Jayne Gackenbach, Ph.D.

&

Teace Snyder, FTW

Play Reality

How Videogames are Changing EVERYTHING

Play Reality: How Videogames are Changing EVERYTHING, is Jayne Gackenbach's and Teace Snyder's first book together and, like, the twentieth or something between the two of them. Jayne Gackenbach is a well-respected videogame and dream researcher and Teace Snyder is a 'kind of' well-respected hardcore gamer and lifelong writer. Jayne works at, and can be contacted through, Grant MacEwan University, where she has taught and researched for 21 years, and, Teace, oversees, and can be contacted through his website, www.teace.ca, which he created and launched in 2007. Oh yeah, and by the way, they're mother and son too, and, are currently living in Edmonton, Alberta, Canada, where they regularly express the endless bounds of their geekiness and hold hipsters in utter contempt.

www.playreality.ca

Also by Jayne Gackenbach:

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Conscious mind, sleeping brain: Perspectives on lucid dreaming

Control your dreams

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Iris (collection of rhymes)
The Collection: Volume One (collection of short stories)
Rise (novel)

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Introduction:

Dear, the person reading this book,

You've probably already checked the back cover to try and find out exactly what this book is about, and the particularly bizarre way in which it was written, only to find that you had to actually open it to get the juicy details. So, without further adieu, here's the gist of what this book's about and how it was created…

First of all, the person writing this book right now, whose words you're currently reciting inside of your head, is not actually the Ph.D./dream expert/university professor/videogame researcher who's pushing the envelope of what we know and challenging the conventions of how people think of videogames. Nope, I'm not her. She's not even in the room right now. But, before you go all whistle-blowing detective on my ass and try to inform the publisher of how I've somehow managed to hijack a researcher's work and taint it with my words, you should probably keep in mind that the aforementioned researcher, who you were expecting to be hearing from, is in on the scheme. But rather than take the reigns of these written words and march to the front lines to make her case for herself, she's hired me to translate and paraphrase this book for all the people out there who don't speak psychologist. And, to quell any idea that I might actually be misrepresenting her positions, I'll thicken the plot with another detail—she also just happens to be my mother and there's no way she'd let me get away with that.

See, here's the thing: I'm a hardcore gamer and my mother is a videogame researcher. This does not mean that while I was still in diapers she took the liberty of engineering me to become a hardcore gamer for the sake of her research, or, that she swabbed my fingers after gaming to use as part of her experiments. Instead, it means that throughout the course of my life I have had a consistent fixation on videogames and, due in part to that fact, my mother has had a consistent exposure to videogames. And when I was younger, she had to wade through the all-too-familiar issues of concerned parents for their gaming children—signs of aggression, potential for addiction, effects on the brain, on learning, attention, socializing, etc, etc, etc. So, after a while of biting her nails and internally debating the issue, she took the liberty of reading some of the

research on videogames to try and better understand what she had observed from watching me.

Now, up until that point my mom's field of expertise had been that of lucid dreaming—when people are able to recognize the fact that they're dreaming and potentially control the experience to varying degrees. And after looking over the research on videogames, my mother was surprised to find that there were an alarming number of parallels between people who were able to control their dreams and those who frequented controllers. And, when you think about it, it makes perfect sense that those parallels would exist. Playing a videogame can, in many ways, resemble the sensations of dreaming and the regular practice of controlling a game would only logically produce an enhanced ability to control or perceive dreams. Of course, not unlike an apple hitting Newton on the head, the idea that lucid dreaming was moving to the forefront of our society by way of contemporary media was something that both startled and enthralled my mother—she recognized in what she read that there was a new cultural evolution underway and that videogames stood poised to change EVERYTHING. Suddenly, it wasn't just about understanding my obsession with videogames it was about exploring her curiosity about them as well.

Today I continue to play videogames and my mother continues to research them. But when it came time for her to compile much of her findings on videogames, and the plethora of cool and interesting facts that she'd happened across along the way, she found herself unable to articulate the depths of her inquiry in any terms other than data and case studies; she found that despite her countless hours of time and work that there was an ingredient missing from her recipe for a book. Because, although she had made herself familiar with and had taught about every variety of game and gamer it didn't change the fact that she wasn't one herself. To her credit, she regularly plays simple puzzle games and remains hopelessly plugged in through every major technological advancement, but still, she's not a quote-unquote "hardcore gamer". And to be able to engagingly talk about videogames in the way that she wanted her book to do, it would take someone who had devoted enough of their life to playing videogames that, for them, talking about playing videogames would be as basic as talking about the weather. Of course, since she just happened to have raised an individual of the sort she was searching for, it didn't take her long to make a decision. But, before we start to get into all of the cool and mind-blowing ways in which videogames are changing the world, it's probably best to But, before we start to get into all of the cool and mind-blowing ways in which videogames are changing the world, it's

probably best to briefly summarize what they **are** and how they stand to evolve…

Videogames are the process of synthesizing imagination into interactive experiences. Until recently, that's mostly been applied to entertainment—to small, limited interactions with a few buttons and a handful of characters within a story. But that's not what videogames really **are**—it's just how they got started. Like a single cell organism forming out of a thick carbon rich soup in the early stages of life or Godzilla before he got irradiated—everything that grows up to become something greater than it once was, had to have both the time and the opportunity to be able to grow. That's videogames in a nutshell—a nutshell that has only just touched water in the past few decades and has only just recently found soil to grow in. So off the top, before we say anything else or delve any deeper into the subject at hand—remember this: Videogames are not just videogames. They've become something so much bigger. And that's what this book is really about.

Like the title says, videogames really are changing **EVERYTHING**…

CHAPTER 1

Past 2 PR3S3NT: A Brief History of Videogames

"All your base are belong to us"—Zero Wing by Toaplan

"Boo do do, Boo do do! BOO!" –Mario Theme, an interactive pwm.

Once upon a time, people lived primitive and fearful lives in what is historically known as the Dark Ages. Of course, I'm not talking about the actual Dark Ages; that would just be weird and not really pertinent to this book at all. What I'm talking about are the dark ages when people couldn't illuminate rooms with the light from their handheld videogame consoles. The dark ages when people didn't know videogames could brighten their free time and spark their imaginations because, quite simply, they hadn't been invented yet. Hard to believe, I know, but it's true… seriously! You don't believe me do you? You've already put down this book and started playing a videogame haven't you!? Fine! To keep both your attention and the hope alive that you won't sink into complete denial that videogames weren't around forever, this chapter will cover the history of videogames: where they came from, how they evolved, and that, miraculously, people used to be able to live without them ;P

Think of the opening sequence from the film 2001: A Space Odyssey, only, this time, the bone the monkey throws doesn't morph into a sophisticated spaceship. Instead, it turns into a really cumbersome, slow, expensive, ugly, single-functioned, little understood box of wires, circuits and good old-fashioned nerd love: That's right, the first videogame console!

Now, to be fair, Atari, founded by Nolan Bushnell in 1972, was, back in the day, little known, affectionately named after Nolan's favorite board game, and headed in a completely different direction than the

playing of conventional pinball machines which, at the time, were about the closest thing to videogames that anyone had ever seen. In fact, the very first videogame prototype of Pong that Atari created made its debut in a pub and had to contend for people's attention, and thumbs, next to its clunky-mechanical-pinball-predecessors. Showcased within a thin wooden box, utilizing a coin slot swiped from a kid's ride, and perched atop a barrel, the console looked more like something built on Gilligan's Island than a groundbreaking technological innovation. And, as people downed their drinks and lost their ability to tell the difference between beautiful women and ugly machines, the console soon found an audience. And, not only that, it blew their freaking minds! Thus, it was on that fateful night, under the watch of the two wise men who had created it, and in the hands of their virgin demographic, that the anointed videogame craze was born! W00t! Pong was a hit! People had never seen anything like it. Even though, by today's videogame standards, Pong was laughably simplistic! It was nothing but a couple of moving white lines, a bouncing dot, and two knobs that allowed the person playing the game to control how the graphics on the screen interacted with one another. But in the 70s this wasn't just impressive, this wasn't just cool, THIS HAD NEVER HAPPENED BEFORE!

At the time, people were well acquainted with televisions and movie theaters, but the idea of being able to control what was on the screen was something that seemed like it was straight out of a science fiction novel. Nolan even recalled one girl asking him "How do you get the signal from the knobs I turn down to the TV station?" Awww, that's so cute! They couldn't understand the very nature of the fun they were having! So, after spending the evening watching people fiddle around with their machine, Nolan and Al Alcorn (Atari's first engineer), left the bar and went home for a good night's sleep. But when they woke up in the morning they received a call notifying them that their machine was broken. Disheartened and worried, they rushed back to the pub to investigate, only to find that the cause of the problem wasn't with the console itself; it was that the coin slot was so full of quarters that the game wouldn't run anymore! Cha-ching.

Fast forward a little bit to the point where the world had been blown away by Pong and large arcade console versions of the game were available for play all over the place. Atari had gone from an initial investment of $500 to making millions. But an even greater and more contemporary mindset of the gaming industry was about to effervesce from their success. One day, Al Alcorn approached Nolan and said that he believed that they could manufacture Pong in a smaller and more affordable package and, by doing so, break into the home entertainment

market—allowing people the freedom to play Pong without pockets full of quarters, or, fear of anxiety of liking a game more than the girl they were out with. But there was a problem. No retailers were interested. Seriously. Atari couldn't find a toy store anywhere that was interested in buying their home versions of Pong. That is, until Sears came to the rescue. After ordering 150,000 units of the game to be ready for Christmas time, Sears put out a print ad, ran a commercial, and presto— Pong sold out everywhere. With sales like that, it didn't take long until Atari was manufacturing other successful videogames. And to the young, energetic, creative and free-spirited workers of Atari, it seemed like the world was their oyster… Until…

Lawsuit! Turns out, Nolan wasn't as innovative as he seemed. Ralph Baer, a television set designer, had come up with the idea for Pong (and many other types of videogames) years before Nolan and Al did. In fact, he'd even built them already! Baer called his invention 'the Brown Box' and, ironically, his version not only looked just as homely and archaic as the first Pong console did, but it also played almost identically. It was soon picked up by the television manufacturer Magnavox and developed into a sleeker version of Baer's Brown Box called the Odyssey (see what my earlier Space-Odyssey-reference was really about? Clever right?) Anyway, the Odyssey made its debut at a trade show in New York years before the founding of Atari and received a very enthusiastic response from those in attendance. And, not surprisingly, one of the most enthusiastic attendees happened to be none other than: Nolan Bushnell. Busted!

So, litigation this, negotiation that, and after a while the whole thing was brushed under the rug with a $400,000 licensing settlement that Magnavox accepted from Atari in lieu of them actually admitting that they stole the crap out of the idea for Pong. But, despite the ongoing arguments, and the semantics of who created what and when, the world at large didn't particularly care about who the father of videogames really was. All they wanted was more videogames. And, with the explosion of games like Space Invaders, Asteroids and various other graphical and content innovations, they got their fix and then some. Arcades were the new hip hangout for teenagers and old people suffering through mid-life crises. Eventually, they even managed to take center stage in Hollywood, appearing in films like Tron (1982) as a euphoric Jeff Bridges miraculously twiddled his thumbs and outmaneuvered the best players both inside and out of the game.

Of course, it wasn't all sunshine and pixilated rainbows. The media (the simpleminded beast that it is) took to covering stories of parents and politicians who insisted arcades and videogames were creating

a generation of delinquents. This, combined with the buyout of Atari, the removal of Bushnell, and the splintering of the company's once creative-dream-team, took the innovative reigns away from Atari and threw them into the ring for business savvy, imagination-less, money hungry individuals to over saturate the market with crappy games and crush people's faith in America's contributions to the gaming industry. It was a dark time indeed… Dark Ages dark. And, if that wasn't bad enough, then came the 80s. I'll give you a moment to shake the horrific memories of neon pink headbands, Ronald Reagan, the Cold War and the gut churning hairdos, that could have been used to successfully fight the Soviets, and, instead, divert your attention across the ocean. In the belly of America's former colonial overlord, Britain, a couple of genius teenage twins named Phillip and Andrew Oliver were about to take the world by storm and Frankenstein the computer gaming industry to life, bigger and better than it had ever been.

Ok, get this: The Oliver twins weren't allowed to have a gaming console. However, fortunately for them, and every gamer alive today, their parents were willing to buy them a computer to help them with their homework. Soon enough, the twins had not only taught themselves how to write computer code, but they had begun making their own videogames! The Oliver twins' remarkable innovations continued throughout their youth and were sold (for far less than they deserved) and distributed all over the country, eventually allowing them to transition game designing from a hobby to a career. Then, at the age of eighteen, rather than go to college, the twins met (no joke) another set of genius game developing teenagers, the Darling brothers. Now, since I can't resist the urge, I'm going to create my own 'Beniffer', 'Brangelina', foolish-hybrid name to simplify the union of the two sets of uber-geek-brothers: the Darlives! So, since the Darling brothers had already paid their dues and set up an at-home distribution business for the games they'd written, when the genius of the Oliver twins came their way, they didn't hesitate to give them substantial compensation for their work and, more importantly, the means to go about widely distributing it—inspiring the twins to write more games, faster and better than ever.

Meanwhile, across another ocean in Japan, an even bigger evolution was brewing. The fabric of videogame-society was shifting and the industry's historic rise was about to reach new, even higher, heights. Shigeru Miyamoto had originally wanted to establish himself as a professional manga artist, but, instead, had to settle for creating some of the bestselling, most influential, highly innovative game-changing videogames of all time. In 1980 Miyamoto brought his talents and ambitions to the one-time manufacturer of traditional Japanese playing

cards, Nintendo. Although Miyamoto admittedly didn't even used to like computers, and had never designed a game, he was soon given the opportunity to explore the genre and put his imagination to work. Miyamoto's unique vision of the potential for games to, not only entertain us, but tell stories and engage our emotions, helped Nintendo create some of its first groundbreaking character-based games like Donkey Kong—the story of a portly Italian man chasing a girl-abducting-ape up and down ladders with a hammer. But, as anyone who's played the original Donkey Kong knows, his then aptly-named rival 'Jump Man' would soon take the spotlight when Nintendo released its first home videogame console, the Nintendo Entertainment System—or, more commonly known as what Santa Claus saw written on just about every letter he received that year: the NES.

Around the 1700s France had the Age of Enlightenment and around the mid 1980s Nintendo had the age of Shigeru Miyamoto. Because, as if Super Mario wasn't cool enough, Miyamoto soon created a franchise even more groundbreaking and awe-inspiring—The Legend of Zelda. Now, I'm getting all tingly and nostalgic just mentioning this game because, like so many other devout gamers, it was a huge part of my childhood. In fact, one of my mother's favorite stories to tell is of me kissing the videogame console box on the way home from the toy store, eagerly anticipating the adventures and excitement of exploring the miraculous in-game fantasy world that Zelda provided. Because, unlike other games before it, The Legend of Zelda wasn't just a casual playing experience in which gamers tried to get better at the same tasks and levels over and over. Instead, it was a world that allowed you to grow as a character—to gain experience, overcome challenges and become the Hero of Time. This parallel to the tendencies of people in the real world to develop themselves and learn and grow everyday was a remarkable sensation to experience inside of a videogame. And, not surprisingly, this winning formula of giving the player the feeling of accomplishment and coming-of-age has been a fundamental part of the gaming industry ever since.

In those days, Nintendo was the overlord of the industry—at one point, accounting for 85% of it. And with the technology available to them, they were able to facilitate the imaginations of those who worked for them and continued to push the envelope and develop, not only new and exciting games, but new and exciting game platforms. In 1989 Nintendo released the first handheld game console, the Game Boy. But what stands out in my memory most, not unlike many others who first played on this console, was one game in particular—Tetris. I played this game constantly and I was amazing at it. Starting at an age from which I

can remember little more than the fact that I was playing Tetris all the time, unbeknownst to me, I had already begun to condition my thumbs, my brain, and the future of what I would play, how well I'd play it, and how my parents would let me get away with playing so damn much! From the minute I plugged in, I was hooked. And, as a curious tech-savvy parent, so was my mother—who, after reading the research about videogames, soon became obsessed and began to research them herself.

But enough about my love for games! Following in the footsteps of Nintendo's remarkable innovations, videogame consoles had new life breathed into them, not only in the western world, but all over the globe. The industry was not only growing, it was accelerating at a rate similar to the historic introduction of other forms of media and communication like radio and television. New products and companies began to pop up all over the place, creating quality products and rival consoles that gave consumers the choice of not only what types of games they wanted to play but, also, the extent to which the virtual worlds they escaped to consumed their time on earth. The votes were in and videogames were going to be a big part of the future. However, as the landscape of videogame play slid from simplicity to complexity so too did the issues surrounding the games people played and the people who played them.

In 1992 a new breed of game entered the market. While violence had already been in videogames like Deathrace, which required its players to drive over gremlins in order to accumulate points, or, Duck Hunt, which allowed you to literally hold a plastic gun and shoot at the cartoon ducks flying around the screen (only to be mocked by a condescending douchebag dog) Wolfenstein 3D took things to a whole new level. For the first time players were able to experience a virtual world from the first-person-perspective of a gun-crazed killing machine (an American soldier escaping a Nazi stronghold)—or, as the genre is more commonly known by today, players were able to experience a First Person Shooter. But aside from the exhilarating fun of shooting, chasing, and being chased by people shooting at you, the genre also brought about intense controversy and skepticism over its violent and graphic content. Of course, that wasn't going to stop people from playing the game. Or, for that matter, keep other, even better games in the genre, from coming out and blowing our minds—literally.

The door to offensive and brutal content was officially open and, not unlike opening the gates of hell, a whole whack of nefarious themes and characters flooded the world. The game Doom elaborated on the blood splatter effects introduced by Wolfenstein and allowed its players to use bigger guns and cause more damage—liquefying their opponents into garbled mounds of pixilated blood and guts. Mortal Combat saw players

ripping each other's hearts and spines out of freshly-carved fist-shaped-orifices. Grand Theft Auto let you experience an open world of majestic beauty and then destroy the living crap out of it—stealing cars, picking up prostitutes and engaging in all-around maniacal, criminal and borderline psychotic behaviors. It was scary stuff in real life but inside the games, man was it fun! And, when you think about it, those types of themes and games were bound to be an inevitable part of the progression of the industry. Because, as videogames evolved, they grew more and more like the leading media of the time—movies and television. And as anyone who's ever turned on primetime, watched a cop drama, a blockbuster film or anything outside of the Disney Channel knows, both television and movies are chock full of violence, sex, debauchery, and just about every kind of graphic depiction. And, with technology on their side, videogames were quickly catching up.

