upgrade in motion-capture technology, the development of another device allows actors to express more of themselves through their CG characters.

Discovering Character through Real-Time Performance and Capture

As the protagonist of the story, Jake Sully discovers a new identity through the avatar program. Through the neural link made possible by an advanced technology he walks again and lives among the Na'vi. By the end of the narrative, his acceptance into the Na'vi family leads to a supernatural ritual that permanently places Jake's psyche into his avatar body. He has become one of them. No longer human, yet not completely Na'vi, he has become a hybrid of sorts. In a similar fashion, the actors on the *Avatar* stage discover a role unlike any other CG part of the past. They say every line and act out every motion; they run, walk, jump, and squat whenever the scene calls for it. Even every smile and angry cry are recorded and played back through the faces of each CG character in a seamless, natural-looking fashion. This melding of human actor and CG character is made possible by a motion-capture body suit and the second device developed strictly for this movie: a molded head gear rigged with a personal camera to capture the detail of different facial expressions.

Use of the new facial-capture technology became a key innovation enabling the film's production to create actor-driven, full-CG performances. Throughout performance-capture production actors wore the custom-fit helmets that include a miniature boom arm with camera attached. This aspect of filming allows the actual expressions of the actor to be the emotions expressed by each corresponding CG character—when Zoe Saldana, the lead female role, screams out in rage, Neytiri, Na'vi native and love interest to Jake Sully, cries out with

matching passion. The fitted facial cameras help to translate expression and feeling from human actors to their digital selves. This technology allows for the seamless transfer of human emotion to an otherwise lifeless and artificial form. Duncan and Fitzpatrick report, “[Cameron] wanted to direct actors on the performance-capture stage and know that those *exact* performances would be translated, intact, to the CG characters” (47). The final character seen on-screen expresses even the smallest details of the actor’s performance.

Immersed in an Interactive Role

The immersiveness of this new style of acting is in-part due to the interactivity between actor and CG character; an interaction made possible by new technology. The ability to see the CG character within the CG scene in real-time brings an immersiveness set apart from any previous CG acting experiences. This technology brings a physical immersiveness that enhances the emotional connection to characters being played. According to Duncan and Fitzpatrick, “Despite all of the technical paraphernalia that went into the setup, when actors stepped within the Volume, performance was paramount, and most of the peripheral elements of typical movie production were absent” (115). This absence means each actor possesses a greater responsibility for controlling their character. Similar to Sully’s ability to control his avatar the actors drive their CG characters through performance. The layered immersion and interactivity is unmistakable as human performance is coupled with innovative technology to

create CG characters controlled by human actors via fictional avatar technology. In a sense the avatar program can be seen as a loose reflection of the virtual filming used to create the fictional world in the first place.

The relationship between the film's immersiveness and interactivity reveals a reciprocal nature. Actors must immerse themselves into a role that requires interactivity and, that extended interaction leads to a level of immersion that can be experienced by viewers in the theater. The movie's 3D release represents an extended interactive reach that assures each willing viewer has an enhanced immersive experience. Whether in the movie or merely watching it, everyone has the opportunity to be a part of it. The collective *Avatar* experience incorporates everything from director, actors, technology, and especially the viewers. The film's website (www.avatarmovie.com) brings this interactivity home: with simple mouse clicks a person can maneuver through the *Avatar* world, stopping the various displays and videos to learn about specific aspects of the movie. Various links such as "Become an Avatar," "Interactive Desktop," and "Immersive Video" reveal the film's goals of interacting with viewers. Cameron and the *Avatar* team invite people to join the "Home Tree Initiative," a worldwide environmental project pushing to plant one million new trees. The *Avatar* experience brings the movie out of the theater to mingle with the rest of our lives.

Digital Reflections of a Society Gone Digital

The wave *Avatar* has made in the entertainment industry creates a wake we may be riding for some time. Before completion of the film it already created a newsworthy buzz that people in various technological industries had to take notice. In a 2007 *New York Times* article titled, "Computers Join Actors in Hybrid On Screen," writer Sharon Waxman reports that the "ambitious and costly film" will "test new technologies on a scale unseen before in Hollywood." She writes further that the movie "will present characters designed on the computer but played by human actors" and makes an interesting point about how far we have come in this digital age. Waxman says, "Mr. Cameron is widely regarded as one of Hollywood's foremost innovators, and he has been waiting to make the film, which he wrote more than a decade ago, while technology catches up to his vision." The advancements of the digital age have made it possible for this vision to become reality. This vision comes to represent so much more than one person's movie idea. The attention it has received alone abundantly represents the stir it has made within pop culture itself.

