

Children and Hyperreality

The Loss of the Real in Contemporary Childhood and Adolescence

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Preface

This book is about American children and adolescents and the surreal landscape of our culture. It argues that increasingly children and teenagers live and spend much of their time in simulations, rather in than the natural or "real" world. It is an argument, which if true has serious implications for not only our children but also for the future of our society.

This is a book that has been profoundly influenced by recent events—in particular the murders at Columbine High School in Littleton, Colorado. Research for the book was, in fact, begun some time before the tragedy in Colorado, and continues a line of inquiry I first began with the publication *Video Kids: Making Sense of Nintendo*, which examined issues of violence, racism and gender discrimination in video games.

I argue in this book that the unreal, the simulation, the *simulacra* has been substituted for the real in the lives of

our children. This occurs at many different levels: in the video games that are so much a part of the experience of contemporary childhood, in the shopping malls and "commercial civic spaces" that we occupy, in the television programs, advertisements and movies that increasingly occupy our time, in the theme parks where we vacation, in the online chat and discussion groups through which we communicate and exchange information, in the fast food restaurants with their hyper-processed food that separates us from the land and traditions of the family, and finally, in the images of beauty and sexuality that run as a powerful undercurrent through much of our culture and the lives of our children.

As suggested above, the hyperrealities that increasingly shape and define the experience of childhood and adolescence come in many different shapes and forms. Some are clearly more detrimental than others.

Like Timothy Luke, I largely equate the "hyperrealities" of our culture with "mediascapes". These hyperrealities are critical to the formation of contemporary modes of mass production and consumption. Emerging as part of a new postmodern culture whose origins can be traced back to the period immediately following the Second World War, they are increasingly becoming the "reality" for our culture. In doing so, Luke argues that the: "New technical and economic forces are creating a more culturally impoverished and ecologically destructive world system, which is now based upon attaining the complete commodification of all aspects of human life." According to Luke, with the emergence of "informationalization" we can see corresponding "declines in several different but interrelated spheres—environmental quality, urban life, material living standards, cultural vitality, popular political effectiveness, and ordinary everyday community."

I want to emphasize in this book the extent to which these different hyperrealities come together to create much of the contemporary experience of children and adolescents. I believe that while this construction is intensely engaging for children and adolescents—as well as for adults—it is ultimately highly toxic. What serves to titillate and excite children and teenagers does not necessarily make them better. What serves corporate America and its profits does not necessarily help children and teenagers grow and develop in ways that maximize their potential. What serves our personal needs or interests as adults does not necessarily serve the needs of children and adolescents.

The American public needs to understand better that childhood and adolescence are social constructions. To be a child or a teenager is not simply defined by one's age, but by the artifacts of culture and society that surround them. Childhood and adolescence are, in fact, social and cultural constructs, ones that we as a society are responsible for having put in place.

As a researcher primarily interested in issues of literacy and the cultural construction of childhood and adolescence, I have looked at topics ranging from video game violence to what it means to learn and be part of a community in cyberspace. Parents and the media often ask me if I can show causal relations between things. Do video games, television and films actually make children more aggressive and violent? Does media negatively influence children and adolescents? Is online culture a good environment for young people? It seems that in asking these questions people want to point to a cause to explain how or why our children and teenagers behave in the way they do.

Psychologists, media specialists and other types of researchers have tried to answer these questions through careful experimentation and the careful tracking over time of individuals and their development. As indicated by many of the studies cited in subsequent chapters of this work, it seems clear that media in the form of video games, television and films, can often be highly detrimental in terms of the best interests of the children who engage in the them, and for American society and culture in general. While such research can be useful, I think

that there is an even more important need to describe the assumptions of our culture and how we construct childhood and adolescence.

We need to understand the geography and terrain of the cultural landscape that children and young adults occupy. This book is an attempt to describe some of the important features of this geography. I believe that understanding the role of hyperreality in the lives of our children and teenagers is key to this process. It is one that we cannot afford to ignore either in terms of the needs of our children or those of our society and its future.