Alright, now I'm gonna jump ahead a few years, past the dawning of the golden age of the internet and the vast improvements that were made to every kind of console and computer, to a more contemporary era of gaming. Videogames like Tetris and Super Mario are still around entertaining people all over the world. But it's a new breed of multiplayer gaming that has branched out from its predecessor's single player campaigns to create fully functioning worlds available at the click of a button and a monthly subscription. However, it's not the worlds themselves that are the best part of the experience, it's the fact that you can share them with your friends! Massively Multiplayer Online games, XBOX live, Facebook-App-Games and countless other peer-to-peer types of connections took gaming out of the living room, out of the bedroom, and put it into both. Now people could not only escape to virtual worlds but they could recreate themselves, invite their friends and manage to stay, both plugged in, and in touch. Videogames had become more social than ever and the types of people playing the now tremendous variety of games available everywhere, all the time, had grown equally as diverse.

From humble beginnings to everyday life, the brief history of videogames has been one of both astounding success and unresolved questions. Because as much as the industry has evolved, and as much as we've all grown with it, the greater implications and effects of playing videogames is still largely unknown. Questions about learning, addiction, violence, attention, consciousness and competence are just a few of the issues on the tablet. And with the huge variety of games now rivaling all other types of media and the very scope of our own imaginations, the ramifications and rewards of play and gaming have never been more pertinent to understanding the future. And while it is a vast and daunting

journey to grasp the seemingly endless bounds of our own creations, take heed and remember: this is only Chapter One and the history of videogames has only just begun.

CHAPTER 2

CULTURE: You are What You play

"Today it's not culture; it's box office."—Alex North

"If we are to preserve culture we must continue to create it."—
Johan Huizinga

       Before I start dissecting the subtle nuances of videogame culture, I want to take a second to pull back and look at the bigger picture. Traditionally there have been two dominate forms of culture that have, arguably, been at odds throughout history: high culture and pop culture. High culture is the kind of thing that you experience in an opera house or an art gallery—you know, that old world snooty mentality that certain forms of artistic expression are above and beyond the ability of the average individual to appreciate. Conversely, pop culture is kinda like average-Joe-art and expression—the stuff you see in box office movies and read about in tabloids. Previously, one was considered refined and elegant while the other was defined irrelevant. But in the mid-20th century, painter Andy Warhol introduced a broader perspective with his work that seamlessly merged the two forms of culture by painting pop-culture icons like Marilyn Monroe and Campbell's Soup cans. This, of course, contributed to the convergence of culture reaching epic new heights thanks largely to the influence of newer forms of media like movies and television. And since revolution is an inevitable byproduct of cultural evolution, the elitist division between cultural lines quickly eroded (although not entirely) as the technological advancements of the times allowed for new ideas and possibilities to influence various cultures.

       Now I don't want to make it out as if Andy Warhol is single-handedly responsible for mending the cultural divide, but I do want to emphasize the significance of how that division has narrowed with each generation. Because, nowadays, the heart of both videogame culture, and, cyberculture, is their intense degree of interconnectivity that hasn't been seen in the real world since the last big glue factory explosion :P And while much of that interaction depends on content and worlds that are

entirely virtual, the influence of real world cultures, and their divides, can play as much a part online as in real life. Thus, the recent explosion of online cultures came about at the behest of globalization and the convergence of real world cultures—almost like reality was a stepping-stone for virtual cultures to emerge.

All that said, videogame cultures simply couldn't exist without the proper technology and interconnectivity. However, the technology that our world has to offer isn't just the product of one culture. Instead, major technological advancements have come from all corners of the industrialized world and, especially when it comes to videogames, much of that technology, and the subsequent cultural identities that have arisen, came from two corners in particular—the East and the West. Thus, a unique perspective of videogame culture is that of Mia Consalvo, who suggests that the "video game industry is a hybrid encompassing a mixture of Japanese and American businesses and (more importantly) cultures to a degree unseen in other media industries, especially in regard to US popular culture." An example of this geographical, in-game cultural influence/divide can be found in the MMO World of Warcraft, in which some guilds have been formed around the national identities of their members. And while this also means that real-world prejudices and discrimination could make the jump into virtual worlds, it's important to remember that the geography inside the game isn't the same, and that the focus should be placed on how a variety of people, guilds and cultures are playing together, not falling apart.

Another way to think about culture is the way anthropologists define it: "The set of learned behaviors, beliefs, attitudes, values, and ideals that are characteristic of a particular society or population." And while all of these factors can be easily applied to videogame players, and the cultures they've created, there are societal misconceptions about games and gamers, which have been so pervasive that videogame culture has gotten a bad reputation because of it. And despite the fact that the videogame industry is growing by leaps and bounds every year, with non-players dwindling, videogames are consistently regarded as: unsophisticated in their form, problematic in their content, the cause of health problems (from obesity to addiction) and riddled with anti-social overly aggressive teenaged players. All this, coupled with varying degrees of pre-existing, nerd discrimination in the real world, have resulted in videogame culture being regarded as on the fringe, even as it moves into the mainstream.

There are a variety of organizations and institutions that track gaming incidence and demographics all over the world. An industry spokes-group, the Entertainment Software Association (ESA), is

dedicated to serving the needs of the companies that publish interactive games within the U.S.A. for everything from videogame consoles to handheld devices, personal computers and the internet. In a 2011 report, the association found that 72% of American households had members who played videogames in one form or another and that the average age of those players was 37. In fact, contrary to the popular belief that videogames are just for kids, the majority of gamers (53%) are actually between the ages of 18 and 49, with minors accounting for only slightly less than 20% and people over the age of 50 accounting for 30%. Another often-assumed variable of those who play videogames is that of the gender divide—because while most people are under the impression that the vast majority of videogame players are male, in 2011 42% of the gaming population was found to be female (again mostly adults).

To the outside world, someone who sits in front of their computer all day might seem more reminiscent of a vegetable than a cultural icon. But inside the virtual worlds of some videogames, that same individual could be regarded with admiration and awe for their remarkable accomplishments. Competitive gaming, Massively Multiplayer Online games, and peer-to-peer games are swallowing up more and more of people's time every year and investing it into the avatars they've created. And while, surprisingly enough, it's casual games such as board games, card games, puzzle games, etc, that attract the most online play, it's the emergence of online economies, prejudices, folklore, heroes and villains that has created the most remarkable connections between players and the richest online cultures.

In the Massively Multiplayer Online game (MMO) Everquest, there were a couple of big-ass dragons that players had to team up against to be able to bring them down. But when these dragons finally fell and spilled their innards at the feet of those who'd slain them, there would only be two or three items to go around between the up to 40-odd people that had to cooperate with one another to kill the beasts. And while these circumstances could cause even the most well composed warrior to break into a berserker hissy fit, the players of Everquest instead took the initiative to devise a means of commerce, rather than conflict, to fairly distribute these rare and infrequent items. Players came up with their own online currency called Dragon Kill Points that they would then pay one another every time someone showed up to go on a mission. These same points were then tracked on a separate website and after a player had accumulated a sufficient sum, they could then bid on whichever cool items they were interested in. And while you might think that this incredibly sophisticated means of tracking and distributing items was something that the game itself lacked, and its users consequently had to

create for themselves, it was, in fact, an addition, and a vast improvement to, the established in-game trading system. That's right; gamers took the initiative to develop a self-regulated in-game currency to accommodate the needs of commerce in their free market, strictly online economy. And if that isn't amazing enough, decades after the fact, and countless MMOs later, similar systems of trading outside of the game have been devised and implemented in just about every major online gaming community.

After completing a review of thousands of Everquest auctions for items and in-game currency, Edward Castronova, associate professor of economics at California State University, concluded that, on average, players were earning approximately $3.42 of real-world money for each hour of online play. Thus, by taking Everquest's in-game universe of Norrath and regarding it as a real-life country, its gross national product was at one point comparable to the 77th richest country on earth. In fact, if you take online activity, currencies, and items of interest, from all over the internet, and treat them according to their attributed value in the real world, online economies have experienced the kind of economic booms and sustained growth that presidents can only dream about. And while the idea that 'things that don't exist in reality are becoming more and more valuable' may make some people uncomfortable, the same could be said for the current global monetary system of fiat currencies and the extent to which they're backed by relative value. Put simply, if trends of play continue and virtual cultures not only break into the mainstream but become the mainstream, one day the global economy might be influenced as much by virtual worlds as it is by reality itself.

Online universes as huge and immersive as that of Everquest are available all day, every day, and, some gamers don't hesitate to devote both their waking hours, and those they probably should have spent sleeping, to improving their in-game lives or skills. This level of devotion and borderline self-sacrifice can be a fitting tribute to the power of games and the scope of cultures that emerge in those games when their players have collectively spent millions upon millions of hours gaming. However, it's not just the games and gamers that contribute to the culture of gaming, it's also how those people choose to plug in and play. In the late 90s, in South Korea especially, the real-time strategy game Starcraft had such an impact on players that PC Baang (Internet Cafés) featuring the game popped up everywhere, giving players access not only to better computers and connection speeds but, also, to an environment built specifically to cater to their gaming needs in a social setting. Not long after, gaming competitions soon emerged from the growing culture of dedicated Starcraft fans in South Korea and gave gamers there something

that generations before them could only dream of—the opportunity to play videogames professionally for fame and fortune.

South Korea is the most wired nation on earth and the professional gaming phenomena's that arose from the popularity of Starcraft and other games was more profoundly felt there than anywhere. Competitions were broadcast continuously over a variety of competing networks devoted to the rise of competitive gaming. 'Ssam-Jang' was one the first South Korean pro gamers who gained fame, publicity, and fortune. In fact, after winning numerous tournaments and competitions, fan pages and websites dedicated to him popped up everywhere and he even appeared in a television commercial. And while in South Korea professional gamers can make hundreds of thousands of dollars a year, play in stadium environments filled with densely packed crowds of adoring fans, and experience fame that matches their fortune, in the West professional gaming has been slower reaching a large audience. Players can still receive substantial contracts or endorsement deals that rival even those in the East, but when it comes to having their skills recognized and their names celebrated, it's just not that big a deal yet… YET!

Conversely, and surprisingly, one of the biggest cultural shifts and phenomenal phenomena's to rear its head in recent years has been that of the casual gaming revolution. Because while, as big as MMOs are becoming, and as wide as hardcore-gaming-culture is reaching, it's the less time-consuming, smaller learning curve, generally easier (but still challenging), cheaper to produce, E-for-everyone, Tetris-esque kind of games that are paving the way for generations of quote, unquote 'non-gamers' to join the club. In fact, the reach and explosion of casual gaming has been so monumental that it now stands poised to flip the videogame industry on its ass—splintering the attention of developers between more simple games and those aimed at hardcore gamers. However, it's not just the type of games or the shorter intervals of play, that have been the most alarming aspect of this revolution to developers, and their traditional hardcore gamer CEOs, who thought they knew everything about what people wanted to play. Instead, it's the target demographic leading the revolution that is just so freaking peculiar that some are still trying to wrap their heads around it. In fact, if it weren't actually happening, there would be jokes about it actually happening that would go something like this: Knock, Knock … Who's there? … The casual gaming revolution … The casual gaming revolution led by whom? ... The casual gaming revolution led by middle aged women, seniors and anyone with a Facebook account … WTF?!?! Anyway, it used to be that developers would laugh at this joke and shake their heads at the ludicrous idea that the industry would be reborn at the beck and call of mothers, not their kids. But, they're not

laughing anymore. Suddenly, videogame culture isn't just about people who are willing or able, to devote huge amounts of time to playing complicated games. Instead, it's about how everyday people are starting to be introduced to and learn the fundamentals of how to play videogames.

Essentially, there are two ways to think of the social elements of videogame play: within the game and beyond the game. And thanks to forums, clans, guilds, competitions, LANS and conventions, players can spend huge amounts of time both in games, and in the worlds built around those games, without ever leaving the cultural environments they've grown accustomed to. For example, Blizzard, the developer of some of the world's most loved and played games, has an annual event called Blizzcon at which they host casual and professional tournaments, discussion panels, community contests and hand out brand name merchandise all centered on the virtual worlds and franchises they've created. However, it's not just game developers and devout gamers who are constructing videogame culture—nowadays pop culture, high culture and everything in between, is converging online, creating new medleys of artistic expression, cultural identities and alternative ways of experiencing and engaging life on earth. Suddenly, the historic duality of cultural divisions has not only been 'patched' and is now fading away, it's being 'played' away.

Videogame culture doesn't just describe one game or one demographic of player. Instead, it's the culmination of real world cultures, and the creation of new ones online, in environments built around play. It used to be that if you lived under a rock you were isolated from the world, but, nowadays, you can still get Wi-Fi—and because of that you can still be a part of a community, surrounded by friends, earning XP and gold to auction on Ebay or, maybe, just so you can show off your individual achievements. You can still meet new people and explore new worlds. And, most importantly, you can still feel like you're a part of something that matters. Because whether you're a hardcore gamer playing an MMO or a devoted casual gamer playing Farmville, you know the familiar feeling of making meaningful connections online. You know the feeling of joy and jubilation that accompanies play, regardless of whether or not you're a grown up who's had to put up with the old wives' tale about how 'play is only for kids.' And if you're familiar with gaming, and the cultures that have grown around games, then you may be more likely to notice both the subtle and significant ways in which videogames are affecting people and cultures all over the globe.

While every demographic of videogame has its kings and kingdoms, they exist in virtual worlds where players gaming needs demand constant change. And, due to the passing of time, the

improvement of technology, and the expanding possibilities of videogames, online cultures are constantly diverging, converging, evolving, and growing out of the remnants of their predecessors. One day World of Warcraft players will be regarded as the ancient forefathers of futuristic MMOs not unlike how the Mayan civilization long preceded Spain's arrival in South America. But the cultures that have grown online will not simply diminish and slip into oblivion with the passing of time. Instead, they will adjust out of necessity to the changing environment of online play and, in the end, they will become deeper and richer because of it. The thing is, history doesn't always feel historic to those who live through it. And, unbeknownst to many players today, videogame culture is quickly evolving and will soon bridge the gap between how people live and how people play—creating an integrated culture that exists somewhere between online and offline. This is both a good and a… well… potentially really, really horrible thing. It's not one or the other! It's a combination of the two. But… what do I mean by 'really, really, horrible' you ask? Not everything about videogames is good. Not everything about integrating digital culture and the real world is good. In fact, if you want to zero in on my the earlier metaphor of Spain arriving in South America and changing the culture?… well… uh… let's just say the future is going to involve some serious changes in culture. Some of them positive. Some of them ominous. And this evolution is going to both unify, divide, rip and sew the whole of the species. Seriously. Shit's about to get real!

☹

CHAPTER 3

ADDICTION: All Play Makes Jack a Dull Boy

"You do anything long enough to escape the habit of living until the escape becomes the habit."—David Ryan

"Just because you got the monkey off your back doesn't mean the circus has left town."—George Carlin

I'm struggling to recall a time in my life when I was addicted to playing videogames. And the reason I say struggling is because while I do have memories of things like playing fifteen hours consecutively, accumulating hundreds of hours on single player campaigns in a couple of months, and pumping out countless hours of dedicated play online, I'm still not coming up with any memory of losing my grip on my priorities or succumbing to the influence of virtual worlds to the detriment of my actual life. I have no memory of losing touch with my family or friends because I was too busy playing a videogame; I've never been fired from a job or forgotten to feed one of my pets; I've never sold my body for bandwidth or hawked my possessions for cartridges. And, despite the fact that playing videogames has been a huge part of my everyday life, I have somehow, miraculously, managed to remain a normal, healthy, productive, everyday member of society. That's right, turns out I'm not addicted to playing videogames and I never have been. But, not unlike the dark side of the force, I know the all-too-familiar call and temptation that goes along with excessive play. And while I have been fortunate enough to walk the line of videogame addiction without losing myself to it, there are those who are not so fortunate. There are those who can't escape their frigid grips of their keyboards and controllers—locked in icy basements full of air conditioning and Big Gulps, as their time and lives are sucked out of their fingertips and deposited into virtual worlds that make them feel like gods! And just when they think they've leveled up for the last time and completed every quest and mission in the game, another expansion comes out and sucks them back in again! Give us a chance why don't you?! Damn you developers! GIVE US A CHANCE!!!

Kmmm, Kmmm… Anyway, this may all seem kind of stupid and melodramatic to anyone whose exposure to videogames has been limited to the stuff they find preinstalled on their phones, but, really, it's no joke. It can sometimes seem funny, but, still, it's no joke: videogames have the potential to be extremely addictive! Don't believe me, and, haven't experienced it for yourself? Ok… here's some research, case studies and compiled data to illustrate not only the depth of videogame addictions but the scope of the problem and the many repercussions associated with excessive play when gaming makes the jump from willing pastime to disgruntled fulltime. Oh, and one more thing: nowadays the word 'addict' is frequently used as if addiction is synonymous with 'frequently using,' but it's not! Addiction is much more serious than the casual way that it's used in popular culture. It's when a behavior, a substance, or whatever a person happens to be addicted to, negatively affects their lives to the extent that it either makes themselves, their friends, their family, or all of the above, suffer because of their addiction. But no matter how bad or guilty that person might feel; no matter how much harm their addiction has done to their life, relationships and overworked finger muscles, they just can't stop—they have to keep going—like having a coal engine for a belly and nothing to feed it but peanut shells and diet soda. And although they might want to turn the engine off, they just keep shoveling in more and more of the same damn thing to try and appease that unquenchable flame. Or, as would be more typical of someone suffering from a gaming addiction, they'd keep shoveling in Starcraft, Doritos and Red Bull. But, whatever, you get the idea. The point is that the criteria for addiction isn't the amount of time spent playing a videogame or the amount of cocaine a movie star can do between takes. It's whether or not that behavioral, or, substance addiction persists despite the desire of the addict to get clean and change their life. Therefore, addiction = suffering, not pleasure.

Anyway, people have died because of videogames. I'm not talking about obese guys keeling over playing Dance Dance Revolution or the terminally ill trying to squeeze in one last game of Tetris before they short circuit the MRI, I'm talking about everyday average Joes and Joe-ettes who, for whatever reason, managed to play so much in a relatively short period time, or, become so obsessed with gaming that, they actually freakin' died. WOW… no pun intended. In South Korea in 2005, Lee Seung Seop played Starcraft for almost 50 continuous hours and, consequently, suffered a heart attack attributed to exhaustion. In China, a thirteen year old, Xiao Yi, threw himself off a building, leaving notes behind that addressed his addiction and declared his hope to be reunited with cyber-players in heaven after his death. Back in the United States, Daniel Petric shot his parents (killing his mother) for taking away his copy of Halo 3. And, as if all that isn't fucked up enough, a young Jacksonville

mother pleaded guilty to second degree murder for shaking her infant son to death when he interrupted her game of Farmville.