Various other articles report on the type of impact *Avatar* has in an industry in need of such a stir. As more of society moves away from movie-watching and turns to the graphically advanced, drama-filled video games of today, *Avatar* helps to bring film back to the forefront of the entertainment industry. In her article, "Avatar: Director James Cameron's Crowning Glory," Jane Warren reminds us that even the best CG characters of the past have always

lacked “a soul behind the eyes.” But the new concepts and equipment behind *Avatar* bring to life “a fully immersive cinematic experience, one in which computer-generated characters convey credible emotions and inhabit an imaginary world so flawlessly realized that it seems completely believable.” Warren reports further that *Avatar* “has been hailed as the most futuristic film ever made.” As an example of tomorrow’s movies we cannot overlook the fact that it is a film created within today’s digital world. It is modern technology, displayed for all to experience through film. It is modern society, allowing us a glimpse of what tomorrow may hold and what we may be living within today.

If we are in fact in the midst of an identity-evolving digital revolution, then Microsoft’s involvement with *Avatar* is evidence of the film’s place in such change. In a 2010 Microsoft.com article, “Cameron Says Microsoft’s Role in ‘Avatar’ Was Key,” Jake Siegal talks about the important partnership between the filmmaker and the largest software company in the world. The film’s vast digital identity required huge amounts of data storage: “In ‘Avatar’ every blade of grass, every cloud in the sky, every vine in the jungle existed digitally and had to be stored somewhere.” This need for digital space led to a logical partnership and Cameron relied on Microsoft technology to store the massive amounts of data generated during filming. Recognizing the film’s digital revolution it was an easy decision for Microsoft to be a part of it. Siegal writes, “The agreement between Microsoft and [Cameron’s production company] underscores the digital shift that’s underway in Hollywood, a shift that means IT will play an ever-expanding

role in moviemaking.” For decades, films have represented the societies that watch them. As the most-watched movie of all time and at the forefront of what it means to be digital, *Avatar* speaks volumes for where we are as a society in this digital age.

Posthuman Embodiment and Thriving Cyborg Rhetoric

Although the wonder of *Avatar* can be easily dismissed as technology’s latest artwork and the narrative as fiction, even fantasy, another aspect of its experience beckons the posthuman. Jake Sully’s out-of-body (and into-another-body) experience is characteristic of some contemporary takes on embodiment. In her article, “Flesh and Metal: Reconfiguring the Mindbody in Virtual Environments,” N. Katherine Hayles explains, “The body is the human form seen from the outside...Embodiment is experienced from the inside, from the feelings, emotions, and sensations that constitute the vibrant living textures of our lives...” (297). In other words, embodiment may have an obvious physical link to the body but is by no means reliant on one in order to exist. She goes on further to explain that while we recognize that ideas of the body change as cultures change we might not notice the changes occurring to our experiences of embodiment. Hayles elaborates, “Living in a technologically engineered and information-rich environment brings with it associated shifts in habits, postures, enactments, perceptions—in short, changes in the experiences that constitute the dynamic lifeworld we inhabit as embodied creatures (299).” As Sully’s experience is a

physical one, the actual exchange that occurs differs entirely; his human body diminishes as his embodied self continues living. Looking at this fictional character's experience and considering Hayles's affirmation that "embodied experiences are changing through interactions with information-rich environments" (299), we should consider the embodiment we experience in our own digital world. Surrounded by digital information, we immerse ourselves and interact with the digital world until we can see ourselves within it.