* * *

I would like to thank the many people who have helped me in writing this work. First and foremost are my thanks to Asterie Baker Provenzo, companion, editor and constant constructive critic. Alan Whitney, computer techie par excellence provided me with insight and information about current computer game culture. Jenny and Peter McLaren hosted me in Los Angeles in the summer of 1998, as I explored the ins-and-outs of the video game industry at the Computer Game Developers' Conference in Long Beach, California. Many of my graduate students at the University of Miami have helped me as I have tried to find my way through the issues in this book. I would particularly like to thank my graduate student Keith Graziadei and Lina Chiappone for their ideas and insights as this study was researched and written.

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Chapter 1 Introduction

There was a child went forth every day,

And the first object he look'd upon, that object he became.

—Walt Whitman

The fantastic and the surreal have always been part of Western culture. Medieval mystic St. Catherine of Sienna,

Renaissance painter Hieronymus Bosch, fairy tale authors such as the Grimm Brothers and Hans Christian Andersen, surrealist artists Salvador Dali and Joseph Cornell and science fiction authors like William Gibson all include elements of the fantastic and the surreal in their work.

In the postwar era, the fantastic and the surreal have proliferated throughout American culture as a result of technologies such as film, television and the computer. Hyperrealities and mediascapes have become a regular part of our experience. One need only turn on the television and watch the advertisements for a little while to see the extent to which this is the case. Magic and the fantastic are found everywhere. A recent television advertisement, for example, shows a sports utility vehicle speeding across the countryside. The countryside it is driving across, however, morphs and transforms into animals including bears and lions. The deceased actors Fred Astaire, John Wayne and Humphrey Bogart appear in advertisements, selling products that did not exist when they were alive.

Often the images we see in contemporary advertising are more dreamlike than real. The line between the real and the unreal becomes unclear. We start to equate what we have seen on television or in the movies with something that actually happened. During his presidency, Ronald Reagan, on a number of occasions made reference to stories he had seen on television and in films as though they were true stories—not fictions created as part of some entertainment.

Following the horrific bombing of the World Trade Center in New York on September 11, 2001, many people commented on how the scene of violence, destruction and death was familiar since they had many times seen similar scenes in movies. As the actor James Olmas explained: "We've grown accustomed to watching so much violence on television—the shot of the plane hitting the building was like a special effect—so we were not really able to grasp the full horror of the situation until we saw the faces."

Examples of the blurring between the real and the fantastic are found everywhere in contemporary media. In the wildly popular science fiction movie "The Matrix" the main characters are disembodied computer programs that live in a digital construct. So integrated are they into this fantastic world that they do not even know that they are functioning as computer programs in a simulation, and that their "living bodies" are stored deep beneath an earth which has been destroyed as part of a nuclear holocaust.

In video games children and adults can enter highly detailed simulations including complex virtual worlds like "Myst" and "Riven", or "first person shooters" like "Doom" or "Quake." In these games they can explore an alien landscape, solve puzzles and intellectual challenges, or ruthlessly hunt down and murder their enemies.

Online, people occupy chat and discussion rooms where they assume alternative personas. They can participate in cybersex or even be threatened by the possibility of digital assault or rape in an online environment.

Several contemporary social theorists have come to recognize that these fantastic and surreal forms dominate contemporary culture, and that we are substituting them for much that is real. This process in particular has come to be associated with the concept of "hyperreality."