Now while cases like these are rare, videogame addiction is becoming more and more common all over the globe. In China and South Korea videogame and internet addiction have both been labeled growing problems. In 2005 the deputy government chief information officer of Hong Kong warned that 40% of the city's youth were addicts. In Korea 30% of those under 18 were identified as at risk of addiction. It has even been reported that 13.7% of Chinese adolescents meet the diagnostic criteria for internet addiction. Now, while said criteria is still in development, it, nevertheless, remains a large and concerning figure to have attributed to so many people. Initially China reacted by limiting computer game play to three hours a day, but has since relaxed and changed its policies to try and encourage gamers under the age of 18 to get off their butts and do something active.

Government intervention and concerned labeling aside, the question remains: why exactly are people getting so hooked on videogames? As far as I've been able to gather, you can't smoke videogames to feel all giggly and euphoric or use any cords to feed them directly into your bloodstream. Instead, all a player can do with a videogame is play, become immersed, and then keep playing. But, not unlike the euphoric, or, adrenaline-filled, rushes of many other well-known addictions, sometimes playing videogames can feel so good that it's hard to stop. It empowers people; it liberates them. It gives them control, instant gratification and aggrandizes their egos when the game they're playing puts them at the center of a world, makes them the hero that everyone's counting on and lets them experience and do things in game that they never could in life. And, while not all games are the same and not all players look for the same things out of playing, the high of immersion is consistently there—that's what's so addictive.

Now while there are a whole whack of games out there that people spend countless hours playing, and may or may not be addicted to, there's one game in particular that has redefined and epitomized contemporary gaming addiction. There's one game in particular that appeals to so many people that millions are online playing it all the time. There's one game that's so expansive and deep that some of its inhabitants spend more of their time living in its artificial world than in their own. And, while in its pure form, one could easily confuse this game for a glimpse down the rabbit hole, or a trip up to heaven, it is, unfortunately, only a convincing mirage. However, those snared by curiosity, reviews and screenshots are often too blinded by the alluring promise of in-game spectacle and grandeur to keep their senses with them

and their fingers off their keyboards. They plug in and foolishly reassure themselves that they will be strong enough to resist the game's influence. But it's already too late. They've tempted fate. They've tickled destiny. And they've awoken within themselves a hungry fetal monster with an insatiable lust for gold, equipment and XP. Because not unlike the tempting call of the Sirens to Odysseus and his men, this game has been successfully wooing gamers and commandeering their time for years. Temptation, thy name is WOW.

Unlike its stiffest competition, crack cocaine, fortunately for the next generation of gamers, babies can't be born addicted to playing World of Warcraft. Launched on November 23 2004 and based on an already wildly popular game franchise released by Blizzard ten years prior, WOW took the reigns of said franchise's real-time strategy origins and headed in a completely different direction. WOW was designed to be the king of a new realm of 'unending', expansive and deeply social gaming that had already begun sweeping the globe— the Massively Multiplayer Online Game. And while MMOs like Everquest had already taken the world by storm and established a template for future games in the genre, WOW didn't just raise the bar that had been set for it, it took it away from everyone else's reach and framed it in Blizzard's personal trophy case. And with dozens of awards to its name and millions upon millions of gamers logging on at all hours of the day, Blizzard managed to establish itself, and the world it created, as a few of the captivating gems that videogames had to offer. The only problem was the addictive properties of those gems that happened to be similar to that of a well-known narcotic, crack cocaine—earning the game one of its many affectionately given nicknames: 'World of Warcrack'.

There isn't a line you cross to become addicted to playing videogames; there's a slippery slope you slide down—increasing playing time everyday, going out less and less and minimizing the importance of other things until, eventually, the life you've chosen is the one inside of the game. But fortunately for those who have become glued to their keyboards and locked inside of games, there's still hope of returning to the real world. In China some facilities specialize in videogame and internet addiction, treating mostly youths between the ages of 12-24 who suffer from anxiety, depression, and a lack of sleep due to their long hours of online play. However, the recovery rate of participants in these facilities is questionable given some of the harsh and unyielding methods applied. Led by Toa Ran, a military researcher who built his career by treating drug addicts, these facilities use techniques like: counseling, military discipline, drugs, hypnosis and mild electrical shocks to try and treat their patients. However, due to the extreme nature of this treatment, it can be argued

that these facilities come closer to incarcerating their clientele than effectively treating them. One such example of someone's experience while in videogame rehab is that of Sun Jiting who: "spends his days locked behind metal bars in this military-run installation, put there by his parents. The 17-year-old high school student is not allowed to communicate with friends back home, and his only companions are psychologists, nurses and other patients. Each morning at 6:30, he is jolted awake by a soldier in fatigues shouting, "This is for your own good!" ("In China," 2007)

Not surprisingly, back in the West we have very different approaches for treating videogame addiction. One option is Online gamers Anonymous which was founded by Elizabeth Woolley after her son committed suicide while playing Everquest. It's based on the twelve-step program for recovery and receives roughly 500 internet and phone inquiries everyday. Other AA-like sessions are also frequently held by a number of organizations to assist couples who are afflicted with videogame addiction and whose very marriages and livelihoods have been put at risk because of their excessive play. This coupled with the support of friends and family can serve to help some, but without well-established methods of treatment and a firm stance on the criteria for internet and videogame addiction, chances are that many more people will become addicted to videogames before the problem is effectively addressed.

While this chapter has focused specifically on addiction thus far, when it comes to videogames, there's a huge gray area in between heavy playtime and actual addiction called hardcore gaming—those people who spend significant amounts of their time and lives playing videogames. Because, as much of a burden as heavy videogame play can pose to the lives of its players, some people see this as a gift, not a curse. The argument I'm referring to is, of course, pro-hardcore-gaming: So what? Who cares if I'm constantly playing videogames as long as I'm happy doing it and not hurting anyone? Who cares how I choose to spend my life and how much of my time is spent online? And, most of all, since people have been growing more and more integrated with virtual worlds and interactive media, isn't this type of behavior just an inevitable byproduct of our cultural migration? Aren't we all becoming addicted to making life easier, more carefree and technologically integrated? Etc, Etc, Sort of a… 'viva-la-no-resist-games!' defiant war-cry.

Anyway, these are important questions to ask and consider because they offer, not only an insight into gamers themselves, but, also, the cultural values of the real-world societies they live in. In South Korea professional gamers are treated like pro athletes and people everywhere are encouraged to play by the example of fame and attention that they

receive. Some pro-gamers who are still in high school, affectionately have their poor grades ignored for the sake of not interfering with their ten or more hours of daily gaming time. WOW players often find themselves so intimately connected to their online community that the very idea of calling gaming an addiction can be taken as an insult to the time that they've invested and the friends that they've made by doing so. And in countless other ways, many gamers have come to identify so much more with cyber culture than they have with the real world, that the idea of staying only in reality can be a crushing blow to, not only that individual's hobby, but also to the person who depended on that hobby to identify themselves as the individual that they are. Videogames are more than just addictive in the conventional ways, they're also a lifestyle choice. And when someone becomes immersed in that lifestyle choice, the parameters of acceptable playtime disappears and are replaced by encouragement and the feeling of being at home. Their new virtual lives assimilate their real ones and who they were to the outside world can disappear into the game. To a lot of people that's very, very scary stuff! However, as long as that player isn't suffering because of their playtime and can continue to pay their bills, feed themselves, be responsible on this earth, and function like a full grown adult, it's unfair to label them as an addict. Sometimes people choose to live in videogames for good reasons and that's a choice they have a right to make. It's ok to be a hardcore gamer and it's also ok to be worried about people who play excessively. But remember, addiction is something else entirely and confusing one for the other is a conventional misconception that many hardcore gamers and cyber culture enthusiasts have come to resent. Personally, as I've grown older and older playing videogames, I've come to see the need for seeing all sides. Sometimes it's important to play all the time. Other times I really need to get away. Like I said… it's a slippery slope. And this is a concept that we must continuously return to.

Currently neither videogame, nor internet addiction, is part of the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM), but, fortunately, their inclusion has been proposed for the fifth edition. The following is the proposal for the criteria of internet addiction that could just as easily be applied to videogame addiction:

1. He or she is preoccupied with the Internet/gaming (thinks about previous online activity or is anticipating the next online session).

2. He or she needs to spend longer and longer periods of time online in order to feel satisfied.

3. He or she has made unsuccessful efforts to control, cut back, or stop Internet/gaming use.

4. He or she is restless, moody, depressed, or irritable when attempting to cut down or stop Internet/gaming use.

5. He or she repeatedly stays online longer than he or she originally intended.

Additionally, the player must meet at least one of the following criteria:

1. He or she has jeopardized or risked the loss of a significant relationship, job, educational or career opportunity because of Internet/gaming use.

2. He or she has lied to family members, a therapist, or others to conceal the extent of involvement with the Internet/gaming.

3. He or she uses the Internet/gaming as a way of escaping from problems or of relieving an unpleasant mood (such as feelings of helplessness, guilt, anxiety, or depression).

As is frequently the case with the abuse of narcotics or indulging in any behavioral addiction, those who are classified as heavy gamers (whether they're addicted or not) scored significantly lower on measures of physical functioning, mental health, vitality, general health and social functioning. They also failed to meet the national average for physical exercise and many reported experiencing some sleep-related problems. And while this is concerning to both parents and gamers, a recent study on gamers in the military conducted by the US surgeon General's office found that heavy gamers (6 hours of daily play) were low on psychological resilience, and yet, conversely, so too were low-end gamers. Interestingly enough, it was the moderate gamers (3 to 4 hours of daily play) who scored the highest on resilience. And while it's too simplistic to reduce addiction, and the consequences of play, to the number of hours that someone spends playing, it, nevertheless, remains a part of the puzzle. The point is, there's no magic formula for healthy or unhealthy gaming. And as more and more people find themselves struggling to resist, escape,

or find a balance of daily videogame play, no doubt more and more recipes for recovery and contentions of consequence will effervesce out of the abyss of all the stuff we still don't understand about the direction videogames are taking us!

Believe me when I say the future is changing HUGELY because of this! It's not even something we'll necessarily explicitly see or recognize on the horizon. It's rising up right from under our noses—controllers in hand as if fusing with our own hands! That's… well… that should give you pause for some SERIOUS reflection (no, seriously… take a moment to reflect… this affects **everything**!) What if in the future of our digital integration with reality, addiction isn't even a word that can be applied anymore? What if the world itself becomes so fundamentally integrated with how we experience videogames that we allow ourselves to lose track of who we are as a species? Seriously! That's a VERY real possibility moving into the next twenty or thirty years. Addiction has the potential to become a very, very serious problem when facing the expanding entity of technology. Reality itself could be replaced! That's scary!!! That's **beyond** addiction! That's simulation-assimilation!!!

When you go over the various things that people have been known to become addicted to it's easy to see that they all offer some kind of reward or instant gratification for their use. And while that reward can be lost with excessive use, so too can addiction be quelled with tempered reward. Playing videogames requires as much self-restraint as indulging in life itself. Because as sure as cookies alcohol and sex can be enjoyable in moderation, so too can videogames, internet use and MMOs. It's up to the person playing to exhibit that they can play responsibly—and part of that means playing in **moderation**. After all, not all people who play videogames become addicted to them—estimates of players who meet the proposed DSM criteria for addiction to videogames ranges from between 10-15%. And, to juxtapose that figure with a more well-known addiction, approximately 80% of people who try cigarettes end up becoming addicted. So, to sum it up, and to reiterate once more, when you approach the idea of a behavioral addiction one can't judge simply by observing the behavior—it's how that behavior affects the lives of those who play. To this day I'm still a hardcore gamer, and, to this day, my mother still has her trepidations about that fact. I frequently tell her not to worry and, with an exasperated shrug, roll my eyes at her pestering motherly affection. But, the truth is, despite my casual regard for her concerns, I remain aware of the fact that someday she could be right. Because, as Samuel Johnson once said "The chains of habit are generally too small to be felt until they are too strong to be broken."

CHAPTER 4

VIOLENCE: Monkey See, Monkey… do?

"I need to watch things die from a good safe distance.
Vicariously I, live while the whole world dies. You all feel the same so,
why can't we just admit it?"—lyrics from the song Vicarious by Tool.

"Boom! Headshot!"—Conventional, celebratory, declaration
of blowing someone's head off in a game.

On April 16th 2007 Seung-Hui Cho, a senior English major at Virginia Tech, shot and killed 32 people and wounded many more. Cho had been diagnosed with a severe anxiety disorder and had been previously deemed mentally ill by a Virginia special justice who then ordered him to undergo treatment. As news of the shooting spread, people watched horrifying details and graphic images unfold, expressing sorrow and grief for the tragic loss of life and the senseless brutality of a student turned gunman. The media was on-site almost immediately—covering the facts and spreading speculation about what had motivated Cho to behave so erratically. One of the many contentions of those reporting that day was that Cho's behavior was motivated by a culture saturated in violence. Some even went so far as to make the claim that Cho's actions were not only an unfortunate byproduct of violence in society but, more specifically, of playing violent videogames that, in the past few decades, had run rampant in popular culture and dominated people's spare time—that's right, they made the claim that playing violent videogames had led Cho to murder his peers. And, moreover, they did so without any evidence. In the months that followed, an in-depth investigation into Cho and the shooting took place. And when the findings were released, and the details came to light, the evidence that the media had been missing when they first made their dire and erroneous claims was now there for everyone to see: Cho had, in fact, played videogames as a child. However, despite the unprofessional assumptions of some reporters that day, the only videogame he had been known to play was Sonic the Hedgehog—a children's game no more violent than

the average G-rated movie. Cho didn't play violent videogames. And, in retrospect, one can't help but wonder what the media's motivations were when they behaved so irresponsibly and took aim at violence in the gaming industry.

In the game Call of Duty: Modern Warfare 2, there's a mission in the single-player campaign that can be skipped at the player's choosing. If, however, they feel inclined to play through it, a couple of content-warning messages pop up at the start of a new campaign. Now, in the history of my extensive time playing videogames, I have <u>never</u> witnessed content-warnings outside of the box, or the load screen that follows inserting the game. <u>NEVER</u>!!! Despite the fact that I had played videogames where I could torture and murder anyone I wanted; despite the fact that I'd played games where I could burn entire families alive, use an exploding cat as a projectile; destroy entire cities; and harvest creepy little girl's innards for perk-filled-slugs, warning screens simply hadn't been done in the videogames I played. But for whatever reason, this game had a level that required warnings for not only what the player was about to see, but, also, what they were about to do. The level was called 'No Russian' and the mission wasn't far off from perpetrating a school shooting.

Armed with a light machine gun and enough rounds to slaughter an entire airport full of innocent civilians, and heroic police officers attempting to stop the bloodshed, I did just that. Walking beside my fellow terrorists, I killed them all. I mowed down the crowds, fleeing through the halls of the fabricated world, and experienced the carnage of taking innocent life, pausing to observe the horrified expression of a man pulling his body along the ground, through smears of blood, to try and escape my wrath. I didn't spare him; I didn't spare anyone. Hysterical screams echoed down the hallways but my finger rarely left the trigger. Because, in the game, it was my mission to do what I was doing. In the game, I was someone else. And, within the context of the greater storyline of Modern Warfare 2, the level 'No Russian' was a brilliant and gut-wrenching requirement to ask of the player—to justify the games later descent into all-consuming war and destruction—and, not only that, to make it feel real. No PG rating; no bullshit bullets-without-blood so that younger and younger kids could experience dumbed-down versions of war—this was real war, not make believe. And it was strictly intended for adults. I respected that and I immediately recognized the storytelling merit of doing something in a virtual world that sickened who I was in reality.

Now it's important to note that since playing the level 'No Russian' I haven't begun planning a mass murder or a mini-holocaust to get my jollies off. I haven't purchased a gun the size of a car or lost my mind and, for that matter, neither have the millions of other people who

did the same things I did when they played through the single-player campaign of Modern Warfare 2. However, mysteriously, whenever shooting rampages do happen in the real world, they are almost always accompanied by speculation that people's constant exposure to violent movies, television and videogames will inevitably lead them to become more violent themselves. And, moreover, that violent videogames exclusively posses some sort of remarkable power to corrupt the hearts and minds of those who play them. To that, and to those who make that argument, my rebuttal is thus: BULLSHIT!

Ok, ok, ok… that was a little too simplistic and, maybe even borderline stupid. I suppose I do need to elaborate on the relationship between aggression, violence and videogames with a little more research and statistics, rather than just going from the gut and screaming "bullshit" at bullshit. Fortunately, as always, throughout her research and teachings my mother has compiled some case studies and pertinent data for this chapter that will go over the conventional misconceptions about the relationship between exposure to violence in media and the tendencies of those who are repeatedly exposed to it to becoming violent themselves.

First of all, the idea of media violence and its effects on aggression is nothing new. The old saying of "monkey see, monkey do" essentially paraphrases the contention that people's exposure to violence, among other things, can have a strong correlation with how likely they are to model it, or, 'mimic' the behaviors that they observe. A famous study by Albert Bandura involving a few adults, children, and an inflatable clown named Bobo served to illustrate this modeling effect. Basically, the experiment went like this: the children watched as the adults beat the shit out of Bobo—punching, kicking, thrashing and even including all kinds of crazy Bruce Lee sound effects while they did it. Then, after the adults left the room, the same kids who had observed them, were given the opportunity to interact with Bobo themselves. These kids not only interacted aggressively with Bobo, they also included some of the same sound effects that the adults had made—directly mimicking the violent behavior that they had just observed. This study led to a long series of research studies on the modeling effects of viewing violence with a special emphasis placed on those who had witnessed domestic abuse and family violence. Additionally, another side of the research that received ample attention was whether or not viewing violence in the media, or, playing it firsthand in videogames, could somehow produce a similar modeling effect.

Craig Anderson and Brad Bushman, of the Department of Psychology at Iowa State University, concluded in 2001, from a series of studies coming out of their lab, that playing violent videogames would not

only increase aggressive behavior in the short term (e.g., the aggression demonstrated in the lab) but, it could also increase aggressive behavior in the long-term as well (e.g., delinquency). More specifically, they concluded that:

> Research on exposure to TV and movie violence suggests that playing violent videogames will increase aggressive behaviour. A meta-analytic review of the video game research literature reveals that violent videogames increase aggressive behaviour in children and young adults. Experimental and non-experimental studies with males and females in laboratory and field settings support this conclusion. Analyses also reveal that exposure to violent video games increases physiological arousal and aggression-related thoughts and feelings. Playing violent video games also decreases pro-social behaviour (p. 353).