It seems apparent that embodiment and especially the disconnect between existence and the body itself positively affects the exponential development of cyborg rhetoric. Our cyborg nature abounds because regardless of what happens to the physical body its existence continues through our embodiment. In *How We Became Posthuman*, Hayles connects embodiment with action, "In contrast to the body, embodiment is contextual, enmeshed within the specifics of place, time, physiology, and culture, which together compose enactment" (196). Thus, who we are and express ourselves to be is actually linked to our embodiment. She continues that "Embodiment is akin to articulation in that it is inherently performative, subject to individual enactments, and therefore always to some extent improvisational" (197). Although we actively exist through our bodies, the ephemeral nature of our physical existence does not directly apply to our embodiment. This insight only adds to the complexity of the cyborg within us. In "Refiguring the Posthuman," Hayles assures us, "Perhaps the only clear conclusions are that the future of humans will

increasingly be entangled with intelligent machines, and that embodiments will still matter in some sense, however virtual or cyborgian they become” (316). Humans have always been complex beings, so there is no reason to believe posthumans will be any simpler.

The Remediation Effect

Jay David Bolter and Richard Grusin might call the red box rental machine a remediation of the classic video store. In their 1999 work *Remediation: Understanding New Media*, they explain remediation as the process by which new media technologies improve upon or remedy prior technologies and specify it more “to mean the formal logic by which new media refashion prior media forms” (273). Throughout history and especially the last century remediation has been a surging constant within society and pop culture: film, television, radio, and computers, all fall into the category of remediated or remediator. Technologies are always changing, improving upon older models to be a newer version of generally the same thing. Today’s technologies are evolving at such a rapid rate we have a hard time keeping our own participation current: I upgraded my cell phone to a smart phone last year. Less than 6 months later I cannot call it “smart” anymore. If the red box remediates the video store then *Avatar* remediates the science fiction film. Through this remediation it not only changes what science fiction can accomplish but transfers such evolution to those who experience its technological wonder. As Sully discovers himself completely immersed within the

Na'vi, he eventually becomes one of them. As we discover our immersion within this digital age through the books we read and the films we watch we realize an interaction with a new kind of information. The digital lines being drawn into our lives stir developments in how we identify with ourselves and others. Beginning with the red box and definitely not ending with *Avatar* we start to recognize the existence of our remediated selves.

As *Avatar* reveals remediation characteristic of the digital age and representative of cyborg rhetoric in popular film, direct remediation of human identity occurs closer to home. The following final chapter delves into the depths of such remediation by exploring various avenues representative of user-generated internet, or Web 2.0. Analysis of these texts will show a juggling of entertainment, information, and identity while exemplifying reflexivity between creator and created. Web 2.0 gives us the ability to be more than users of the internet, to actually become a part of it and establish our new identity within it.

CHAPTER FOUR

CAUGHT IN THE WEB 2.0: RECOGNIZING THE "I" IN INTERNET

If the cyborg exists through the entertainment industry's big screen then it communicates with us through the smaller screens of the computer industry. As in-home and mobile technologies advance so does our cyborg existence. Computers and the Internet are not what they used to be. We have come a long way from dot matrix, DOS commands, and dial-up modems. No more awkward modem screech as the computer connects to AOL, only to disconnect you every ten minutes. No more waiting an hour for a photo to download. Today, the Internet is not only fast and usually efficient, but an undeniable part of how we live life. In the 90s it was called the World Wide Web and sometime during the last decade it finally began living up to that name. We go online for just about everything. We study, research, read, and discover random things we would never usually think about. We shop, sell, and trade with Internet users all over the world. We laugh, cry, connect and reconnect with everyday friends and others only called "friends" because of the network. We watch, listen, and learn about an eclectic collection of events, news, and even tragedy. We send, receive, and forward anything and everything to anyone and everyone. We gossip, politic, agree and disagree about issues local to international. We work, look for work, and apply for work; we go online to making a living. We wake up in

the morning, turn on the computer. We get to the office, turn on the computer. We get home, turn on the computer. When we travel, we have our computer. We have the Internet on our cell phones for everything in between. More than ever, the Internet and the technologies behind it are crucial to how we live and who we are.