Hyperreality

Hyperreality is a concept developed by the French social theorist Jean Baudrillard. It has been expanded and delineated by a number of other critics as well, and essentially argues that we have entered a world in which media such as television and computers have created a culture of simulation in which the "hyperreal" takes the place of the real. According to Baudrillard, we are in a world where there are:

No more mirrors of being and appearances, of the real and its concept. No more imaginary coextensivity: rather, genetic miniaturization is the dimension of simulation. The real is produced from miniaturized units, from matrices, memory banks and command models—and with these it can be reproduced an infinite number of times. It no longer has to be rational, since it is no longer measured against some ideal or negative instance. It is nothing more than operational. In fact, since it is no longer enveloped by an imaginary, it is no longer real at all. It is hyperreal, the product of an irradiating synthesis of combinatory models in hyperspace without atmosphere.

For Baudrillard, contemporary culture has substituted the map or simulation of things for reality. In *Simulations*, for example, he describes how the Argentinean writer Jorge Luis Borges created a tale where the cartographers of an empire drew a map that was so detailed that it covered all of the things it was supposed to represent. When the empire fell into decline, the map rotted away, merging with the soil it had once covered and obscured. What is left is a hyperreality, what Baudrillard describes as:

...the generation by models of a real without origin or a reality: a hyperreal. The territory no longer precedes the map, nor survives it. Henceforth, it is the map that precedes the territory—*precession of simulacra*—it is the map that engenders the territory.

At what point does the simulation act as a map or guide to the reality that we are trying to decode? At what point does it obscure that reality? When does it become the reality? How do we distinguish the real from the unreal? These are the ultimate questions raised by Baudrillard about the culture of simulation and the meaning of hyperreality.

As mentioned earlier, there are many discussions of hyperreality beyond those of Baudrillard. The Italian semiotician Umberto Eco talks about holography, Disneyland and reproductions of da Vinci's painting "The Last Supper" as being hyperrealities. According to Douglas Kellner, a hyperreal society of simulations also includes interstate highways, urban freeways, fashion, media, architecture, housing developments and shopping malls. In this work, I am interested in hyperreality as it pervades our culture and the experience of children and adolescents.

The Postmodern Child

The experience of childhood and the social construction of the family are not what they used to be. Both have gone through a series of profound changes as a result of the emergence of postmodern culture. New family

structures are changing the experience of childhood. The traditional nuclear family (Mom, Dad and two or three children) is giving way to a much more complex and fluid model of family—what the psychologist David Elkind refers to as the "permeable" family. As Elkind explains:

Over the past half century, profound shifts in our ways of perceiving, valuing and feeling about ourselves and our world have radically altered American society and reconfigured the American family. We find these changes—which have been described as the movement from modernity to postmodernity—both liberating and stressful. The modern nuclear family, often idyllically portrayed as a refuge and a retreat from a demanding world, is fast disappearing. In its stead we now have a new structure—the postmodern permeable family—that mirrors the openness, complexity, and diversity of our contemporary lifestyles.

Since the early 1980s writers and researchers have recognized changes in the family and childhood. Neil Postman, Marie Winn and David Elkind, have observed that the distance separating children from adults has narrowed and in many instances has become negligible. Children today are again wearing clothes identical to those worn by adults—much as they did in late Medieval and Renaissance childhood. As in earlier eras, adult sexuality is less concealed from children. Young children often watch adult films and television. Children and adolescents are the targets of marketing by fast food companies like McDonald's and Burger King, as well as clothing companies like the Gap and Calvin Klein.

As Postman has pointed out, before television came to so dominate our culture, it was easier to keep adult knowledge from children. Books and magazines with adult ideas and information could be regulated. Television cannot be regulated to the same degree.

...Television erodes the dividing line between childhood and adulthood in three ways, all having to do with its undifferentiated accessibility: first, because it requires no instruction to grasp its form; second because it does not make complex demands on either the mind or behavior; and third because it does not segregate its audience.

The notion of the child being an innocent, someone protected from the harsh realities of adult life, is becoming less plausible. In the past, one had to learn to read to have access to the "secret" knowledge often found in books. Today, television provides ample information about sex, violence, and any number of adult subjects. Movies with restricted or "R" ratings are broadcast regularly on commercial television with the disclaimer that "Due to the mature nature of the subject matter of the following film, parental discretion is advised." The Internet and World Wide Web make available vast amounts of information that children have traditionally found hard to obtain. Children routinely have access through cable, videotapes and lax theater policies to films intended for much older audiences.