Woah, woah, woah… ok… so… yeah… fine… I guess if you want to put it like <u>that</u> then yeah, playing violent videogames won't necessarily make someone more violent, but they sure as hell can make people more aggressive. And, as anyone who's ever tried to play a first person shooter's single-player campaign on the highest difficulty, or, a heated multiplayer match knows: sometimes playing videogames can be so frustrating that you literally want to kill shit. However, once again, that doesn't necessarily mean that those violent thoughts and aggressive tendencies will lead to committing acts of violence. Thus, the distinction between aggression and violence becomes the line that someone has to cross to go from acting like an asshole to being a real-life criminal. But, despite the strong correlation between playing violent videogames and, consequently, becoming more aggressive, players don't typically cross that line or fully model or mimic the behaviors that they observe in a game for a prolonged period of time. Instead, they just get temporarily upset or frustrated about them. However, it's when you combine these augmented negative sensations, like anger and frustration, with either a genetic predisposition or sociological exposure to violence and aggression that things can take a turn for the worst. Here are a few non-scientific equations to try and better represent what I'm talking about:

Violent videogames + violent douchebags = high probability of increased violence

Violent videogames + kittens, sugar, spice and everything nice = low probability of increased violence

Violent videogames + average individual = occasional temporary increased aggression (not necessarily violence)

Violent videogames + mainstream media's depiction thereof = Presumptuous erroneous shit storm.

Now that I've given you a contextualization for how playing violent videogames can sometimes increase aggression, I'll move on to how this simple controversy has evolved into major misconceptions and oversimplifications—(not unlike my non-scientific formula's above). Those of us who were alive to witness the horror of the Columbine shootings no doubt remember the extent to which the mainstream media placed its emphasis on the fact that the two shooters had been known to play a popular violent first person shooter—Doom. An informed critique of the overall issue was later offered by Christopher Ferguson in the *Review of General Psychology* in 2010. Ferguson pointed to the moral panic wheel to account for the drastic overstatements made by the media and the degree to which the general public felt inclined to buy into their hype. He pointed out that: research that ignites fear is promoted both through the media and by politicians. And, when said research reaches the ears of the general public, it promotes not only fear but additional inquiry and research as well. However, when that information is gathered and released it is often neglected or ignored unless it directly supports the findings and policies that have already been proposed by politicians and spread on their behalf by the media. Unfortunately, this directly contradicts the idea of 'news' and spits in the face of anyone trying to inform themselves by watching it. However, in all fairness, this reaction to a new form of communication isn't just a problem over the airwaves. Instead, it's historically characteristic of the fear that people have felt anytime there's been a major paradigm shift in the media.

Plato wanted to ban written poetry and irrationally tried to rationalize his argument by saying it would corrupt even the best young men's minds. In France the Marquis De Sade was imprisoned, among other things, for pushing the envelope of acceptable publications with his graphic and violent stories. The invention of radio was met with fear and skepticism of the influence it would have on, not only people's ability to rationalize, but also, their exposure to a broader range of ideas and

unprincipled political figures. Rock and roll was deemed the devil's music, comic books were borderline contraband unless they strictly adhered to 'morally acceptable content', and, for a while, there was even a mandate in Hollywood requiring all horror movies to kill off their monsters by the end of the film. Throughout history people, publications, politicians and propaganda have pumped pop-culture full of fear and left generations both skeptical and ignorant about the true influences of various kinds of new media. So, within a historical context, the degree to which videogames have been stigmatized and misunderstood is only a fitting tribute to their rise as yet another significant form of new media.

Despite the fact that people have been spazzing out over this kind of thing for centuries, it doesn't make it any less important to understand exactly what type of influence violent videogames have. Because although the research hasn't proven the causality of playing violent videogames and, consequently, becoming violent, those who experience enhanced aggression as a result of playing can still see this kind of behavior as quite concerning to both themselves and the people in their lives. Parents who have to listen to their kids scream at the screen, or toss their controllers out of frustration, are no doubt more likely to worry about the effects of playing videogames than parents whose kids play G-rated, low-stress alternatives. And, personally, I can relate. When I was younger (and even sometimes today), I used to flip out over the games I was playing and throw temper tantrums as bad as a toddler being tasered. However, it wasn't the games themselves that made me act out so much as it was my intense investment in doing well at them. Because, as mad as screwing up in a videogame could make me, I'd also find myself getting just as upset if I made a mistake playing a competitive sport, game or gambling. It was the rush that made me boil over and, unfortunately, trying to deal with that rush sometimes aggravated not only me, but the people around me too. Of course, increased aggression isn't limited to violent videogame play, or players, and can even be encouraged in other ways like: various sporting events, business acquisitions, and, obscure sexual fetishes. Although, it's not likely that parents would be any happier listening to their kid's taking out their aggression in those ways either.

Anyway, getting back to the research side of things, Ferguson listed a few of his methodological and theoretical problems after concluding his review on the play of violent videogames, which, essentially, served to illuminate the intricate complexities of: who people are, what kind of environments they're in, and how those factors contribute to the effects of playing violent videogames. He also cites various other components at play in the emergence of players behavioral patterns. And, interestingly, when those alternative factors are accounted

for (such as gender, family violence, genetics, etc.) then the causation between playing violent videogames and committing acts of violence is reduced to less than 2%. Moreover, a statistic published by the US government stated that in the years of significant videogame console sale increases (1996-2006) violent crimes significantly decreased. Now, I'm not saying that crime decreased because criminals were too hooked playing Grand Theft Auto, or other videogames, to leave their rooms and break into people's homes, but the drop in crime, during the boom in console sales, does overtly contradict the alleged premise that playing violent videogames incites violence. However, if you take those same years and change the focus from videogames to the state of the economy, one can't help but realize a much MUCH stronger correlation between violence and the quality of people's lives than there is with violence and videogame play.

Given the complexity of this issue relative to the simplicity of the sound bites presented by politicians and the media, one can't help but second guess the old cliché of "monkey see, monkey do" and ask "What kind of monkey?", "what kind of environment are they in?", and, "What kind of media so grossly misinformed monkeys about what other monkeys do?" Truth is, videogames are just a new form of interactive media that address the same timeless, and sometimes violent themes, as movies, books, television, radio, comics, theater and campfire stories. So unless people are willing to swear off violence in all walks of life, and fictional representations thereof, then they probably shouldn't be so quick to judge videogames and those who play them. After all, it's important to try and remember that new media isn't necessarily something to be afraid of. It's important to understand and study the consequences and effects of playing videogames rather than simply making assumptions about them. And, most of all, it's important to remember that violence aside, videogames are just another way to play—they're supposed to be fun— and if they weren't, and, if they really did make people more violent, then they wouldn't be any fun, and, people who weren't already violently inclined, wouldn't want to play them.

CHAPTER 5

PERCEPTION AND THOUGHT: Being is Believing

"Our entire universe is made up of consciousness, we never really experience the universe directly we just experience our consciousness of the universe, our perception of it"… "our only universe is perception."—Alan Moore

"Did you konw taht our birans are albe to prcieve wrods out of jmulbed ltetres as lnog as the frist and lsat lttrees of tsohe wrods rmeian the smae? Naet, huh?"—An example of automated perception that you just automatically perceived.

The experience of 'reality' is subjective. Truth, is not. Because of this, the degree to which our perception aligns with truth is of the utmost significance in understanding… well… everything! And when it comes to 'reality' the human species is tragically caught between our ability to perceive truth amidst our subjective views of 'reality.' To someone who suffers from schizophrenia, 'reality' can seem imposing and frightening. To a young child it can appear wondrous and surreal. And to, supposedly normal adults, it can seem monotonous and mundane. However, there are steps around 'reality' that we all frequently take without losing our composure or confusing the 'real' for the unreal. We all dream—whether we remember those dreams fondly or forget them instantly. We all suspend in reverie from time to time—imagining better lives or different circumstances. Most people tell and listen to stories—watching movies and reading books. Many play traditional games or sports, and, as time goes by, many more will come to play videogames—adding to the numerous ways in which people choose to escape from 'reality.' However, as subjective as 'reality' can be for different individuals at different stages in their lives, so too can repeated exposure to virtual or imagined worlds blur the lines between what's 'real' and what's not. And while making this distinction may seem as fundamental to living life as breathing actual air or eating tangible food, the truth is, sometimes perception has more to do with exposure than it has to do with 'reality.' And in a world saturated in

movies, television, videogames and gadgets, what we're being exposed to is growing increasingly unreal.

When I was younger I would frequently go through periods of utter fixation on one specific videogame and then play it for hours on end. And, while at the time I happened to be a relatively well-adjusted individual, I also happened to be playing a huge amount of one particular game: Splinter Cell, a game in which the player assumes the role of a black-ops agent who has to ninja his way in and out of hostile territory without being detected—a really great game, and, one that I managed to become really great at by playing so damn much of it. Anyway, despite the fact I was playing all the time, I was still human and, thus, I had to occasionally feed myself in order to survive. So, from time to time I would grudgingly stand up, stop playing the game, and leave the house. However, when I did so, I found that, even when I was away from the controller, I hadn't completely stopped playing the game. Because when I dropped by the bank to get some money that day, the first thing I did when I walked in the building was count the number of security cameras and then briefly run the scenario through my head of how I could kill everyone in the room without the alarm going off—the exact behavior of my assumed identity inside of the game. Of course, I didn't actually do any of these things that day, and, moreover, I was very much aware of how peculiar my thought process was. But, nevertheless, for that split second, the game Splinter Cell, had splintered a part of me—blurring my perception between what I'd been playing earlier and how I was thinking then.

Perception is the automated, often unconscious processing of sensory information—the way our brains sift through, organize and label what our senses are experiencing. And, while immensely complicated in its formation, our perception is essentially arrived upon without our even being consciously aware of it. Sure, someone might actively be thinking about something that they're seeing or hearing, but by the time those thoughts have entered that person's mind, their brain has already told them what they're perceiving. Thus, the squishy pink and grey masses that live inside our skulls frequently take the reigns away from our grandiose illusion of self-control and outright tell us what to believe—they tell us what we're seeing, what we're hearing, whether or not we think it's 'real' and, most importantly, where that stimuli fits in in a world of constant stimulation. And while people are usually consciously aware of the fact that they're perceiving, when it comes to the automated processing of mindless repetitive tasks, or very familiar routines, remarkably, we're able to completely tune out and think about other things. And because our brains are built to perceive without our active participation, people can

step away from their bodies steering wheels without ever losing control. And it's similar kinds of focused or practiced distraction, which allow us to become so immersed in books, movies and games. Because while our brains have comfortably reassured us of where we are, they also give us a gateway to believing that we're somewhere else.

When it comes to the sensory modalities of the human species we're primarily dependent on audio and visual stimuli. But things like taste, smell, touch and whatever 'sixth senses' we may, or may not, possess as people also play a big part in our unconscious construction of perception. However, since videogames haven't yet introduced scratch-and-smell-controllers or lollipop headsets, gamers remain primarily dependent on sight and sound to navigate and perceive the virtual worlds they inhabit. Of course, these sights and sounds are custom tailored to create remarkably realistic in-game experiences that harness the emotional subtleties of light, shadow, music, noise and dissonance. But, since what people see and hear remains only a fraction of their overall senses, the current depth of sensory videogame immersion is such that even when people are completely focused on the game, they remain tethered to 'reality' with some senses, while they're blissfully misled by others. And, really, that kind of sensory splintering is a big part of where the grey zones between 'reality' and fantasy start to appear. Because while people's perception of 'reality' is formed by sensory stimuli, no longer are all sensory stimuli actually 'real'. And, since people are as hardwired to believe in 'reality' as they are likely to believe in a believable fantasy, constantly jumping back and forth between the two can become quite confusing.

Some of this probably seems a little bizarre, and, while I'm basically saying that 'reality' (not to be confused with objective truth) is largely a matter of interpretation, and it may or may not exist in the way we perceive it at all, the specific point that I'm trying to make here is that, when it comes to our perception of videogames and 'reality,' our sensory systems were practically built to confuse the two. And while there are many factors that contribute to our perception of in-game stimuli, ultimately, all of those factors were deliberately employed by game developers in their attempts to try to make the feeling of play seem more and more 'real.' No doubt we're all familiar with examples of this, but for the most part, when playing videogames, we're not consciously aware of the ways that our perception is being manipulated by intensity (how closely a gun is fired to us), novelty (has a player's avatar ever been at a particular point in a game before?) repetition (if at first you don't succeed, die, die again) contrast (areas of light and dark, quiet and loud) and movement (spotting a threat in the distance). However, it's not just simple

stimulating variables packaged together that creates the most impactful and profoundly immersive experiences. Instead, those are a result of great storytelling, engaging and believable in-game worlds, and, sometimes, even nostalgic trickery.

One time I was playing a game set in war-trodden Manhattan in which I had to run around the city blowing the crap out of aliens. All well and good, everyday-videogame-behavior with one exception: I used to live in New York and I also used to frequent many of the locations that were featured inside of the game. So, needless to say, when I came across those in-game simulations of my 'real'-world home and then saw them torn to shit by alien invaders, I felt a nostalgic pulse of indignation and vindictive rage. There was no way in hell I was going to let those alien scumbags invade the streets I walked to school everyday! They could get their own Starbucks on their own planet! Diiiiieeee bitches!!!!... Anyway, prior to that point, it was common for me to become attached to game franchises like Halo or Final Fantasy and, consequently, identify with the in-game nostalgia and sentimental attachments that players can develop for virtual worlds, characters and lore. But what was so striking about a game taking a version of my 'real'-life home and letting me play in it, was how remarkably 'real' and emotionally engaging that experience was. And, if you take that same example of cross-'reality' play and apply it to soldiers who have fought in 'real'-life wars, who then play war games, you get an idea of how immensely powerful simulated experiences can be, especially as they move closer and closer to 'reality.'

While our perception of 'reality' and videogames isn't perfect and sometimes it can be slightly blurred, when it comes to our perception in general, it turns out it can be completely duped. The assumptions our brains frequently make about what we're seeing and the sensory information that we're processing is such that: what we perceive and what's actually there can be completely different things. And, when it comes to simple or major adjustments to what we're perceiving, such as, moving an object or, changing a color, people can often be looking right at something right before, and after, or, even as it changes, and not even notice. This affect is called *change blindness*, in which an individual's perception omits or fails to recognize the altering of sensory stimuli. And while I could go into great detail about this phenomenon and talk at length about case studies, it's probably best for you to just go online, Google or YouTube 'change blindness' and try out a few of the experiments for yourself. In fact, do it now before you read the sentence after this one... trying to cheat by reading ahead huh? Well too bad! I've moved the sentence revealing the detail I'm keeping from you to the next paragraph!

Some (not all) research suggests that videogame players are better at perceiving change blindness, and, if you're a gamer, you may have either noticed some of, or more of, those changes faster than would people who don't game. And while the jury is still out on whether or not this particular type of perception is effected by gaming, it turns out that videogames alter people's thoughts and perception in ways other than blurring the lines of 'reality.' Gamers have been shown to have superior peripheral vision, problem-solving abilities, attention, hand-eye coordination and reflexes compared to non-gamers. However, once again, this isn't the finding across the board. Because while playing videogames can help to illuminate an individual's perception, not all individuals are so easily or equally improved. A simple analogy to illustrate this fact is that: if you give a highly intelligent person a lot of books to read, they'll likely become smarter and more knowledgeable for it, but if you give the same books to someone of average intelligence, it'll probably improve their minds, but it won't make them highly intelligent—that, like some people's God-given-gaming-skills, is a matter of genetics, development and even a little bit of fate. And as we are collectively marched towards an interconnected civilization, whether virtual, 'real,' or somewhere in between, it's important to remember that games aren't just entertaining us anymore; they're training us. Stop to think about this. Are you consciously aware of how you're being trained? Or… are tiny things unbeknownst to you being slipped in without your perceptual awareness? Hmmm… Important questions to keep in mind!

The superiority in videogame players' attentions was initially identified on an empirical basis by Shawn Green and Daphne Bavelier in 2003. Their findings were then elaborated on by Walter Boot and colleagues at the University of Illinois in 2008 when an experiment was devised that would compare known lifelong gamers to admitted-non-gamers. In this experiment, non-gamers received 21.5 hours of videogame training and their in-game performances were then subsequently compared to those of lifelong gamers to see how the two groups would differ. And, while the non-gamers who received game training did see performance-based improvements like the ability to rotate and interact with objects in-game, they didn't come close to achieving the sorts of skills and abilities that lifelong gamers possessed. And while the study wasn't able to conclude whether or not those differences could be solely attributed to the varying characteristics of people who become lifelong gamers versus those who don't, it was quite clear in its contention that playing videogames, particularly for many hours throughout an individual's lifetime, strongly suggests improved perception and attention.

You know that old saying "practice makes perfect?" It's not true. And, neither is that old saying "perfect practices makes perfect." The truth is, what practice does is make something feel normal and slowly adjust our perception of familiar stimuli. And in order for non-gamers to be able to walk the lines of reality and make investing in virtual worlds and avatars seem normal, it's going to take a lot of practice. And while today's lifelong and hardcore gamers may be experiencing a kind of symbiotic harmony with their avatars, it's the idea of <u>non-gamers</u> achieving the same kind of immersion that's the most promising for, not only the future of videogames, but also, the way that people perceive the world. Because while a game's objectives, controls and inner workings can appear simple and mundane to a familiar gamer, they can also appear frustrating, confusing and impossible to non-gamers. However, the casual gaming revolution has slowly been teaching millions of 'non-gamers' the fundamentals of play and, in doing so, has begun mending the divide between advanced gaming skills and simple playability.

Now, since the world is moving towards an interconnected society (either voluntarily or forced upon us), in which videogames are frequently played by everyone, attention, memory and a variety of other skills will likely vastly improve as a result. However, the greater implication of this isn't just that people will be able to remember where they left their keys faster, or notice more of what's going on in the background of a movie. Instead, the possibilities of the potential improvements in our societies, cultures and even species as a result of playing videogames are so great that they can be hard to grasp or even believe. Because while attention and memory do play a part in the games we play, they play a far greater part in our conscious awareness of, and attention to, who we are, where we are, and, which 'reality' we're in; our attention determines whether or not we're even aware something exists and whether or not we'll remember it later on. And, when it comes to our ability to perceive the very boundaries of 'reality' itself, to align ourselves with objective truth, nothing is more important than an accurately attuned attention. For thousands of years, Eastern religions have emphasized the training of attention to be able to live in the moment and filter out destructive emotions and thoughts. And while the idea of billions of people sitting around the modern world meditating en masse may seem ridiculous, it's important to remember that, for the most part, all meditation is is the training and focusing of attention. And as people practice splintering themselves into different realms of communication by texting, instant messaging, gaming, emailing, etc, etc, etc, so too do they acquire the ability to focus their attention accordingly and divide their conscious selves without losing control. In the future, since meditation is to monks as gaming is to gamers, videogames might just alter our

perception enough for us to become more emotionally balanced, consciously aware and, all in all, just better people because of the games we play. That's the hopeful outlook anyway. I don't know if I really believe that. Because beneath our conscious intention is the will and desire of corporate and government entities to hijack our consciousness and strip us of our ability to discern reality at all! Both of these trajectories are coming into focus just over the horizon. Ultimately, I think it will be what you **know** and how well you are able to perceive **truth** through the veils of subjective 'realities' that will determine our collective fate. That's the key. Not the games we play—how well we wake up from false 'realities!'