If the Internet used to be called the World Wide Web then a common term for its remediation is Web 2.0. Not necessarily a sequel to the original, today's Internet simply categorizes as the second version made available to the public. Bolter and Grusin explain that the remediation of reality has always been around (62) and that "we see ourselves today in and through our available media...[employing] media as vehicles for defining both personal and cultural identity" (231). Today's Internet is today's reality and what we might consider self today has undoubtedly remediated at an exponential rate. As the digital age remediates media its users are understandably changed as well. The digital age remediates our communication, relationships, business, social networking, and even our Internet. It remediates our brains. We act differently, speak differently, and even think differently. The digital age is now, cyborg rhetoric is here, and the objective of this final chapter is to recognize the many ways all of this is no longer a subtext to life, but blatantly available for us to realize. The Internet is a real part of our lives and acts as an effective vehicle for the posthuman.

Reality in Virtuality

The Internet, located in cyberspace, has no corporeal presence. Though it cannot be seen, touched, or moved, its presence is undeniable. Despite its virtuality the Internet thoroughly affects the reality of life. This suggests there must be a realness to the virtual—a palpable reality pungent enough to influence daily living, whether physical, mental, even emotional. This virtual reality becomes most real when we consider human interaction within cyberspace. Even at its earlier stages the Internet provided a virtual space where extraordinarily real interactions could take place.

In “A Rape in Cyberspace,” Julian Dibbel writes about the first recorded account of a criminal act committed in a virtual world. The text-based MUD (multi-user dungeon) known as LambdaMOO is a virtual reality that exists both through text on a computer screen and in the imaginations of the users who drive it. People are free to move around and socialize with others, creating themselves as whoever (or whatever) they want to be; all from the comfort of home. Considering these aspects, it is absolutely apparent that this is not real but rather *virtually* real. But this reality is enough for a series of “rapes” to occur and this alone affirms that these communities are more than just a server processing information. In *How We Became Posthuman* Hayles reports that Sherry Turkle, in her work on MUD users, “convincingly shows that virtual technologies, in a riptide of reserve influence, affect how real life is seen,” and one of Turkle’s respondents remarks that the reason why he/she turns to virtual worlds is because, “Reality is

not my best window” (27). Even before the sophistication of hypertext, ultrafast processors, and webcams, the Internet was real enough to affect the users’ actual lives. Today the Internet has attached itself to us and human identity seems mundane without it.

In a 2007 digital ethnography titled “Web 2.0: The Machine is Us/ing Us,” Michael Wesch, Assistant Professor of Cultural Anthropology at Kansas State University, describes Web 2.0 and its impact on human existence. The four and a half minute YouTube video begins with an example of how digital text differs from written text and how hypertext represents a separation from form and content. The linking ability of hypertext provides a great example of how the web can connect text, sites, and people virtually anywhere. For example, if this study is being read on a computer with Internet access, a simple click [here](#) will take you directly to the video itself. Wesch uses a computer to display the things he comments on; various links, websites, and digital text are used to let viewers watch the material in action. He not only talks about the ways Web 2.0 links people but explains that using it for so many things enhances its capability for affecting our lives. Ultimately, everything in the web has been put there by people, and the more we put into it the more it learns. The web is not about just linking information anymore, but Web 2.0 is “people sharing, trading, and collaborating,” and it pushes us to rethink everything from copyright to privacy and rhetoric to identity. According to Wesch, “We are the web.”

Living the Internet

Identity, at least to some extent, is created everyday through blogs, video-sharing sites, and social networking. Professional identity develops from numerous online careers and such opportunity grows every day. Whether the user works from home, socializes from home, or catches up on current events from home, the Internet creates and communicates identity in a wide range of ways. According to a site that ranks website global traffic (ebizma.com), the top five blogs in the world include an Internet newspaper, two reports on the latest electronics and gadgets, and two categorized as celebrity gossip or entertainment news. Ranked at number 2 and 4, TMZ.com and PerezHilton.com keep inquiring minds informed about the latest buzz surrounding famous people: celebrity marriage, divorce, infidelity, and paparazzi moments.