The idea that contemporary childhood—and in turn adolescence—has been transformed as a result of changes in the family, work and media has been dealt with in sufficient detail, that it does not need to be discussed in this introduction. What has not been recognized sufficiently is the extent to which these changes in the conditions of childhood have also taken place in the context of children experiencing and living through the hyperreal, rather than the real.

Hyperreality dominates the experience of contemporary children. To use Borges and Baudrillard's metaphor, we

have substituted "the map" for "the territory" with children and adolescents. Children and adolescents in postmodern society have, to a large degree, replaced experience with reality and the natural world with models and simulations. The *real* has been replaced by the *hyperreal*.

Hyperreality, Media and Narratives of Violence

What are the stories American society tells its children? Where do they learn these stories? Many are told in different forms of media ranging from television and film, to rock music and computer or video games. Overwhelmingly, these stories are violent. In particular, with film and television, and increasingly with computer games, "technology has transformed violence into a spectacle of stunning beauty." As Peter McLaren and Janet Morris explain:

Violence when it's stylized, when it's choreographed and hyperaccelerated or played in slow motion, when it is set to the strains of a poignant Beethoven sonata, the minimalist pulses of a Philip Glass creation, or the tremulous strains and corrosive screams of a Diamanada Galas vocal, can be thrillingly sublime and breathtakingly beautiful. Since the advent of cinema and television, we've been blessed with endless variation: severed heads floating through the air in all the splendor only freeze-frame decapitation can convey; severed arms gliding down elevator shafts while still pulsing arcs of blood; hideously dislocated jaws and cheekbones shattering beyond recognition; noses crumbling like beer cans; eyes gouged by lightning-swift fingers trained by Shaolin priests; skin ceremoniously flayed, revealing as the victim screams, shiny bone laced with blood vessels; intestines greedily gobbled up by lip smacking zombies who look like your Uncle Roger after a night out on the town; mutants giving birth to talking heads; and aliens thrusting about chest cavities like restless adolescents trapped in a small town, finally shooting through their jagged rib cages, snarling giddily past their first few gulps of oxygen.

Narratives of the type described by McLaren and Morris are common in the programs, and particularly movies and video games, viewed by children and teenagers. Through their emphasis on the hyperreal, they distort reality through a trivialization of violence and the effects it has upon human beings.

In addition, I believe that hyperreal violence of this type encourages children and adolescents to assume a rhetorical stance which equates violence with style and personal empowerment. Hyperreal narratives of violence challenge the "real" world and the potential of children to understand it. As Timothy W. Luke explains:

The material means of generating hyperreality are mainly the electronic media. Traditional notions of causality, perspective, and reasoning are undermined completely by the electronic means of information, which efface the differences between cause and effect, ends and means, subject and object, active and passive.

It seems clear, for example, that the recent epidemic of school shootings, including the suicide of two killers, the death of a teacher and 12 students and the wounding of 23 others in Littleton, Colorado on April 20, 1999, clearly demonstrate how the electronic media have encouraged children and teenagers to assume a rhetorical

stance which equates violence with style and personal empowerment.

It is also clear that these acts are examples of how children and young adults are blurring the lines between the real and the hyperreal, and how actions constructed in the unreal worlds of simulations such as video games and movies are becoming realized in violent acts like school shootings.