CHAPTER 6

SERIOUS GAMES AND GAMIFICATION: Play > Work

"All the world's a stage, and all the men and women merely players."—William Shakespeare

"You can discover more about a person in an hour of play than in a year of conversation."—Plato

"Many young people have developed incredible hand, eye, and brain coordination in playing these games (videogames). The air force believes these kids will be our outstanding pilots should they fly our jets."—Ronald Reagan, speech, Aug. 8, 1983.

Part of being an adult is not being a kid anymore. And part of not being a kid anymore can mean losing cherished privileges and pastimes that aren't generally considered acceptable behavior after a certain age. Because, as an adult, it's not really normal to order something silly off a kids menu or swan dive into a ball pit at Chucky Cheese. It's not mature to laugh at fart jokes or tease a girl you like. And, according to our societal wisdom of what a grown-up should be, it's certainly not fitting for an adult to conduct themselves as frivolously and carefree as children do. After all, adults have responsibilities; they have obligations and ambitions—and, moreover, adults have rigidly defined roles, scripts and limitations that they have learned and acquired over the course of their lifetimes from the judgment of their peers and the ominous expectations of the societies they live in—kind of like being poured into a mold of their parents by everyone else's parents. However, there's one crucial part of being both a kid and an adult that doesn't fit the mold that society has made for us, or leave us no matter what age we reach. It's an inherent part of who we are as people and a huge part of how we're able to cooperate and get along as well as we do. And despite the monumental significance of this characteristic, when it comes to describing a healthy, happy and

productive adult, most people wouldn't even stop to think about how invaluable a contribution the act of play has played.

Play is profoundly important. It has a vital part in, not only our development as children, but in our wellbeing as adults. It has a visceral connection to our happiness and state of mind, and, yet, despite that fact, remains an unsung hero of upbeat dispositions everywhere. Because, while people recognize the importance of play in some respects, there is a prevailing myth, not unlike that of a popular 'rabbit-proof' breakfast cereal, that it's 'just for kids.' However, play isn't just picking up a controller and plugging into a videogame or rolling a pair of dice on a board game. Play is everything from dancing to tickling; it's everything from playing sports to teasing, from practical jokes to building sand castles, manufacturing whoopee cushions to Chinese finger traps and beyond. Play is everywhere around us, and it's because, as a species, regardless of whatever age we happen to be, or, culture we happened to grow up in, we were made to not only play, but to play regularly, and in a wide variety of ways. And, while the inner workings of our minds and the evolutionary origins of play are hugely complex and still largely unknown, the joys of playing, and the desire to play, are as clear as day to all of us. Whether it's in the eyes of an infant playing peek-a-boo with its mother, or in the heart of an office worker counting down the clock until they can escape all work and go play—we all feel the need to let loose, have fun, and just do something for the sake of doing it.

Play has always been at the heart of human interaction and has given people a zestful exuberance for the experience of life. However, on the flip side, if in a person's development they are deprived of play, it can severely affect their mood and emotional wellbeing not only in the short-term, but later on in life as well. An example of how significant play can be to the healthy development of an animal is that of an experiment in which two sample groups of mice were taken at an early point in their development in which they were frequently playing—roughhousing, exploring, and practicing behavior for later on in life. One group of mice was allowed to play and develop normally while the other group had its play habits deliberately suppressed. The result was that when both groups of mice encountered a cat collar doused with cat urine, they would run away and hide, as they were genetically hardwired to do. However, only the group of mice that had been allowed to develop and play normally began to emerge from their hiding places later on—creeping out of safety to explore and satisfy their curiosity as to whether or not the threat was gone. And, as for the group of mice that had had its play habits suppressed, they remained in their hiding places indefinitely and, consequently, died as a result.

Now, while this example does serve to illuminate the importance of play, I'm not giving it to try and suggest that if you don't buy a kid the videogame they're asking for, they're going to fail to develop and die as a result. They may throw a temper tantrum and appear to lose their minds in the short-term, but kids are always doing that! Instead, the point I'm emphasizing is the significance of play in an animal's development. And, when it comes to our species and the ubiquitous intuitive desire of all people to play, whether it's with the world around them, or simply with one another, we find that the act of play is one of the most effective ways to captivate and motivate us throughout our entire lifetimes. So, now that play is finally starting to be taken seriously, in the world of videogame development, which has been conventionally thought of as strictly for entertainment, two ideas called 'gamification' and 'serious games' have started to surface in order to utilize our natural desire to play and develop games or game mechanics that will help with real-life education, work, medical treatment and more. They're ideas that have been given huge attention by some of the world's top corporations and innovators. And while it may seem to some that we're stepping eerily close to plugging into the matrix by immersing our society in videogame-esque reward structures and motivators, ultimately, it's only a fleeting hiccup of concern that won't stand in the way of technocratic assimilation. Gamification and serious games, in de-centralized, open-sourced model's have the potential to be truly revolutionary concepts for making all kinds of things more fun and rewarding to do! The old-world mentalities of where we draw the lines between work and play, both for the young and old, are being disregarded by the potential to harness this innate human desire. Of course, we need to be careful about **who's holding the reigns** of that harness. But the raw concept itself—the idea of using play as a way to pave the way—THAT is profoundly intriguing! And that's what serious games and gamification are all about.

First, lets talk about serious games: A few examples of the improvements that serious games offer their players (depending of course on the game) are: to raise awareness of issues, train motor functions, develop social skills, improve social awareness abilities, develop crisis response skills, human capital and workforce, improve mind and body, business skills, organizational management, creativity and, also, just outright acquiring knowledge. And while this list of effects may seem more reminiscent of going to school than playing videogames, it's important to remember that that's the whole point of serious games— working while playing. It's an exciting idea, and a powerful tool to try and improve the learning process. However, as was the case with the blossoming seed of the videogame industry struggling in its first days of

development, the serious games movement has only just begun to take root and reach for its full potential.

Ever hear of a game called Nanoswarm? Yeah, me neither. But, then again, I'm not a kid, or a kid at risk for diabetes. However, in the future, if I were a kid (fingers crossed for the miracles of spiritual awakening), and I went to see a doctor who identified my health risks, I might receive either a stern warning and a few pie charts about nutrition, or I could be prescribed a videogame that I would have to play in order to learn about a particular disease or affliction, the risks of contracting it, and how to live a healthier, more responsible life. And, while it's not the future yet, Nanoswarm is here now and it happens to be exactly that kind of game. Developed for children at risk for diabetes, which by the way, in North America, is a huge percentage of all children, Nanoswarm teaches kids lessons about healthy eating and lifestyle choices within the framework of an in-body nano-bot invasion that threatens the fate of the world. However, despite this familiar videogame theme and interface, the game is much, much more than just another form of entertainment.

In a Baylor College of Medicine clinical trial, children who played Nanoswarm increased their fruit and vegetable intake by a full serving a day and were more physically active than those visiting traditional health websites for kids. And, if that isn't cool and shocking enough for parents who've had to wrestle with their kids to get them to eat their vegetables, then get a load of this: the beneficial effects of playing the game continued after play had stopped—establishing new healthier lifestyle habits from the lessons the kids learned, almost inadvertently, while playing a videogame. And, even more surprisingly surprising, 80% of the kids who played this game that taught them to eat vegetables, exercise, and be responsible, stated that they actually enjoyed playing it! Wow… if you're a parent, it's ok to cry a few tears of joy right now. Anyway, now that some kids are voluntarily eating their vegetables because they played a particular videogame, we know that either hell has frozen over, or that serious games are on to something big. However, when it comes to the scope of issues that can be addressed and explored by these games, eating your vegetables is small potatoes.

Darfur is a region in Western Sudan that has endured a horrific genocide at the hands of the Sudanese government and the brutal militia it employed, the Janjaweed. Over 400,000 people have been killed in the conflict and more than 2.5 million have been displaced. Everyday, the citizens of Darfur are faced with the threat of having their homes burned down, or being brutally raped, murdered and tortured. And while ample humanitarian aid has been sent and significant attention has been paid from the outside world, getting people to understand the severity of the

situation and the hellacious conditions of everyday life for the citizens of Darfur has remained a challenging and complicated problem. A unique approach that was entered into a Digital Activist competition was that of a narrative-based videogame that would portray the conditions of living in Darfur under constant threat of attack from the Janjaweed. The game, titled, Darfur is Dying, was conceived of by a handful of people who worked closely with humanitarian aid workers with extensive experience in Darfur. And while the game certainly does give its players the foreboding sense of impending doom with every action they take to try and simply exist in a simulated version of Darfur, the argument remains as to whether or not serious games targeted at issues as immensely complex as the conflict in Darfur are helping or hurting those who play them. Because, despite the sense of imminent threat that accompanies the in-game experiences, the game itself lacks a position, or information, on many of the issues that reflect the truth of the situation in Darfur.

Typically, information about Sudan and Darfur are given without historical, political or geographical context for the greater issues at play, or the motivating factors for what has occurred. The game, Darfur is Dying, is no exception to this fact. Because as much as it does help to bring awareness to the issue, it doesn't really help people playing the game to understand the bigger picture of what's really happening and **why**. It doesn't mention the religious aspect of the violence and how political leaders provoked religious divisions for the sake of causing civil unrest. It doesn't mention the impact of the economic and agricultural resources of Sudan, or, for that matter, talk about the vested interests of global superpowers like China and America in the region. However, what the game does do quite effectively is strip away the complexity of what's happened for the sake of creating an emotional connection to a character. And while, after finishing the game, the player may not fully understand the issue, they will, nevertheless, understand the emotional connection they've made to it. And while that feeling of empathy may not solve the problem in Darfur, it remains an invaluable contribution to bringing awareness to an urgent and very complex matter.

Another of the many examples of various uses of serious games is that of helping people to develop crisis response skills. A game called Triage Trainer utilizes a virtual simulation of patients suffering from a variety of injuries or diseases and then scores and instructs the player on the proper methods to go about stabilizing and treating their patients. And, since these virtual simulations of people decay and, without the assisted medical intervention of the player, will eventually die, the game manages to create an emotional pressure that accompanies the information it provides. And while it may not be the same as working

with a flesh-and-blood person, research has shown that training in 3D simulators is as effective as training with artificial physical mannequins, a long-established practice to help people learn and prepare for the real thing.

On the flip side of healing people, serious games have also been used by the United States military to entice new recruits to enlist. In a nutshell, serious games may pose a serious risk for profound indoctrination. America's Army is a free game, available for download online, designed to give civilians insights into soldiering from the barracks to the battlefield. And while the game made a point of sticking to absolute realism, such that if inside of the game your character died, it stayed dead, it, nevertheless, suffered from the same plight of simplicity as Darfur is Dying. Because while it is immensely important to understand and respect the heroism and valor of men and women who fight for their country, it is erroneous to regard the War on Terror as heroic or to be given that impression by a game. Because if, in fact, it was in the United States best interests to produce a game that honestly reflects the reality of their contemporary soldiering and warfare then they would also have included in the game the fact that soldiers fighting in Afghanistan and Iraq are more likely to kill themselves than the general population despite the psychological screening they receive before they're deployed; it could have included that if you sign up, you might be unable to stop playing because of a mandatory stop-loss program; and, it might even have mentioned the shoddy intelligence used to justify recent wars, the countless civilian deaths that have occurred because of them, or the huge body of empirical, corroborated evidence that supports the theory that 9/11 was an inside job. However, not surprisingly, none of these factors factor into the game. And, consequently, as has been the case for many serious games produced by private interests so far, the product tends to reflect the desired propaganda of those who are selling it without necessarily including the parts of reality that might not compel people to buy or play it.

What is now being referred to as 'Serious Games' was once labeled as 'Edutainment' back in the 1980s. These games were largely drill-and-practice based learning with fairly simple game play, but, nevertheless, they were still able to captivate players without having a teacher present. And though, for a while, the field did seem to fade from its initial promise, it reemerged a decade later due to the immense improvements in computing power and, also, thanks to the significant decrease in computer-game-costs relative to large-scale-simulators that people had previously been using for training and educational purposes. Over the past five years, Serious Games have exploded into the market, appealing to everything from government agencies, schools (whether

kindergarten or college) and even fortune 500 companies. Various conferences hosted by academic institutions have sprung up, devoted to the idea of Serious Games and at Michigan State University, there's even a master's degree available in the field. However, despite the meteoric rise of the industry, Ben Sawyer, the founder of Games for Health, recently stated his position that no one has made a lot of money off of serious games yet, and, that most of the development is still under the umbrellas of government funding or corporate interests. And while it may be that serious games will be slow to turn a profit, the responsible and appropriate use of serious games, in many ways, is already paying off. Let me be clear when I say that—I am in no way advocating for the advancement of corporate or government interests. But the interesting thing about how serious games are advancing sheds light on how powerful these tools can be if entrusted in the hands of people working to help other people.

Now that we've gone over some of what serious games are about, let's move on to Gamification: Gamification isn't the same as the application of Serious Games, but it does have a similar idea—motivating people to work, learn and innovate outside of the box. Described as "the application of game mechanics and game-thinking in non-game environments to increase fun and engagement," Gamification is basically just the process of making real life feel as fun, engaging and, especially, as rewarding as playing a videogame. Because as important as graphics, story and gameplay can be, a huge part of what makes videogames as much fun as they are, are the ways in which the player is frequently rewarded for playing: whether it's with valuable in-game items, XP, currency, achievements, un-lockable items, or, maybe just something as simple as a game saying 'good job.' Videogames have mastered not only the rewards they give, but also the frequency with which their given, the rarity/randomness of special rewards, and the tingly feel-good sensation of accomplishment that accompanies them all. And, an unexpected benefit of games tapping into these kinds of calculated reward structures is that videogame developers have greatly reaffirmed our understanding of how we learn, why we learn the ways we do, and, most importantly, the vast improvements to our ability to learn when a sense of play and reward are involved. If this process happens to remind you of Pavlov's dog? Then good boy! ;P

Now, if you're struggling to grasp what the greater implementation of gamification into the world abroad and everyday life might be like, don't worry—there happens to be a videogame you can play to help understand: The Sims was a wildly popular never ending videogame that simulates the experience of everyday life and allows the

player to try and balance their avatars ambitions and happiness. By monitoring progress bars associated with work, play, socializing, eating, sleeping, hygiene and going to the bathroom, players become the guardian angels of their avatars, and, for the most part, do everything they can to try and please them—potentially better, and more attentively, than they might be inclined to do so with themselves in their real lives. However, it isn't the gameplay of the Sims that contextualizes what gamification in the real world would be like. Instead, the tremendous insight that The Sims gives us into the future of what gamification may bring (or force on citizens), are the progress bars and in game mechanics that present the simple everyday parts of life as if they're a game too—monitoring and giving feedback on every detail of how we live. That's right, in the future, people may well end up being like The Sims and gamification may end up offering progress bars, mini-games, XP, and other 'in game' mechanics, all rebuilt for real life.

Wait? What?! Seriously? I'm gonna get some kind of 'progress bar' that measures how close to an orgasm I am during sex, or, how many times I hold the door open for other people? Well, no. But, then again… maybe someday, yes. And that's what's so crazy about the idea of gamification—unlimited potential! Both good AND bad! Because while some things being monitored, documented, and fed into a perpetual system of feedback may discourage or freak the shit out of some individuals, conversely, some people may be inclined to explore the option and customize which parts of their lives are gamified—which parts are private and which parts are public; which parts are competitive and which parts are casual. Some people may want to include their stats online in the same ways that pictures are available on Facebook today. And some may even want to fully integrate their social networking profiles/lives with their gamified stats—creating the next generation of social networking— social gamification.

Think it's ridiculous? Think it's too far fetched to actually happen, or, too invasive to ever be socially widespread, let alone socially acceptable? Maybe, but then again, maybe not. Because, as has been the case with consumer products since the inception of the globalized world, people won't know whether or not they like something until a corporation tries to shove it down their throats, repeatedly for generations! And friends, let me tell you, that day is quickly approaching, hell it's already here! In fact, since I can't come up with any better way to explain the massive potential of gamification (both good AND bad), I think it's probably best to just come up with a few examples of how it may one day change the world. So … that's what I'm gonna do! That's right!!! It's hypothetical paragraphs of the future time!

Ok, so, pretend it's the future. Not the kind of future where everyone's perfect and we all have access to interstellar travel and calorie-free donuts: a realistic future. But, there's a twist—it's a future in which gamification has been fully implemented in cultures around the world and has become as familiar to people living then as advertisements have become to people living now. So! Let's say someone named Bob is eating breakfast. But, it's not just breakfast, it's a rewarding mealtime game in Bob's day that helps him stay health-conscious and makes him feel good for doing it. Because, in hypothetical-paragraphs-of-the-future-land, every meal both measures Bob's nutritional intake, and gives him progress bars, or points, to track how well he's been eating. And, since Bob has been particularly good with his diet lately, he may even be rewarded with bonus points for purchasing nutritious or locally produced food. And, since a local community-based subsidy has been set up to give people who buy locally and eat responsibly extra points that can then be spent on buying more healthy local food, it gives Bob and everybody else an incentive to be healthier and even rewards them for doing so—just like in a game.

Now, let's fast forward to the later part of Bob's day in hypothetical paragraphs-of-the-future-time. Let's say he had more energy because of his nutritious breakfast and decided not to drive to work. Instead, Bob is going to ride a bike. And, fortunately, since another subsidy has been set up for people who save gas and live green, Bob is going to receive even more bonus points that he can then spend on whatever he wants! Ok, ok, ok, hold on a second… this future is sounding a little too perfect—governments aren't innovators when it comes to taking care of people, and more often than not, they have to be pestered or kicked in the ass to get out of the way so that problems can be fixed by people working to help one another outside of the restraints of the government! So, let's try to keep in mind that gamification likely won't just be arrived upon by consumer consensus or government oversight, but, rather, by corporate competition and subversive private interests. Gamification isn't just something that can be used to help people enjoy things more. It can also be used as a tool to slowly condition people into only behaving a certain way! That's the ringing bell of Pavlov's dog. That's an indescribably important aspect to bear in mind! Because later that day, when Bob gets to work, he finds that he's only one more can of soda away from completing a 'soda-quest' in which he had to try every different flavor of soda a certain company produced in less than a week's time. And, while Bob won't be receiving any bonus points from his local community for drinking soda, he will be getting similar rewards and alternate game structures from competing private interests—vying for his attention and which games he'll choose to play as he goes about exploring

the perk-filled potential of a gamified society. See how promising AND scary something like this can be?