Although both sites have similar focus they are different in an identifiable way. TMZ.com (also available in a popular television show version) presents the news through a group of reporters where most of the identity development focuses on the celebrities reported upon. Not to say that tabloid press solely creates celebrity identity, but to a certain extent celebrity and identity often run synonymous—at least from the fan's point of view. Agents, publicists, and even celebrities themselves know the importance of exposure and often prefer any press over none at all. In comparison, the two-tiered PerezHilton.com molds a separate identity: the identity of the site's creator, Perez Hilton. The unfamiliar name Mario Armando Lavandeira, Jr. goes unnoticed in most circles, but his

online alter ego, one he's created for himself through gossip blogging, has become a household name for anyone with a television and/or online access. Through his blog and its popularity he makes a very good living, strategically developing a famous identity. The authenticity of his created identity matters little because he now exists as the character he created through the Internet.

To think that these two sites make up two of the top five blogs visited worldwide is a bit disconcerting because it raises an interesting point about the things Internet users do with online access. Still, the proof shows in the numbers and this type of information feeds the curiosity of millions of web surfers. Two other sites (ranked 3 and 5) focus on the latest technologies and gadgetry. The present and future of cell phones, navigation systems, and computers is available on a global scale. Technology users in this digital age want to know about the devices that could enhance their already staggering access. In a sense, as already dependent cyborg we constantly search for more ways to increase our connectedness. In "Posthuman Geographies?" Fiona Coyle writes, "This world is characterized by emergence, reflexivity, embodiment, and a dynamic partnership between human and non-human nature" (507). Within these sites we can peruse the non-human gadgets we wish to partner with. As an aside, I am somewhat relieved that the number one blog reports world news. It is refreshing to know that most of us use our access to learn about the things that do matter most.

The most noticeable features of Web 2.0's user-generated aspect can be seen in the rise of video-sharing sites and social networking. YouTube has the power of instant worldwide exposure; it creates new celebrities (Justin Bieber) and tarnishes reputations (recently, a UCLA student posted a racist rant that went viral in days). Through Twitter (thought to be a fad when first launched) people share even the most miniscule parts of their days with all their followers. Twitter has become so popular that companies now use it in their marketing strategies. Actor Charlie Sheen created a Twitter account after his latest bout with drug addiction and had over a million followers in less than 24 hours. Facebook users create a network of "friends" that they communicate with on a daily, sometimes hourly basis. Status updates, comments, and likes give users an opportunity to develop an online façade that leaks into how they identify with themselves in real life. A Facebook friend of mine wrote that she just finished some gardening so I have actively labeled her an avid gardener. However, in reality it may well be the first and only time she ever sunk her hands in soil. Still, in my mind I input it as part of her identity—something she may be aware of, maybe even intended. A few years back I met a Second Life celebrity in person. Within the 3D virtual world she is a confident singer with a strong following. In the physical world, she is introverted and seldom performs for an audience. Interestingly, all of these characteristics, virtual or not, are part of her identity.

The shift from social networking to business is not a far-fetched one. The professional possibilities within the online world have created an entirely new

market and breed of business. Online business consists of a multitude of jobs and careers accessible to anyone willing to pursue them. Raymond Fong of Los Angeles, California is cofounder of an online company, Attraction Marketing Formula, LLC. Founded in 2008, AMF currently works with thousands of clients for a variety of services characteristic of the growing online marketing industry. Fong explains, "In short, we teach and help business owners with their online marketing." Fong works over 60 hours a week from home and yet his business network spans a global scale, boasting international clientele from Nigeria, Australia, Norway, Canada, Singapore, South Africa, Mexico, and Japan. AMF sponsors an annual conference in Las Vegas (No Excuses Summit), offering the latest strategies to others in the online marketing industry. According to Fong, when the company started, "Everybody was willing to buy anything online." Although he recognizes online business still has a long way to go and the company has recently integrated more direct personal contact with clients, he cannot part from his personal observation that, "Online marketing casts a big net." This net has the ability to catch anyone who takes the time to surf the seemingly countless number of sites available today. A former engineer, Fong actively exchanged his cubicle for an office in cyberspace. His business represents a reputable part of his personal identity and his new office space is literally endless.