The consequences for children of this hyperreal rhetoric of violence is discussed by Deborah Prothrow-Stith in *Deadly Consequences*, where she describes her rotation as a medical student in the emergency room in Boston's Brigham and Woman's Hospital. There she describes how children were often brought into the hospital's emergency room who had been shot with a gun and were surprised at how much it hurt. For them, as well as many adults, violence was cool, without (up until then) serious consequences. According to Prothrow-Stith, they obtained this impression largely from the media:

The mass media lie about the physical and emotional realities of violence. As a graduate of the emergency room I know better than most that in real life, mashed and mangled bodies are not attractive. Neither is the emotional pain that violence causes. The remorse of those who resort to violence, even justifiably; the rage and humiliation of victims, the life-destroying impact of permanent injury; the endless grief of family members; the smashed psyches of children who lose parents—these crucial elements of the story are usually left untold on television and in the movies. In real life, the impact of violence reverberates through time.

In fact, it does matter that violence is made into a game or into a surrealistic or hyperreal narrative for children. It does matter that characters in films portrayed by actors such as Arnold Schwarzenegger and Sylvester Stallone suffer injuries without consequences. It does matter that children engage in computer and video games that involve "mortal combat"—games which can be played repeatedly, yet whose characters never actually die, or are never permanently injured. It does matter that violence and only violence is a solution to problems in electronically constructed hyperrealities. It does matter that children admire and imitate the moves of television characters such as the Mighty Morphin' Power rangers, who sustain near lethal injuries with little or no consequences.

All of this matters because our children are not being taught to reason before they act, nor are they being taught the concept of cause and effect. Many children, if not the population in general, have come to believe that the hyperrealities of violence so dominating the various forms of electronic media are real and that the narratives of violence included in our culture's mediascape are normal. After all, as television and computer game moguls love to remind us, the violence they depict in media merely reflects the violence that exists in society.

In fact, the hyperrealities of media violence grossly exaggerate violence as it actually exists in the culture. Very few of us have actually seen the violent death of someone, an assault or a rape, yet hyperreal images of rape, torture and murder are channeled into our culture through television, film and video games as though they are normal.

These violent hyperrealities are a mythic form whose function and message is different from earlier literary and cultural forms used to educate and socialize children. These narratives are not like Aesopic fables, where actions have consequences. They do not follow in the even more violent tradition of fairy tales, which challenge the child to overcome adversity while directing "the child to discover his identity and calling, and they also suggest what

experiences are needed to develop his character further."

There is the hyperreality of the computer and the online culture of the Internet and World Wide Web; of advertising and consumer culture; of our suburban neighborhoods with their shopping malls and cookie cutter homes; of television and the movies; of music preoccupied with death and violence, of theme parks like Disney World ; and even of food that is eaten but does not nourish.

These are the themes that constitute the rest of this book. Their significance, and the significance of hyperreality, lies not so much in their individual effect and meaning, but instead in the ways they combine together to uniquely define the experience of children and adolescents in postmodern America. Understanding their meaning is critical to our culture, our children and our future.

Chapter 2

Video Games and Hyperreality

You can learn a lot just by watching.

—Yogi Berra

The idea for this book came very clearly into focus when I visited "The GameWorks," an electronic video game arcade located in South Miami, shortly after it opened in the spring of 1999.

The GameWorks is a hugely popular project originally conceived by Steven Spielberg and Skip Paul. Its parent company, Sega GameWorks, was formed in 1996, as a joint entertainment venture between SEGA Enterprises, DreamWorks S.K.G., and Universal Studios, Incorporated. The first GameWorks opened in March 1997, in Seattle. Within its first year and a half of operation, GameWorks had opened five sites which were visited by over nine million people visit it. By the summer of 1999, a total of eleven sites were in operation including arcades in Miami, Florida, Seattle, Washington and Tempe, Arizona.

Each GameWorks has its own unique characteristics. Many "signature" games, however, can be found at virtually every GameWorks site. These include "classic" computer games from the 1970s and 1980s such as *PacMan* and *Ms. PacMan*, *Centipede* and *Asteroids*. *Vertical Reality*, a totally new "signature" game is described by GameWork publicists describe as providing "the most intense gameplay imaginable, in which players experience physical consequences based on their skill level—ascending as they succeed up to 24 feet and descending as they get hit." *Virtual Arena* "has guests swinging, kicking, punching and jumping. The player's every move is mimicked by his/her on-screen character, which makes for a truly dynamic and engaging battle."