Alright, now that I've given you a few examples of gamification in the hypothetical-paragraphs-of-the future, you're gonna need to return to the present day where, unfortunately, you don't get many cool bonus points or rewards for living a responsible life other than just 'living longer' and 'feeling better.' But who cares about that?! I want free stuff now! ;P Just kidding! I don't care about free stuff. I care about freedom. And that's more important! So when I look at the idea of gamification I pause and reflect… Yes, there are prototype systems that have already been incorporated into things like collecting punch cards to earn a free sandwich, or collecting Monopoly stickers from McDonald's to try and win prizes. But all of these precursors in the real world to a truly gamified society in the future, still pale in comparison to the de-centralized 'cohesion' or ominous assimilation that gamification may well bring.

It would be wonderful to think that we could somehow award points and positive feedback simply for living life. Of course I want points for brushing my teeth with a particular brand of locally manufactured toothpaste so I can get a discount the next time I buy it from the people I love! I want to be able to log on to whatever freedom oriented social media platform replaces Facebook and see which artistic, cooperative, innovative and mind-blowing real games my friends are playing and then try them out myself! I want to figure out the most effective ways to amass 'XP' and then be the best guardian angel to myself that I can be, while basking in the simple everyday rewards of my new gamified life! But at the same time… I need to be realistic about how underhanded, subversive behavior adjustments really work. I need to take very seriously the idea that someone, somewhere may actually want the games I play to become more important to me than the world we live in. Gamification and serious games have the potential to do that. The Sims made us realize the delicate balancing act of catering to a pampered middle-class suburbanite, in the same way that gamification will enlighten every choice we make with the prospect of how much we monitor our own behavior. Kind of like Capitalism 2.0—it's not just about buying and selling anymore, it's about playing and rewarding. I'm not saying this is a good thing. Let me be clear—this is power. The power to teach or the power to control. The power to indoctrinate or the power to liberate. The crucial difference between the two is what we understand and how freely we allow these concepts to flow.

William Gibson once said that, "The future is already here—it's just not evenly distributed." The same happens to be true for the future of serious games and gamification. Because, while serious games are starting

to get serious attention, and ample distribution, they have yet to top their bestselling strictly-for-entertainment counterparts. And, while Gamification hasn't yet reached the level of immersion or indoctrination as presented in the hypothetical-paragraphs-of-the-future, the potential to begin implementing it via cell phone apps or social networking sites is already everywhere around us. China recently unveiled a social reward system as a way to further pacify the concept of revolution or political discourse. This is done through the process of shaming people. And if you think using shame as a reinforcement tactic is a cruel and unusual way of 'rewarding' a society, you're very, very correct! This stuff is already being slowly rolled out all around us! Remember, it doesn't just magically appear. It slowly rises up from under our noses! What does it smell like to you?

Now… this isn't all to say that the transition from where we are now to how we'll live later will be as simple as playing reality. Instead, there will probably be a great number of failed attempts and piss-poor games that will adversely affect large numbers of people in a way they don't even understand. There will likely be as much propaganda in some of the games of the future as there are in the advertisements and mainstream media of today. However, despite the potential for serious games and gamification to be applied for nothing more than profit and corporate propaganda, the larger benefits that they offer for people and gamers everywhere are simply too great to all go bad. Because what I recognize most of all when I look into the eyes of my fellow man, is our innate desire to play. That's healthy. That's normal. The trick is making sure that the games we play aren't playing us!

CHAPTER 7

VIDEOGAMES AND HEALTH: No pain? Now game

"The devil has put a penalty on all things we enjoy in life. Either we suffer in health or we suffer in soul or we get fat."—Albert Einstein

"Be careful about reading health books. You may die of a misprint."—Mark Twain

This is not a chapter about fat people or computer viruses. And while it may seem as though I've just crossed out all assumed connections between the word 'health' and 'videogames' by saying that, the fact of the matter is, there's a lot more that goes into defining a gamer's well-being than people would typically consider. And, for that matter, there's a lot more that goes into any person's overall health, both in body and mind, than even the average individual would typically consider. Because in a world filled with recommended daily vitamins and minerals, calorie counts, quick-fix-diets, high fructose corn syrup, cartoon characters smiling on Twinkie boxes, rampant pollution, leaking radiation from Fukushima, STDs, the solanum virus and all kinds of other obscure and everyday ways that people can either lose their health, or have their health placed in jeopardy, sometimes leading a healthy responsible lifestyle can seem more reminiscent of being a fish in a barrel while life shoots at you. However, despite the chaotic collision of causality and possibility that we all endure on a daily basis, there are societal conceptions, and misconceptions, about what is considered healthy and what it takes to genuinely be able to live long and prosper.

The stereotypical image of gamers is that they're lazy, blubbery nerds sucking back snacks and energy drinks in dimly-lit basements most likely owned by their parents. And while, in some cases, this may be true, and, playing videogames can often include large amounts of sitting time, it's unfair and inaccurate to point a finger of blame for the growing rate of obesity or subtle changes in the general populace's physical and mental well-being at just one variable. However, despite that fact, everybody

seems to have their own specific idea about what is causing the general public to slowly become less and less healthy regardless of whether or not those ideas are based strictly on facts or are drawn largely from assumptions. Some say portion sizes are to blame while others say it's what we're eating in the first place that's the problem; some say it's a lack of physical activity, bad parenting, bad governing, or simply poor education about what is or is not actually good for us. And while this juggling act of culprits is as endless as it is confusing, one could just as easily blame comfortable chairs for the drop in physical activity or alleged increase in mental decay as one could blame anything else. Because, the truth is, an individual's physical and mental health are a matter of balance and equilibrium between all components of their lives—whether it's their level of stress, sleep, nutrition, happiness, genetics, development, exposure, education, knowledge, physical activity, diet or any of the other countless variables that contribute to our health. However, despite this immensely complex web that makes up our well-being, the question remains as to what specific effects are videogames having on gamers' health and how close are those effects to the stereotypical image of gamers?

Early in videogame research, a classic study titled, "Not So Doomed: Computer Game Play and Positive Adolescent Development" by Kevin Durki, of the University of Western Australia, and Bonnie Barber, of the University of Arizona, found that there are actually many positive psychological components associated with gaming. In 1988 they sampled 10 school districts in the United States and collected information from 1304 10th graders. They also made a point of controlling for the education of the mother's of the kids they sampled because, like other socioeconomic factors, a mother's education has been shown to drastically alter the well-being and overall performance of their kids. Anyway, various questions were posed to the children who were then divided according to how frequently they played videogames. Through this, four types of psychological information were gathered: adjustment, self-concept, risk behavior, and school records. The studies results were subsequently summarized by stating:

> No evidence was obtained of negative outcomes among game players. On several measures—including family closeness, activity involvement, positive school engagement, positive mental health, substance use, self-concept, friendship network, and disobedience to parents—game players scored more favorably than did peers who never played computer games. It is concluded that computer games can be a positive feature of a healthy adolescence (p. 373).

Similarly, in 2007, Hope Cummings and Elizabeth Vandewater conducted a study examining 534 gamers and then compared them to 957 non-gamers all of whom were between the ages of 10 and 19. The results of this study also showed no differences between the two sample groups when it came to things like: time with parents, time with friends, reading, sports, or active leisure activities. However, in this particular study, the variables that were controlled for extended beyond just a mother's education and included: family income-needs ratio, education level, parents' average number of weekly work hours, child's age, time spent at school/work and even ethnicity. However, the only variable that showed differences between the two groups was that: over the weekends, non-gamers spent more time on homework than gamers did. But, as soon as the work, or school week, rolled back around and the weekend ended, so too did the only difference between the two groups disappear.

Now, to those people in this world, who are still firmly committed to the societal misconceptions about how videogames are allegedly 'only negatively affecting players,' these findings may either seem like an elaborate deception or a firm kick in the nuts. However, despite what people may or may not want to believe about videogames and the anecdotal evidence that has been largely presented by the media/hearsay to justify these alleged 'ubiquitous negative effects on gamers,' it's important to remember that the empirical studies that have been conducted in which a point has been made to carefully control for external variables and, also, to take into account the multitude of other contributing factors into people's health, have proven that, ultimately, videogames aren't really that much different from most other forms of entertainment and media—they're just new. And, not unlike being the new kid in school, they're still getting teased a lot, and, likely will continue to be, until, either, they grow up, or everyone else does.

Alright, now, that said, both of the studies mentioned so far have given examples of the beneficial and sometimes ambiguous outcomes that can be associated with playing videogames, but, not all studies involving gamers have had similar kinds of implications. Daniel King, of the University of Adelaide, reported in the Journal of Cyber Therapy and Rehabilitation in 2009 that a group of heavy players scored "significantly lower on measures of physical functioning, mental health, vitality, general health and social functioning." These heavy gamers played on average 30 hours per week, 4 days a week, for roughly 3 hours per sitting. And of the 411 individuals that participated, 45 (1/8th) were found to meet the criteria for heavy players. However, and this is a big **however**, all of the participants of this particular study were directly solicited from internet

cafés, which constitutes a serious bias of the study, and, subsequently tainted its conclusions and findings. Because trying to get a representative sample of the effects of heavy videogame play only from people who go to a very specific place designed to cater to heavy play is not unlike trying to get a representative sample of heavy drug users from scouring a crack house—of course they're going to be even more likely to exhibit negative outcomes associated with heavy use; look where you're looking! I mean, seriously! And, even with that, only 1/8th of the participants were found to meet the criteria for heavy players! Which, if anything, only serves to show the greater positive implications of gaming environments because, unlike crack houses, even in highly addictive atmospheres, the negative outcomes of playing videogames are mostly contained and are far less frequent than just having a good time and remaining healthy.

Anyway, another study conducted in 2009 by the Office of the Command Surgeon and the Surgeon General, with regards to U.S. troops deployed to Afghanistan, also found negative effects associated with playing videogames. **HOWEVER**!!! Once again, these negative effects strictly pertained to excessive use. By way of conducting a survey of the off-duty activities of soldiers the Surgeon General's Office endeavored to understand their resilience while deployed. Included in the survey were questions about: surfing the internet, listening to music, physical training, reading and, also, about the number of hours spent playing videogames. And, while the study did find that soldiers who played videogames for more than six hours a day were more likely to have psychological problems, so too were soldiers who played less than an hour of videogames a day. Interestingly enough, it was the moderate players of about three hours of daily game play who scored most favorably and were most resilient. And, while, once again, this is not a representative sample of the general population, both studies underline the fact that while there can be positive and sometimes ambiguous psychological effects of playing videogames, so too with excess play can there be negative effects even if the extent of playing hasn't reached the point of addiction.

So, since we've established that there really isn't one conclusive effect that videogames have on the health of all their players, lets zoom in and focus on some of the individual differences and characteristics of gamers and how they effect the experience of play. Because when it comes to issues like aggression and gaming, or, personality and gaming, there is, at least, one particular difference between gamers all over the world that needs to have just a little bit of an extra emphasis placed on it—gender. Because, as much as our varying societal roles, and, identification of ourselves as individuals, can change according to gender, so too can the results associated with gaming vary greatly for people of

different genders. But before you go thinking that the documented gender divides, and differences, are nothing but a matter of pink versus blue color schemes or violent versus docile game types, bear in mind that societal stereotypes about sex and gender have been so pervasive over the years that the contemporary mindset about the differences between boys and girls still has more to do with traditional gender roles than it does with the actual differences between boys and girls. Now, that's not to say that gender roles are completely fabricated or always dogmatically forced upon us. But it is to say that they're so engrained in our psyches that how we identify ourselves as individuals is in large part based upon them. So, needless to say, how we express ourselves and experience in game worlds is also hugely influenced by not only the basic biology of gender differences, but, also, the basic components of traditional gender roles.

A group of male and female adolescents were surveyed in the spring of 2006, and then, again, one year later for a study entitled "Media use and adolescent psychological adjustment: An examination of gender differences." Not surprisingly, one of the biggest gender differences on display was that, while boys spent more time playing videogames than girls did, girls spent more time talking on the phone than boys did. But, interestingly enough, none of the various types of media that were examined in this study were found to be directly associated with depression or anxiety. However, depending on whether boys or girls were playing videogames, the effects of play, and the likelihood of videogames to elicit anxiety as a result, varied greatly. Because while young boys who (relatively) spent more time playing videogames and watching television were found to have the lowest levels of anxiety (especially in homes with alcoholic parents) the opposite pattern emerged for young girls. Another study titled "Re-examining gender differences in videogame play: Time spent and feelings of success" by Karla Hamlen of Cleveland State University, found that the feedback of success was a big part of the differences between boys and girls who play videogames. Because, while girls do traditionally spend less time than boys playing videogames, they still experience the same in-game reward structures and feelings of success or failure. However, due to the differences in gender roles, it may be that the feeling of success (which, in videogames is often closely tied to successfully competing) is more important for boys than it is for girls. And, thus, the observed differences between competitive in game success for boys versus those experienced by girls may be just one variable among many that pave the way for similar differences in gender roles later on in life.

Gender aside, lets delve even deeper into the differences between gamers by taking a look at five universally-recognized

components of personality that have come to be regarded as 'the big five': extraversion, agreeableness, conscientiousness, neuroticism and openness. Edward Witt and colleagues from Michigan State University reported in Computers and Human Behavior, that gaming was associated statistically with openness to experience. None of the other 'big five' were found to have a significant relationship to videogame play preferences. Additionally, the 'big five' have also been examined in terms of the effects of violent videogame play on subsequent aggression. Patrick Markey and his colleague/wife, Charlotte Markey, reported on this question in a special issue of the Review of General Psychology—concluding by way of a general overview of the literature, as well as their own work, that: three of the 'big five' were found to be predictive of a higher likelihood of modeling violence in videogames—low-agreeableness, low-conscientiousness and the presence of high neuroticism. So, needless to say, if you know someone who rarely agrees with you about anything, doesn't really empathize with anyone and likes to obsess over every little detail—run the hell away when they're playing videogames.

Another aspect of videogame play that factors into mental well-being is stress relief. And while someone who's playing the final boss on the hardest difficulty might not necessarily agree with that statement, and may actually flip shit and become more stressed by trying to accomplish their in-game goals, for the most part, videogames have been shown to actually significantly decrease the stress levels of their players—particularly when it comes to casual games. And, when you take into account the influence of stress on mental and physical disorders like cardiovascular disease, diabetes, depression, ulcers and beyond, it makes perfect sense that, whether people are consciously aware of it or not, much of the current casual gaming explosion is intimately tied to the reduction of stress that these types of games provide.

Carmen Russoniello, an associate professor at East Carolina University, has been at the forefront of research investigating the relationship between videogame play and stress reduction. Russoniello was approached by a major game developer, Popcap, to try and figure out exactly why their games were selling so well. So, what Russoniello did was look at an electroencephalography (EEG) and subsequently document the changes in the brain that occurred during videogame play—revealing that the patterns of neural activity during play were consistent with an increased mood and corroborated the previous findings of psychological reports. Russoniello also made a point of examining another stress indicator, heart rate variability (HRV), and found that the autonomic nervous system relaxed when playing casual videogames and resulted in a decreased level of physical stress.

Now, while it's clear that more research does need to be done in order to definitively show how videogames influence various people's mental health and well-being, lets move on to the physical side of things and examine how they're effecting people's levels of activity and physical health. Because, as I mentioned earlier in the chapter, one of the most common stereotypes about gamers is that of their alleged lack of physical activity and growing waistlines. And, while I'd like to point to some kind of study that directly refutes this claim and, in doing so, declare a shimmering upside to the downtime associated with frequent play… I can't. Truth is, videogames are currently mostly sedentary activities that in some cases can contribute to reduced levels of physical fitness, poor diet or snack choices, and even idle fixation or laziness in order to attain in-game glory. And while, once again, this is by no means the case for everyone, until recently, nearly all games had at least one thing in common: requiring gamers to play in a particular way by rarely moving anything but their fingers and having to stare devoutly at a screen. However, the times are changing, and the prospect and process of developing videogames that are more active and engaging for gamers has already started to take root and grow.

Ok, now that I've mentioned physical activity and videogames in the same sentence, you've probably already started thinking about the Wii, the Kinect or any of the other variety of consoles that have been released so far that have been able to harness the full range of players movements rather than just their thumbs and fingers, in order to play and control certain games. And as important as innovative new consoles and games like these are to helping move the industry away from no movement or activity in games, it's still a stretch to regard them as if they've actually attained the same levels of exertion as actual exercise. Because while, personally, I managed to play Guitar Hero so much that, consequently, one of my forearms grew larger than the other, it still didn't come close to reaching the levels of activity or exertion that actual exercise did. And, a further testament to this fact is that at the 2010 Games for Health conference it was demonstrated that while playing the drums in Rock Band can be quite physically demanding, once again, it still pales in comparison to actually playing a set of drums.

Amanda Penko reported in the Annals of Behavioral Medicine in 2010 that the response that kids showed to videogames which required them to be physically active, varied according to whether or not they were lean or overweight. By way of comparing playing a game on the Wii to being on a treadmill and, also, playing a sedentary game, Penko found that, overall, playing on the Wii was favored and, also, resulted in the highest heart rate. The lean children were found to prefer it to the

sedentary videogame, while the overweight children had no preference. However, not surprisingly, both groups of kids preferred playing videogames to being on the treadmill. And, in another study reported on at the Games for Health conference, similar findings of levels of enjoyment from the variety of games available in Wii Fit revealed that, once again, the least perceived levels of exertion and fun were on the treadmill game, while the hula hoop game, or, Sidewinder for the Kinect, were perceived as requiring the most physical activity and also as being the most fun.

Now while, in my opinion, I think the game 'Wii Fit' is ineffective, and, short changes people on simple exercises that could just as easily be accessed by Googling them or actually going outside and participating in them with others, rather than paying an exorbitant sum to simulate them on a screen, it is, nevertheless, a step in the right direction. Or, at the very least, something that requires its players to actually take steps. Because, the potential applications of physically engaging videogames for purposes other than just exercise or entertainment are as huge as they are significant. Rehabilitation, physiotherapy, or movement-based games for people who are either less physically mobile or physically disabled, are now more affordable and accessible than ever, thanks to these kinds of consoles. And, as more games that cater to these demographics are released, so too will our conception of physically engaging games expand—both contributing to and redefining the influence that videogames have on our health and well-being. Now, this isn't to say that every aspect of the growing field of active games will unanimously improve us, or, only positively contribute to our wellbeing, or, for that matter, that videogames in general will only have these kinds of effects. Instead, there will be, as there always have been, both pros and cons associated with people's health and the playing, or overplaying, of videogames. And, given that fact, it's clear to see that with the confounding number of variables that comprise our individual equilibriums of health, both in body and mind, videogames, and their effects, have proven to be, not only a part of the mix, but also, a part with mixed results.