The endless nature of the Internet extends an expansive reach into our daily lives. With upgrades in technology we literally carry online access in our

pockets. About a year ago I upgraded my mobile phone for a “smart” phone. Ignoring the implication the nickname makes about my previous communication device I allow myself to enjoy this new part of me and the numerous applications it brings. I have access to the web, various email accounts, and text messaging. I can check sports updates, schedule events, and store an assortment of media: pictures, videos, music. My phone offers turn-by-turn driving directions through an automatically updated navigation application. I can even play networked games with other people on their phones—absolute strangers connected through technology. Ironically, my phone is already obsolete and “smarter” ones are available. But this increasing trend speaks volumes about the exponential growth we experience in this digital age. Though not easily admitted, many of us identify, in some regard, with the type of phone we carry. Surreptitiously, iPhone, Android, and BlackBerry users (like me) tap into a particular status created by the level of access afforded by each technology. Similar to how the cars we drive raise or lower personal sense of social status our access to the technological world has become a measure for social identity. Today, upgrading our phones (and indirectly our identities) has become a necessary part of our thriving digital existence.

Noticing the Link to Posthuman Identity

Cyborg reality becomes more commonplace as we instantiate its indelible existence via Internet and technology. We interact with technologies that allow

for us to interact with one another. We immerse ourselves in this new identity and relish our part in the digital revolution. Although we create this technology, as it evolves, the reflection we see becomes less recognizable as human, but reveals something different, something more. For Hayles, “the posthuman evokes the exhilarating prospect of getting out of some of the old boxes and opening up new ways of thinking about what being human means” (*How* 285). The way we read, write, and think human is undoubtedly undergoing significant change. We see this obvious change when we pay close attention to the books we read, the movies we watch, and the Internet we use. As much of this continues to go unnoticed Ryan reminds us that, “the self-reflexivity that derives from the electronic and purely selective brand of interactivity is anything but subtle” (*Virtual* 352). The unsubtle nature of the cyborg may be what conceals it best, for often the most obvious signs are the ones left unnoticed and more often unacknowledged.

MSNBC.com writer Suzanne Choney acknowledges this change in her 2010 article, “Internet Making our Brains Different, Not Dumb,” and reports what surveyed experts had to say about the future of the Internet. The survey revealed that 76% of respondents believe the heightened access of the Internet will enhance human intelligence while 21% disagreed, suggesting that the Internet may actually lower the IQs of avid users. One expert who believes the Internet’s effect is based on its user replied, “I would guess that smart people will use the Internet for smart things and stupid people will use it for stupid things...”

Whatever the case, it is apparent that the Internet is doing something. Choney writes, "The Internet may make us more literate in a different kind of way and efforts to protect individual anonymity will be even more difficult to achieve." Although opinions varied, one common detail to each prediction is a belief the Internet indeed does something: it makes us different.

The difference in our brains might be most evident in the difference of our writing. The reciprocal link between identity and writing allows us to study writing to access the brains creating it. In "Writing the Future in the Digital Age," Guy Merchant insists:

Nothing could be more obvious than the ways in which writing is changing. We only have to look around us at the ubiquity of text messaging, the increasing dependence on e-mail as a form of communication and the reach of web-based information and entertainment...the future of writing is closely interwoven with the future of digital technology. (126)

The link between changes in writing and our evolving digital environment directs the juxtaposition of this study's digital texts to developing cyborg rhetoric. These new kinds of writing and identity creation carry a significant attribute linking them to the digital age. This attribute, when looked at from any angle, is suitably cyborgian. However, noticing the connection between such digital texts and the posthuman is not quite enough for equipping ourselves for this revolution. We must be proactive in our reaction so that we might not regret this inevitable evolution. Nearly fifty years ago, Marshall McLuhan wrote in *Understanding New*

Media: The Extensions of Man, that “The young student today grows up in an electronically configured world. It is a world not of wheels but of circuits, not of fragments but of integral patterns. The student today *lives* mythically and in depth” (viii). Decades later, within this digital age, the “depth” in which students exist has surely deepened.

With the digital age comes the need for digital literacy. Staring into the turn of the millennium, Cynthia Selfe writes a call-to-action book, *Technology and Literacy in the Twenty-First Century: The Importance of Paying Attention*, and in it she professes the need for parents and educators to pay attention to changes brought by the pending technological revolution. She calls for the collective need to raise technological literacy, “the complex set of socially and culturally situated values, practices, and skills involved in operating linguistically within the context of electronic environments,” and that this literacy should be a critical one suggesting, “a reflective awareness of these social and cultural phenomenon” (148). With a cautioning tone she warns, “Technologies may be the most profound when they disappear. But when this happens, they also develop the most potential for being dangerous” (160). It seems that Selfe's fear has become reality. Technology today receives less attention because it has become so commonplace, interwoven into society. Nevertheless, Selfe's critical and strategically timed plea has been heard. And although not much can be done to prepare for the magnitude of this digital revolution, our heightened awareness does assuage the element of surprise.