Other typical games include: *Indy 500 Formula*, *Daytona USA*, *Top Skater*, *Wave Runner*, *Alpine Surfer*,

Harley Davidson and *Rapid River*, as well as Pool, Foosball and Air Hockey.

At the entrance to the GameWorks in Miami is a device called the "Virtual Arena." It is described by its creators as ushering "game enthusiasts into a new dimension where live action and the virtual video game world collide." It is described on the GameWorks official web site as featuring:

...two player rings which each contain an opponent. After selecting their character, the player and the character become an integrated machine. The proprietary ThunderCam Motion Recognition technology allows each player's move to be mimicked by their on-screen character, which makes for a truly dynamic and engaging battle. Players use only their bodies to control their character's movements and do not use joysticks or wear attachments. With greater mobility than ever before, the combat experience becomes more engaging for the players and the spectators. Any move that traditionally has been triggered by a joystick and button can be executed by a player's own movement.

The Virtual Arena, according to the publicists at GameWorks "is quickly becoming GameWorks most popular game, fighting its way into the game-play records at each of the five GameWorks flagship destinations." Described as a "physically challenging combat experience," not just players, but observers, congregate around the game.

According to Michael Montgomery, president and CEO of Sega GameWorks—one of the sponsors of GameWorks:

Virtual Arena is by far the most intense live-action hand-to-hand combat experience ever created... Superior technology offers players an exciting new way to play and GameWorks is thrilled to be the only one to have it.

With their flagship game described as "the most intense live-action hand-to-hand combat ever experienced," it is interesting that the publicists for GameWorks came to the conclusion in the same document that GameWorks, under the leadership of its creator Steven Spielberg, has created "the quintessential entertainment destination, delivering the best social experience around games."

When I entered the GameWorks in Miami for the first time, the experience took on an immediately surreal quality. I was immediately bombarded by conflicting noises ranging from bombs and explosions going off, to race car sounds and rock music. Right at the front of the arcade was the Virtual Arena. Inside one of its circles a little girl was learning to punch and kick and throw karate punches. She was wearing a long white dress with a lace fringe on the top that you might expect to see on child in the late Victorian period.

Her parents accompanied the girl. While chatting with them informally, while she entered the Virtual Arena, I learned that the little girl's name was Christina and that she had come to the GameWorks for her sixth birthday. As she stood in the playing circle of the Virtual Arena she seemed awkward and confused. Her parents encouraged her to throw a punch, to kick out with her foot, to be more aggressive, and to watch what she was doing being replicated by the video game figure on the giant television screen in front of her. Soon she began to get the hang of it, translating her thrusts and kicks into the actions of the animated figure on the screen in front of

her.

As she did so, Christina became more and more confident. In a few minutes she was fighting different video opponents with a flurry of kicks and punches from her tiny arms and legs. As I watched her, it was clear that she was occupying two different spaces. The first a physical space in the GameWorks with her parents, and the second, as part of an extremely violent hyperreality in cyberspace.

Some would argue that GameWorks' Virtual Arena is only a game. I would argue that it is much more than just a game. I would insist instead that it is a powerful metaphor for contemporary childhood. It reflects how children occupy multiple physical and simulated realities, their foot literally with a step in each.

GameWorks Versus the Traditional Penny Arcade

As a child I spent a great deal of time in places that on the surface looked a lot like GameWorks. My grandfather owned a cottage in Crystal Beach, Canada—about 10 miles from Buffalo, New York. At that time Crystal Beach was the largest amusement park in Canada—a wonderfully seedy collection of roller coasters, fun houses, Ferris wheels and arcades. I would spend weeks each summer staying with my grandfather—playing cards on the porch, swimming in the lake, and hanging out at the Penny Arcade that was my favorite place in the whole park.