CHAPTER 8

VIDEOGAMES, DREAMS, 'REALITY': Potato, Pah-tah-toe

"Dreaming or awake, we perceive only events that have meaning to us."—Jane Roberts

"I do not know whether I was then a man dreaming I was a butterfly, or whether I am now a butterfly dreaming I am a man."—Zhuangzi

In the Western world, contemporary cultural values are largely based on tangible things and recognizable achievements, which, unfortunately, are often validated by way of tangible things. If someone is rich, you expect them to have items of value to demonstrate their wealth to the world; if someone is smart, you expect them to have a costly piece of paper called a 'degree' to prove it once and for all. If someone is creative, you expect them to have created works of art or profound innovations. And, if someone has superpowers or special abilities that allow them deeper insights into the nature of reality or their experience thereof, you would either expect them to be wearing a superhero costume or to be selling self-help books on late-night infomercials to try and capitalize off it. Because in the dominant cultural climate of the Western world, the merit of an individual's experience of reality is not measured by their level of happiness, creativity, intelligence, wisdom, insight, foresight, spirituality or imagination, but, rather, by their tangible acquisitions in life or documented representations thereof, such as: good looks, wealth, degrees, awards, creations, innovations and beyond. Put simply, in Western society/reality, people need to prove or have it proven to them, that things are real in order to believe in them and regard them as important—which makes perfect sense because, by and large, people are dependent on the notion of reality to define themselves and the world around them. However, despite this, the fact remains that only about two-thirds of our lives are actually spent living in reality, while, the other part, is spent sleeping—allowing us a window of perception into a largely

misunderstood and unexplored realm of existence that falls somewhere in between the real, the unreal and the surreal—dreams.

Dreams are the mental experiences that occur when we're sleeping, in which our brain's refine neural connections. This can include anything from storing information acquired throughout the day into long-term memory, reviewing and processing physical activities, real-world practices, subconscious conflicts, problem-solving and much, much more. And while most of the time spent sleeping is dominated by NREM (non-rapid eye movement) in which, while some sleep-thinking can occur but is typically more logical and harder to recall, it's the last few hours of our sleep processes that are primarily composed of REM (rapid eye movement) sleep—the kind of sleep in which our vivid or sometimes really weird and frightening dreams occur. NREM is characterized by slow breathing as well as all of the other physiological signs of being deeply relaxed while, conversely, REM sleep elicits the opposite response—causing increased heart rate, breathing, stomach acid secretions and is also the period of time during sleep in which asthma attacks can occur and sometimes even heart attacks. Now, I'm not mentioning this to instill in you some kind of creeping fear of going to bed not unlike the idea of Freddy Krueger coming to get you but, rather, to emphasize the fact that our minds are so remarkably engaged and captivated by our dreams during REM sleep that, as far as our brains are concerned, there's no discernable difference between dreams and reality. In fact, to emphasize that point even more, I'm going to say it again in all caps: OUR BRAINS CAN'T TELL THE DIFFERENCE BETWEEN DREAMS AND REALITY!!!

Now, this is not only mind-boggling in the sense that, every night, every animal on this planet (with one exception that I'll mention later) loses their grip on what's real and what's not, but also in the sense that dreams are literally mind-boggling. However, thanks to the fact that our bodies have decided not to go along with our brains when it comes to dreaming, during REM sleep, the vast, vast majority of people remain paralyzed from the neck down—preventing us from acting out our dreams and, consequently, waking up standing in the middle of the kitchen throwing a hissy fit or driving over parking meters when we were dreaming about a racecar. However, once again, dreams are far more than just the firing of neurons and, in addition to the drug-trip-esque experiences that they can provide us, they are also a hugely important part of how we process and encode information. Examples of this are how sometimes people can fall asleep pondering a problem or trying to remember something, only to wake up and have the answer ready and waiting for them. And while they don't have to remember their dreams in

order to arrive upon the answers they were looking for, they do have to have dreams in order to receive this kind of creative inspiration in the first place.

Sigmund Freud conceived of dreams as a profound gateway into our subconscious. And, while he was right, and they most certainly are, he was wrong in that he believed dreams to be solely representative of people's instinctual impulses. Now, this isn't to dismiss the presence of people's instincts in dreams, but rather to emphasis the greater part that dreams play in developing who we are and how our subconscious expresses itself. And one of the best examples of this is the internal struggle and manifestation of traumatic events, that may or may not have actually occurred in real life or, have since been adjusted inside of the mind and expressed within the realm of dreams—nightmares. Nightmares can be such a realistic depiction of traumatic events that, consequently, people who suffer from them can actually be re-traumatized as a result—demonstrating once again the tremendous power that our dreams possess. However, since it's like the fourth paragraph of this chapter and I haven't even mentioned videogames once yet, you may have been asking yourself: "What in the hell does any of this have to do with videogames!?" Actually, a lot—a lot, a lot. And I'll emphasize that fact by pointing out some of the significant similarities between videogame play and dreams, the effects of videogame play on dreams, as well as the practical real-world applications of these parallels and how, due in large part to the contemporary cultural climate of the Western world, they have so far gone mostly unnoticed and unaddressed in the public eye.

It's important to keep in mind that due to a perpetual increase in videogame play habits in North America, nowadays 72% of homes report videogame play. This has huge implications for the effects of these kinds of virtual realities on the processes of people's dreams as well as their levels of awareness and familiarity when jumping between videogames, dreams and reality. Because, while videogames are 'escapable' in that you can pause them or unplug them at your leisure, you sure as hell can't do that kind of thing in reality, and, when it comes to dreams, while they aren't as dogmatic as reality, they are still largely uncontrolled and seemingly sporadic (with the exception of lucid dreams [the kind that some people are fortunate enough to be able to be self-aware in] or control dreams [where some people can actually control their dreams]). Nevertheless, videogames provide people an easy gateway into an artificial or virtual reality that would otherwise be limited to their dreams. And while there are other known forms of alternate realities such as hypnosis, psychedelic drugs or the results of being in a sensory deprivation tank, they are far less accessible to the general public than videogames are. And,

the deep absorption that videogames provide their players is really the first time in history in which a society has introduced and embraced on a large scale, an intermediary step between dreams and reality. And, interestingly enough, laboratory studies conducted by my mother with some of her students revealed that the levels of 'being there' or 'self-reported-presence' within dreams versus those reported when playing videogames were mostly no different from one another—contradicting the firmly-held assumption that dreams are the epitome of presence or sense of 'being there' outside of reality.

Now, as mentioned in the very beginning of this book, my mother, Dr. Jayne Gackenbach, who's been co-authoring this whole thing with me, established her career as a dream researcher decades ago and was even on the forefront of the movement that eventually led the psychological community to accept that lucid dreaming was possible. Then, after a few decades of study, and work in that particular realm of academia, she made the jump to researching videogames in conjunction with dreams, and up until her recent retirement, spent much of her time devising and executing a variety of studies with her students at Grant MacEwan University. One of the questions that they posed in their lab was: how would the internal reality of dreams be affected by the waking immersion in the intermediary realities of videogames? Basically, how much will videogames rub off on people's dreams and affect their levels of awareness while in them? These particular studies focused on hardcore gamers who were categorized by: playing several times a week, more than two hours per session, since grade three or earlier, with experience playing at least 50 different game titles. However, before we go into the depths of what the studies were and what the subsequent findings showed, let's take another paragraph to clarify the contemporary mindset of what dreams are and how hugely important videogames can be to researching and understanding them.

One of the major hypotheses about dreams that is now widely assumed in the clinical and research dream community is that dreams are continuous with waking concerns, such that, if in real life you were really worried about the amount of popsicles you had in your freezer, a similar concern, or representation thereof, would likely manifest in your dreams. German psychologist and leading dream researcher Michael Shredl has shown that events, personality, and pathology have all been demonstrated to have a waking-to-dream influence. However, in a recent discussion between Shredl and Harvard psychiatrist, and leading dream researcher in North America, Alan Hobson, they considered the possibility that dreams may also be discontinuous with waking—essentially theorizing a fundamental contradiction to the modern framework of how most of

academia conceives of dreams. And a simple example of this are the findings of Ernest Hartmann, one of the foremost dream researchers in the world, who reports that despite the continuity of dreams, very rarely do reading, writing, or arithmetic occur within people's dreams. But, in order to further investigate this matter and come to a conclusive understanding of the nature of continuity, or lack thereof, between waking reality and those experienced within dreams, it's the prospect of utilizing videogames and harnessing their powers of immersion that are now giving researchers a new and exciting way to explore, not only the nature of continuity and consciousness, but also, the nature of reality.

Here's an example of one gamer's dream that was documented and analyzed in my mother's lab—providing a unique and peculiar cross pollination between dreams, reality and videogames:

> Subject #27: "I was in a desert. I looked bad, dusty. I saw my tiny silhouette against a large sun, meaning I was watching myself, in 3rd person. While I looked bad I didn't feel bad. I was indifferent to the 'my' feelings. I came upon a carnival, but it gets sketchy at that point. Eventually I'm driving a car, again not at a real POV (*point of view*), but following behind the car. It didn't matter to me that I was crashing into other cars or walls. My car caught fire, I saw it melt from within. I died not trying to escape."

Oooooook … so what's the big deal? All that happened was that this particular high-end gamer seems to have had a very violent nightmare in which they witnessed their own death in a fiery car crash, right? Well … kind of. But, actually, there's a whole lot more going on here than originally comes to mind. Because, by filling in the Metacognition, Affect, Cognitive Experiences (MACE) questionnaire as a follow-up to the dream report, the greater depth of what was occurring in this gamer's dream and how videogames influenced Subject #27's perception while dreaming, is what was most fascinating about their experience:

> Subject #27: "As the car was burning I opened the door and leaned out to leave but made the decision to stay inside instead because I was curious to see what I would look like burning alive. While I felt the heat, smelt the smoke, I didn't feel any pain. I felt detached from the feelings, but recognized that they were my own."

Still don't get how this isn't just another everyday-screwy-bizarre-ass-dream? Well, Subject #27 did not report this dream as a nightmare when asked, despite the fact that it was quite gruesome and was also able to witness their own demise in it. And, curiously enough, Subject #27 also did not report this dream as being lucid, which, needless to say, seemed very odd given the level of awareness and choices that were reported during the dream. Thus, further questioning and analysis ensued to try and better understand Subject #27's experiences while in the dream:

Researcher: "Did you feel any emotions during the experiences?"

Subject #27: "Sort of. I knew what the person I saw as myself felt, but didn't share those feelings. Throughout the emotions of disgust, loneliness, or excitement were all ones I thought best fit the 'character' of myself based on the situation."

Researcher: "Did you think about what you were doing?"

Subject #27: "I was constantly thinking about my every move, making sure that whatever I did was in my best interest. If anything was off-putting (the carnival owner, the desert) I simply moved on."

Researcher: "Did you think about what was happening around you?"

Subject #27: "I was constantly analyzing my surroundings... At the city where I drove my car, I noticed the simplicity of the environment, which seemed to be constructed out of simple polygons."

BOO-YAH!!! There it is people! Wait… what? Ok, ok, ok, here it is people: with the final comment that was made by Subject #27 it became clear that they were of the impression that they were in a videogame environment while, unbeknownst to them, they were actually inside of a dream. They did not think that it was real, thus the bizarre decision-making processes (like choosing to die, to see what it would feel

like). And so, the experience of Subject #27 was such that while dreaming, they had reverted to a more familiar narrative of control—videogames—and by doing so, had been able to retain a similar state of conscious awareness, detachment, and informed decision-making process from the character they were 'playing' while inside of a dream. And, as if it wasn't hard enough to gauge people's experiences of lucidity while dreaming before, now the influence of intermediary reality dynamics must also be factored into the labeling of what is or is not considered lucid dreaming (when someone knows they're dreaming), controlled dreams (when someone has control over some aspects, or, the entirety of their dreams), or nightmares (which, while this dream most certainly could be considered to be, by an impartial party, ultimately, is not—simply because it wasn't frightening to Subject #27. In fact, it was borderline playful).

Ok, that's all well and good, but, once again, so what? Isn't this just another example of waking-to-dream continuity resulting in the in-game experiences that these gamers experienced in their dreams? Isn't it exactly the same kind of effects that you'd see if someone spent all their time playing basketball and then, subsequently, dreamt about it? Well, yes and no. Because while there certainly is waking-to-dream continuity in the sense that videogames have been incorporated into dreams as a result of heavy play while awake, one of the biggest differences between heavy gamers dreams and those of non-gamers isn't just the presence of game dynamics in their dreams but, also, their augmented sense of control—whether it's from the first- or third-person perspective—not unlike the ways in which they have grown accustomed to perceiving and playing videogames. Thus, basically, high-end gamers (who play more sophisticated, immersive and time-consuming games) were found in several studies to have more lucid and control type dreams than non-gamers did.

I want to clarify something here: this does not mean that if you spend the next three days straight playing a videogame that you'll be able to fall asleep and 'play' your dreams. However, if you are a high-end gamer and you've grown accustomed to the control structures of videogames and the refining of concentration/attention that they provide, this will have an effect on your dreams. Although, it's important to point out, that in the same studies that examined the effects of videogames on dreams, media use in general was analyzed (television, internet, etc.) revealing that it too was associated with lucid and control dreams (although, not anywhere near to the same degree as was the case with videogames). Which, when you think about it, is actually pretty cool. Because regardless of whether or not people are gaming, the results of frequently suspending themselves in intangible modes of existence, such

as, 'within a text,' or, 'surfing the net,' has caused non-gamers, who use virtual forms of media, to experience similar effects on their dreams.

However, not surprisingly, when it came to the dreams of high-end gamers, versus those of people who frequently used electronic media, the association between lucid dreaming and videogame play wasn't anywhere near as prevalent or strong as it was for control type dreams and videogame play. And, when it came to differentiating between the many types of gamers and games they played, it was also found that there was no difference in the likelihood of having lucid dreams between high-end gamers and low-end gamers. But, when it came to control dreams, gamers of all varieties, were found to have them much more often than even people who were specifically training their minds to focus in other ways. This was recently demonstrated by way of a study in which gamers' dreams were compared with those of people who frequently meditated or prayed, revealing that: while people who pray/meditate self-reported higher levels of lucidity in their dreams, gamers self-reported significantly more control over their dreams. And, at a second glance, it's not hard to see why this would occur: practice. Because, by becoming better at controlling videogames, so too do people become better at controlling their dreams.

Another interesting effect of this virtual reality and dream cross-pollination is that, when it comes to the dreams of high-end gamers, they actually tend to be much more bizarre and strange than they are for low-end gamers as well as for the general public. This was revealed by a couple of studies my mother conducted in her lab at Grant MacEwan University, by using dream diaries and questionnaires. Types of gameplay, media exposure (both directly before dreams and in general), as well as a bunch of other variables were controlled for during the studies, revealing that the dreams of high-end gamers were, in fact, more bizarre—an example of which is their increased likelihood to feature imaginary and dead characters. Additionally, it was revealed by way of a creativity assessment of high-end gamers that, while there were no significant differences in their verbal creativity from the norm, there were large differences that hugely favored spatial creativity.

Now, as cool and fascinating as it is that videogames allow heavy players an increased ability to control their dreams, that are also (as a result of playing) far more bizarre than those of the average low-end, or, non-gamer, it turns out there are even greater effects on the dreams of gamers as a result of heavy play. Because, throughout these various studies, it was found that high-end gamers' dreams exhibited less misfortune and more intense violence. However, the violence that appeared in their dreams actually occurred less frequently than it did in

the dreams of non-gamers and low-end-gamers. These peculiar and exciting findings directly led to further inquiry into another distinct and notorious form of dreams, and, how heavy videogame play could affect them—nightmares.

Dream researcher Antti Revonsuo argues that dreaming is an adaptive evolutionary process that allows us to simulate threatening situations in the safety of a virtual environment. And this continued practice of encountering, or, fending off threats during our dreams, would allow people to better prepare for similar situations that either may have occurred, or may potentially occur, in real life. Now, the question is, if you take the word 'dream' out of the last sentence and replace it with the word 'videogame,' would it have the same effect? Do the simulated virtual realities of videogames give people the same opportunities to practice fighting against threats as our dreams do, and, if so, how would such tremendous everyday simulations of what might be encountered in people's nightmares effect the dreams of gamers? These were questions that, once again, were posed in my mother's lab and studied with her students. She found that high-end gamers who had played a lot of videogames the day before recording their dreams, experienced no distinct feelings of being threatened within their dreams. Now, this isn't to say that they didn't encounter threats in their dreams—they did—however, those threats did not give them the sense that they were having a nightmare or that their dreams were scary, despite the fact that they had increased levels of violence in them. In fact, they were actually perceived as being fun, just like a videogame! Now, conversely, low-end gamers who did <u>not</u> play videogames the day before they recorded their dreams, but <u>did</u> watch violent television shows or movies, experienced dreams that were, not only high in threat simulation/violence, but, they also, reported them as being both nightmarish and scary—supporting the hypothesis that the threat simulation of videogames may actually help inoculate people against perceiving, and, thus, experiencing, violent or threatening dreams as nightmares.

These initial inquiries into the effects of dreams on gamers' nightmares was subsequently followed up by another study that specifically examined gamers in the military. Conducted with Evelyn Ellerman, of Athabasca University, and an AU upper-level student, Christie Hall, the study asked soldiers to document and describe a recent dream as well as a military dream. Information was also gathered on these military gamers' emotional reactivity and history of trauma, including military trauma, which has been shown to significantly contribute to and 'predict' the incidence and intensity of nightmares. However, when these 'predicting' factors were controlled for, frequent gaming was found to be

directly associated with significantly less threat in military dreams. And, an easy way to think about this would be that: by playing first-person shooter games like Call of Duty or Battlefield, which in many ways are very close to the experience of real-world warfare, a person in the military could essentially ease the burden of their combat nightmares by actively engaging in combating the enemy in game, while receiving positive-reward-structure-feedback for doing so and essentially inoculating against nightmares, so long as the soldier was not already suffering from post-traumatic stress. That said, it's not surprising that gaming in the military is very, very common and, can also be very, very therapeutic.

The idea that videogames have the capacity to influence our dreams is an insignia of how profound this shift in media really is. The idea that gaming can be used to lessen the trauma of going to battle is both 'good' and horrific. What if the military is somehow trying to device a way to keep soldiers from experiencing PTSD at all? What other costs might come from inoculating against our dreams—those that are hard baked into our psyche for a very good reason! I mean, it's great if we're able to help people overcome trauma. But in the military, the largest incidence of PTSD is that of pilots responsible for flying drones. This is in large part because of the severe contrast between what it is when they go to work and what their lives are like when they return home. At work they stare at a screen—playing something not unlike a videogame. They kill. They murder. They take life and then they punch out and go home only to experience the resonating echoes of the very trauma they caused trapped in their own psyche. Maybe that's important for them to experience? And maybe the idea of using videogames as a way to influence dreams is as scary as it is promising? Food for thought. Because these issues are only going to become more and more profound the deeper we go. The next step is virtual reality. Beyond that… it's a thin line between integrating the virtual with the real. Not only in our dreams, but in our waking lives too.