Five years after Selfe's call, Stuart Selber writes a book meant to help educators develop computer literacy programs. In *Multiliteracies for a Digital Age* he stresses the importance of developing "multiliterate" students: those with functional, critical, and rhetorical abilities. He recognizes, "computer environments have become primary spaces where much education happens" (3) and suggests multiliteracy as the key for appropriately equipping students. The extensive digital shift in identity pushes educators to follow suit. In "Beyond the Book: Literacy in the Digital Age," Christopher Borawski asserts, "It goes without saying that children today find themselves sharing, using, and understanding information in ways that were unimaginable just a generation ago" (53). Because this change begins at home, children today can be considered native to the digital age; therefore, parents, educators, and graduate students are immigrants to a digital world with no intentions of slowing down. It has become a necessity to keep up with the assimilation process. Lester Faigley, in "Literacy After the Revolution," describes the "revolution of the rich" and the "digital revolution" as "different aspects of a larger scale change" (32). In other words, they are symptoms of something greater, a change that encapsulates more than just the "haves," "have nots," and the digital. Today, we seem to be amidst this "larger scale change." We see it in our writing, in the need for multiliteracy, and even within the digital texts presented in this study. The world as we know it is changing and these changes are most apparent in the new language we use.

Cyborg Existence

Existing within the digital age requires knowledge of the digital language. For the past decade we have been unconsciously learning this language and much of it has been taught to us through interaction with and through the very machines for which it was originally created. Our journey into the posthuman requires us to assume a fundamentally cyborg hybrid identity: part human, part machine. Although our dependency on technology is so commonplace, our cyborg identity goes beyond physical need and cognitively resides within us. In a discussion about the development of smart environments Hayles sheds light on philosopher Andy Clark's point of view:

Indeed, Clark argues that the distinctive characteristic of humans has always been to enroll objects into their cognitive systems, creating a distributed functionality he calls "extended mind." We are cyborgs, he wrote in a recent article, "not in the merely superficial sense of combining flesh and wires, but in the more profound sense of being human-technology symbiots: thinking and reasoning systems whose minds and selves are spread across biological brain and non-biological circuitry"; observing that the "extended mind" is a strategy almost as old as humans, he nevertheless points out that the joining of technology with biology has created a "cognitive machinery" that is "now intrinsically geared to transformation, technology-based expansion, and a snowballing and self-

perpetuating process of computational and representational growth.”

(Flesh 302)

Since the cyborg within us develops cognitively it is easier to look more specifically at the writing behind digital texts. Singer’s book on robotics and warfare, Cameron’s technologically advanced movie, and the lives we live through Web 2.0 become examples of our use of the newfound digital language: our cyborg rhetoric.

Conclusion

In an effort to answer a visionary call made over a decade ago, this study has been my humble attempt to pay attention to our evolution in this digital age. Although this work falls short of complete instantiation of the cyborg and its rhetoric, I offer it as evidence of an evolutionary occurrence. As yesterday’s computers become obsolete at an exponential rate it seems that our human nature dissolves as well. However, considering all that has been studied, I would argue that we are not disappearing at all. We are changing, or upgrading if you will. Like most upgrades we have our bugs and at times are unsure if we are actually better. Nonetheless, one thing proves absolutely certain: We are different. And though this study only covers a portion of an evolving subject worthy of continued and extensive research, I argue that as new technologies become the platform for today’s writing, that very writing, in turn, reveals a

progression in human identity. Within this cycle of cyborg instantiation, our writing not only serves as cyborg rhetoric, but is the product of a cyborg evolution.

Final Thought

If none of the above is convincing enough, consider this: In March 2011 the Oxford English Dictionary added two new words to its lexicon: "LOL" and "OMG." My immediate response, "LMAO!" ;)

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