The Penny Arcade was a little dangerous and very tacky. It was also safe. You could go there without your parents. There was a woman in a metal and glass enclosed booth who watched the place and gave you change. There were shooting games where you used a crude rifle based on optical beam technology that made it possible to shoot a bear running around on a mechanical track. There was a Skee-Ball—"a game of skill"—in which you rolled balls up a ramp into a series of smaller concentric circles, each awarding a higher set of points and the possibility of larger numbers of prize tickets. There were machines that measured how strong your grip was, photographs of pinup girls viewed through a dim binocular viewer that only adults could use, and the pinball machines, which were the main attraction of the arcade.

The arcade was a roofed structure open on all four sides. It was intensely physical. You could feel the breeze from the lake, smell the cotton candy and hot sugar waffles, and hear the sounds of the different pinball machines in play. In this sense, it was a very different place from the cave-like space of the GameWorks with its low lighting and luminescent screens.

The Penny Arcade at Crystal Beach was essentially a mechanical and analog space. The GameWorks is a hyperreal and digital space. The assumptions underlying the old Penny Arcade and the GameWorks are profoundly different. As I explained in *Video Kids*:

Digital systems such as computer games "recreate" an object or thing from binary code; each version is virtually identical. Analog systems, such as pinball games create a physical model or approximation. Although similar—that is to say analogous—no two versions in analog systems are exactly alike. Thus each pinball machine, because of slight differences in construction, is likely to have a character and meaning uniquely its own. By comparison, the computer game is virtually the same in every version.

Sherry Turkle argues that the video game is liberated from the mechanical limitations of the pinball machine. It is also liberated from a sensate and three-dimensional world. Each pinball machine has its own unique characteristics and personality. There were certain machines at Crystal Beach that were more sensitive to being "tilted" than others. Playing a truly great game of pinball required physically pushing and pulling the machine physically—understanding how it was "set"—and taking it to the very edge of being shut down by a tilt.

In a subtle way, the pinball machine established limits within which it could be played. Video and computer games do not have the physical and sensate limits of the older arcade games. They are by definition *extreme*—that is pushing the absolute limits of what can or cannot be done.

In fact, the evolution and increasing technical sophistication of computer and video games over the past twenty-five years has been remarkable. In the mid-1970s there was *Pong*, Atari's simple electronic table tennis game. *Pong* was followed by *Space Invaders* in which row on row of alien space craft descended towards the earth and were shot at by the player whose mission was to stop the alien invaders from taking over the planet. *Space Invaders* was followed by *Missile Command* in which the player destroyed incoming nuclear missiles before they could annihilate civilization. From *Space Invaders* and *Missile Command*, video games evolved into *PacMan* with its obsessive "munching" and consumption of every object in sight. *PacMan* was, in turn, followed by the introduction of home machines by companies such as Nintendo and Sega with games like *Super Mario Brothers*, *Double Dragon II* and *Mega Man*.

The computer games found at the GameWorks are several generations in sophistication beyond the video and computer games of the early and mid-1990s. Many are entering a new level of sophistication, beyond anything previously experienced. In *Jurassic Park*, for example, two players are buckled into a sophisticated simulator of a jeep. Armed with machine guns to fight off marauding bands of dinosaurs, the players try to shoot them before they break into the jeep.

On the surface, the game is much like any of the more traditional video games with a "shoot 'em up" theme. Its actions mimic reality more than most games however. Essentially, the game's action is projected in front of the two players' on a large screen. The physical rush of moving is produced by a hydraulic mechanism—a virtual reality motion simulator—connected to the seat of each player. The breath of dinosaurs bearing down on you, like a Tyrannosaurus Rex, is produced by jets of air that shoot down on you from above as the beasts get too close to you.