This chapter has gone over four varieties of dreams: Lucid dreams, in which the person dreaming knows they're dreaming; control dreams, in which the person dreaming has control over certain parts of, or the entirety of their dreams; bizarre dreams, which may or may not be lucid or controlled, but, nevertheless, are really freaking weird; and, nightmares, the scary, horrifying, haunting possibilities that lurk in our subconscious and express themselves in our dreams. And, in each case, videogames have shown to have a significant effect on the dreams of heavy gamers—the increased ability to control dreams, the significantly more bizarre and peculiar content of dreams, and the infrequency of nightmares as being perceived as scary or terrifying. But, what I find most

interesting about this whole idea of dreams, videogames and reality, are the many parallels and consistencies between each of the three that blur the lines of how our perception divides them. Because while mankind hasn't yet reached the unanimous state of being able to 'play' their dreams or achieved a technological innovation not unlike that featured in Christopher Nolan's film, Inception, that would allow us to plug into each other's dreams, what we have seen are small documented empirical steps with really big and promising implications. Videogames do affect the dreams of their players and very often do so in positive ways that have brought high-end gamer's dreams closer and closer to those achieved by people who have honed their sense of existence through meditation. The only real question is, how deep does the rabbit hole go? And how much more will videogames allow us to explore it than other forms of media previously have?—forever changing not only the ways we play, and, experience our everyday lives, but, also, how those experiences contribute to our dreams and vice versa.

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CHAPTER 9

FUTURE/VIDEOGAMES: Revolution and Revelations

"It is said that the present is pregnant with the future."—Voltaire

"The future belongs to those who prepare for it today."—Malcolm X

"A revolution is a struggle to the death between the future and the past."—Fidel Castro

Right off the bat, I'll let you know that this chapter is gonna get weirder and weirder as it goes along. Because as much as I'd like to stick to the obvious effects of software/hardware advancements and their short-term implications on the psychological state of the general populace, I'd much rather do that first, and then, take a step further to look at the long-term effects—the really amazing science fictiony stuff that's closer than we think and more complicated than we've ever imagined. Because, in the wake of the modern world and all of its wonders, things that, to those living before our time, used to be regarded as impossible, are now considered mundane. And with the advent of the computer age and the perpetual interconnectivity of the internet, social media, gamification, and a virtual sense of existence that underlines the very ways in which people live and communicate, our world, and the possibilities it provides us, are changing faster and more drastically than ever before. And, although the limited window of perception that is an individual's life is akin to a grain of sand on the beach of eternity, that hasn't stopped people from drawing conclusions about the nature of the beach or why it exists. And, that said, it won't stop me from drawing conclusions about the significance of videogames and how they will play an invaluable part in all of our futures, and, also, how, it's entirely possible that you're playing one right now and you don't even know it.

I cannot tell you with complete certainty. I dare not contend that my imagination and objective truth fully align. But I can share a general philosophy of mine that underlies the way in which this experiential reality

unfolds. It's the idea of destiny—of how that concept is an interrelational dance between the nature of our choices and the depth of knowledge. The future isn't scary, it's unknown. That's the nature of destiny—a tango that helps   determine   where   we   go…

<u>Destiny</u>

Destiny isn't written. It's in the writing. Every day, one moment at a time. A chance encounter, a mysterious sequence of events, an uncharted course on an open horizon. Days are grains of sand. And night sees them fall through the hourglass, forming mountains of memories as we swing on the spiral. The purpose isn't to reach a destination, it's to reach out. To grow. Explore. Expand. Evolve. To feel your pulse quicken and your heart beat. Chase dreams. Risk being uncomfortable. And know that everything will be alright. Because you're a part of something greater than yourself. And you become greater the more you're a part of it.

Intuition is the key. Wisdom is the safe. And where one meets the other, both are rewarded. Nurture the journey or risk it all and fall. Do both. Through the clouds to the stars and back again. That's the path. For however the sun falls on the horizon, however the mountains gleam, know that chance will unsettle any course or path through time but that which you may never know. No time. No guarantee. No fate but what we make. And know destiny.

Now, that said… the fate that we make is not merely one of what we create but so too of what we come to realize is true. You cannot simply magically manufacture a cure all to everything without simultaneously erected significant hurdles and consequences—as if there are hard truths we have to face for the realities we want to be really real. There are terms and conditions that bind humanity to being able to escape the adversities we're confronted with. Some of those conditions will be aided by videogames. Others may be tragically impaired. So, in order to create the liberating, free, fluid and beautiful future that we all want, I need you to understand something above all else that has been written in this book: The future is more about what we **know** than what we play. Our knowledge, our maturity, our understanding, and our ability to love and accept one another are more important than our controllers or what we seek to control. Moral principles and deep understandings of those principles must come first. And the care that we hold in the deepest contours of our hearts is what will give us the strength to face those hard truths together. Videogames alone will not save the future. But they may just offer us key insights that help us gravitate in the directions we need to

go. That's what this chapter explores. The good, the bad, the promising, the terrifying… and most of all… the unknown…

Videogames in the Next 10-20 Years (give or take 10-20 years):

10-20, #1: Scope of the Industry: Due to the monumental size and exponential growth of the gaming industry, it's fair to assume that Hollywood, mainstream media, the internet, real life, and, yes, even porn, in fact, especially porn, will gradually integrate with the interactive possibilities of videogames—allowing for an unparalleled degree of choice and immersion and, also, eclipsing the contemporary mindset of all other forms of media. Kind of like a whale swallowing smaller whales that continue to swim around inside it until they eventually get digested and become a part of it.

10-20, #2: Height of Hype: As videogames move to the forefront of the entertainment industry, celebrity, fame, anticipation, fan devotion and everyday attention will grow larger and larger until, eventually, award shows for videogames will become more important than the Oscars, professional gaming competitions will draw as much, if not more, attention than sporting events and professional gamers will become idolized like modern athletes; playing online games with your friends will become as common as hanging out with them, knowing someone halfway across the world and potentially never actually meeting them in real life will become normal, families will have the possibility of growing closer by playing games of varying degrees of immersion, and the interconnectivity that the internet has ushered into our world will only be augmented by the prospect of playing with those connections. Put simply, when videogames become famous, we'll all buy into the hype.

10-20, #3: Depth of Immersion: The next ten to twenty years may not plug us into the matrix just yet, but it will bring about significantly higher levels of immersion and more frequent play. The technological advancements that will allow for this will be amazing enough—things like virtual reality and sensory simulations for smell, taste and touch. But it's also the implementation of serious games created for exercise, rehabilitation, education, therapy, lovemaking, and just about everything else under the sun, whether it's a screensaver or not, that will change the world as we know it. And, the subsequent reinvention of everyday life will pose the question of whether or not people will mostly exist in the

realities of their actual lives, or, the intermediary realities of their choice. This, of course, poses a real concern for the prospect of addiction, abuse, neglect and… well… simply fading away into the machine. But, at the same time, if huge numbers of people are approaching addiction, society must adapt both positively and negatively as a result—so, if you think videogames are controversial now, just wait and see how crazy things are gonna get. Some people will be able to handle this. Other won't. The conversation must never stop. And it must never stop being honest about what these things are REALLY doing to us.

10-20, #4: Psychological Resolve: Since videogames have been proven to make people more open to experience; to give them greater control over their dreams, higher levels of spatial creativity, inoculate against nightmares, improve focus/attention, and a plethora of other cool and interesting effects both on the side of positive healthy play and negative excessive use, the next generation's state of psychological wellbeing stands to pose both substantial improvements and unexplored consequences. Because with the advent of every technological innovation to date, societies everywhere have had significant parts of themselves grow and atrophy as a result. It is a very real possibility, that problems will arise with people's ability to distinguish between play and reality, it is a very real possibility that certain forms of games and controversial content will potentially either be restricted or banned—creating a black market for videogames, and splintering living people between who they've come to identify themselves as in reality and how their avatars have played a part in that development, and maybe even in their deconstruction. Basically, videogames, if completely let outside of the box, could pose the risks of creating a generation of heroes and monsters. Reality itself is the plane that exists between these virtual worlds. We must NEVER allow ourselves to lose track of how important that is, whether we can definitively prove that it is the ultimate reality above all others or not. However, that's not to say that any government or Big Brother should step in and determine what is or is not healthy and what should or should not be allowed. Instead, those responsibilities will fall on the shoulders of parents, friends, family and the evolving socially acceptable norms of society. Put simply, videogames won't necessarily be the cause of problems in the future, but they will have the finger of blame pointed at them more and more often the closer they get to reality. The closer they get to showing us who we really are…

10-20, #5: Consciousness: The idea of collective consciousness is controversial to say the least and, depending on who you ask, and how

much they actually know about the issue, may even be regarded as hearsay or flat out crazy. However, despite this, for the most part, people tend to agree on the fact that our collective societies are made up of many, many, individuals, all of whom are experiencing varying degrees of consciousness (the experience of being, and being self-aware). Thus, these individual consciousnesses comprise a kind of zeitgeist that reflects the state and well-being of large groups of individuals who, inevitably, are influenced by each other, their environments and societal exposures. But, as videogames move to the forefront of media and more and more people are, not only, becoming exposed to them, but, also, are becoming frequently immersed in them, the question is, what effect will this have on an individual's consciousness and conscious awareness? And, also, what greater insights may this provide us into the idea of collective consciousness, even if, in the short-term, our understanding of it is achieved only by way of technology? If you ask me, I'd say people will gradually refine their ability to focus attention and, by doing so, create one generation after another in which videogames and technology augment our fluid more morally rooted exchanged with the nature around us and the nature of ourselves. If you ask my mom, this will have huge effects on, and help transition people to, collective consciousness and positive influence. If you ask me… I think governments, private interests and, not least of all IGNORANCE of truth will be the greatest threat to our hearts and minds. I cannot stress enough… videogames are not a magic pill. They are an extraordinary tool that we must use wisely.

Ok, hold on a second. Is this entire chapter gonna be nothing but speculation or am I gonna talk about stuff that we already know here and now too? Because, really, anybody can just pull out a shiny-crystal-ball-app, look into it, and pretend that they can see the future, and, I'm certainly no exception to that rule. So let's take a second to go over some of the groundbreaking ideas in contemporary game/tech development and how they're already starting to splinter away from the norm and branch outside of the box. Because, while broad speculation about the future of mankind is rarely accurate, the more people become aware of what's possible today, the more they're able to visualize and connect the dots of what will be possible both in the near and distant future.

Augmented reality is the process of incorporating graphical, auditory, and other sensory content into everyday objects, paper, books, cereal boxes, billboards, and, really, pretty much every variety of surface you can imagine. However, it doesn't stop there. Because, by featuring encryptions that computers, special glasses, smartphones, and other varieties of gadgets can read, it allows people to view parts of the world as

if the internet, videogames, Saturday morning cartoons and every advertisement known to man, had jumped out of the screen and become a part of real life. Imagine advertisements or magazines that, when you look through your phone, or put on a special pair of glasses, become animated—featuring games, puzzles, streaming audio and visual content, all linked, and, Frankensteined to life, by the internet and sharing of information between the gadgets we use and the world we perceive. But wait, it gets even more intense. Because, right now, researchers and developers at MIT Media Lab, as well as many other schools, corporations, laboratories and nerdy basements all over the world are working on creating a manufactured sixth sense for mankind that further improves upon the basic premise of augmented reality.

At MIT Media Lab specifically, they have created a device called the Sixth Sense Apparatus, which is still very much a work in progress. Comprised of a small camera, projector, mirror, and, phone, all strung together in what looks like a glorified geek-gasm-necklace, the Sixth Sense Apparatus, in conjunction with four sensors placed on the fingers of its wearer, effectively allows for the integration of meta, or, virtual information, with any real-world surface or environment. And while, currently, this means that the individual wearing the device could, for example, project a number pad onto a wall, or their hand, and then dial a phone number, or stop to make a particular gesture with their hands and, simply by doing so, take a picture of what's right in front of them, the greater implications of this kind of technology and its widespread distribution, affordability, and, use, are so monumental that, really, it's like adding another sense to the human repertoire. And, this sense, combined with augmented reality, the internet, and, an all around virtual society will soon mean that every aspect of real life will be perceived and analyzed by us as if we were searching the web, playing a videogame, watching television, or, any number of the previously 'separate from reality' forms of media—permanently altering the ways in which we perceive the boundaries between digital information and real life.

Now, given that videogames have only been around for approximately forty-odd years, and, throughout that timeframe, have been perpetually gaining momentum, increasing in scope, complexity, immersion, content, diversity/variety and distribution, the very idea of accurately, or, even reasonably predicting where videogames will be in another forty years, is about as likely as winning the lottery while getting struck by lighting underwater. So, rather than go into a 'videogames in the next fifty years, or, God forbid, videogames in the next hundred years' I'm gonna take a moment to talk about the endgame of videogame development and the ultimate virtual simulation that absolutely everyone

will either want to play, or, is already unknowingly playing. Because, while nobody can see the future, and only time will tell what time will bring, I think that when it comes to the monumental, mind-blowing, unimaginable depth and direction of where we as a species are headed and how quickly we're moving towards wherever that may be, that one of the most important things to keep in mind along the way will be to keep an open mind.

For as long as there have been people, people have been trying to explain nature—whether it's the nature of themselves, their loved ones, animals, deities, dreams, imaginations, celestial bodies or their immediate environments—the question of 'why?' has been as much a part of the human experience as being human. And, even with the many theories that have been devised, religions that have been founded and answers that have been proposed, the nature of existence remains, as it always has been, an immensely complicated, mysterious and elusive web of endless questions answered only by the temporary solutions that people have been able to devise along the way. All of that is grounded is esoteric knowledge of objective truth occulted by those who wish to see humanity remain on a leash. But, with each new discovery and technological advancement that evolves our limited perception of the universe, and, complicates our explanations for why things are the way they are, we like to pat ourselves on the back, call it progress, and assume that one day if we continue to ask the question of 'why?' we'll find the answer. However, as much as I believe in the zealous and boundless curiosity of mankind, I hold the infinite possibilities of the universe in much higher regard. For now anyway :) The two may well come to align. I certainly hope they do! But we're not there… yet!

When it comes to the evolving mindset of explaining the nature of the universe as we perceive it, it may well be that videogames above all other things, will give us a greater appreciation for, not only, the ancient insights of spirituality/wisdom traditions, but, also, the answer for reality itself. As I've come to see it, the conceptions of reincarnation, second lives, heaven, hell, infinite regress, ascension and transcendence are all true of various insights here today and will be equally true of our future sight. Now, this isn't to say that Mario will embody the second coming of Jesus and Bowser will be Satan, or that people will be able to save their souls by twiddling their thumbs. ACTION in the real world is required! Instead, the point I'm getting at is a way to try and explain the nature of existence and answer the question of 'why?' by reviewing who, what, where and how we currently find ourselves perceiving this world. Because, as sure as our brains can't tell the difference between dreams and reality,

it's entirely possible that what we currently regard as reality is an equally convincing dream or game.

Yeah, you heard me correctly, I totally did just suggest that everything we know of is nothing but some kind of simulation or videogame and, yeah, I know how far-reaching that is. But, at the same time, why not? Maybe who you've come to identify yourself as could be nothing more than an avatar of something else playing a futuristic MMO or 'videogame,' within a game, within a game, forever and ever and ever, quite possibly, within the framework of yet another form of energy and consciousness outside of the known universe. Because, essentially, the reason I've presented this theory isn't to try and prove that it's true, but, rather, to suggest a technological way to conceive of the nature of the universe and varying forms of consciousness that exist therein, or may in fact, comprise the entirety thereof. And, really, when you stop and think about the speed and frequency of tremendous advancements in technology, the fickle nature of our grasp on reality, the unknown 'end' that we all face in death and the infinite possibilities of the natural world, when it comes to the idea of what playing videogames in the future will be like, I don't think there's any better example than what we currently regard as real life.

Anyway, regardless of whether or not you've found the many points made in this book to be persuasive, biased, mind-blowing, stupid, simplistic, or simply confusing, the truth remains the truth. It is our moral obligation to both discover what that truth really is and to most accurately align ourselves with it. Science, not unlike perception, is malleable and constantly changing—never proving, only 'disproving' the ways in which we perceive the universe around us, as well as our conception of what is or is not possible. And, thanks to the technological advancement of the times and the advent of the videogame age, a new window of perception is opening before us, allowing us to not only better study and understand ourselves, but the very nature of existence as well.

So, now that you've read this book, it's hard to say exactly what you'll take away from it or value after the fact. Because, despite all the information, facts, rumors, assumptions and misconceptions spiraling in and out of control throughout this world we call home, we're still stuck here on this planet together—whether it's 'real' or not. And, for myself at least, I intend to spend that time not unlike the times I frequently spend playing videogames—leveling up, gaining XP, gathering patches, expansions, exploring the lore, and, most importantly, remembering to play reality. Not because I think it's 'only a game.' But because I value this game of life more than any game I've ever played.

Special Thanks:

✌

"Sometimes you gotta just tape bacon to a cat"—listing for trade goods I saw one time in a WOW auction

"Videogames are bad for you? That's what they said about rock and roll."—Shigeru Miyamoto

Oh yeah, before we do the whole 'special thanks' thing, remember that exception I was gonna mention later about animals all over the planet dreaming every night? Well, here it is: there's a specific type of Anteater that doesn't have REM sleep. And, really, I have no idea why… it's just freaking weird, dude. But, hey, who knows, maybe the very foundation of reality, or, God itself, is nothing more than an Anteater? ;D

Also, since I'd like to thank my mother for helping me write this book, who'd also like to thank me for helping her write it, we're basically just thanking ourselves. So, we'll just skip over that part and give a long list of names that you may or may not have heard of, or, may or may not be one of. Thanks for reading!

Teace Snyder's Special Thanks: Thomas Snyder, Lynda Phillips, (everyone who read this book before it was released), Aksel Stasny, Chris Semenuik, everyone involved in truth movements with the exception of anti-Semitic douche bags and, or/ violent, illogical, hateful, douche bags, God's dog: Jeff (at least that's what I call him), frosting—chocolate especially, my cat's (they can't read so I don't actually have to write their names), videogame developers who are passionate and brilliant, and everyone out there who's taking an active part in making this a better, happier, more balanced, more knowledgeable, interesting and interconnected world—change is good and nobody can do it alone.

PS… If you want to understand the objective truth that underlies our perceptual realities, study Natural Law. Welcome to the real, real world ;)

Works Cited

"The wide variety of info featured in this book comes from my mother's lifetime of research, teaching and study as well as my lifetime of videogame play/experiences. There are a lot of points that are made throughout the book that have references mentioned but lack direct citation. And, while that may be frustrating to people suffering from fact-checking OCD, nevertheless, the decision was made to keep things casual because if the guy who wrote 'A Million Little Pieces' could get on Oprah that way, then hey, maybe so can we? (The last part of that statement was a joke, lighten up people)"—Teace Snyder

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