Even without the motion simulators of games like *Jurassic Park*, computer game systems are becoming increasingly realistic. They are also becoming more violent. The newest wave of video games using 3-D modeling and digitized video is, in fact, becoming more like film and television than what we traditionally expect of a video or computer game.

As David Walsch, President of the National Institute on Media and the Family has pointed out "As technology advances, each generation of violent games became more graphic and extreme." Future generations of video and computer games promise remarkable "realism." Sony's Playstation II, for example, is a machine designed to retail for less than \$500. Based around a microprocessor co-developed by Sony and the Toshiba company called the "Emotion Engine," it can create motion in "real time" at a speed twice as fast as the most powerful engineering work stations in existence.

Mark Pesce has argued that "Computer simulation is on a fast track toward the creation of a new generation of products that will make the virtual seem virtually real." Shin-Ichi Okamoto, Sony's vice president for research and development reported that he had failed the game community by making the Sony PlayStation 2 300 times faster than the PlayStation 1. The PlayStation 3, scheduled for release in 2005 will, according to Okamoto, be 1,000 times faster than the PlayStation 2. As Pesce explains: "After 2005, the simulated and the real will look pretty much the same."

According to Larry Smarr, director of the National Center for Supercomputer Applications in Champaign-Urbana, Illinois, technologies like the Sony PlayStation represent "the transition from people playing video games to a world where we will create our own fantasies in cyberspace." According to Stewart A. Halpern, a Wall Street analyst at ING Baring Furman Selz, "the machine heralds the merger of film, television and the video game businesses."

Sony and Toshiba are not the only companies developing game machines with this type of computing power. Sega Corporation's Dreamcast machine is similarly powerful. Machines such as the Dreamcast can also be connected to the Internet, thus allowing individuals to actually play against others in real time. Microsoft also has its own machine—the Xbox, with a planned release date of November 2001.

Significantly, as the processing speed and power of computer game machines increased in the 1990s, so too has the ability of these machines to copy reality, leading to the creation of startling real simulation games like *Myst* and *Riven*. It has also led to the genre of games known as "first-person shooters."

First-Person Shooters as Hyperrealities

First-person shooters were developed as a direct outgrowth of the increased computer power of the early and mid-1990s. The two most famous creators of first-person shooters are John Romero and John Carmack. Romero has been described by another game developer as "the Paul McCartney and John Lennon" of the computer game business." Together Romero and Carmack created *Doom* and *Quake*—the two most successful first-person shooters, and among the most successful computer games of all time.

Doom and *Quake* are both 3-D games that can both be played online or on a computer. They are part of an evolution of video and computer games going back to *Mortal Kombat* and *Castle Wolfenstein*. Romero and Carmack, in fact, first made their presence known in the gaming industry by producing *Wolfenstein 3-D*. *Wolfenstein 3-D* is considered by many the original "first-person shooter" game.

First-person shooters are games that provide the player with a real view perspective of the game. This is very different from the earlier tradition of "3rd person fighting" games like *Street Fighter II* or *Mortal Kombat*, in which the player viewed small cartoon figures on the screen and then controlled their actions by manipulating them through a game controller. In contrast, a first-person shooter actually puts you inside the action of the game. The barrels of weapons like pistols and shotguns, are placed at the bottom center edge of the computer screen. You can point/look right or left, up or down, by manipulating the computer mouse or game controller. The effect is one of literally stepping into the action of the game as a participant.

Introduced in the early 1990s, *Lethal Enforcer* was one of the earliest games to incorporate first-person shooter elements into it. Still found in video arcades, *Lethal Enforcer* was also widely distributed in the home

market through game systems such as Sega.

In many regards *Lethal Enforcer* is highly realistic. The player uses a light gun which is a replica of a 375 Magnum revolver. The game involves shootouts that take place in banks, chemical plants and airports. The advertising copy on the back of the Sega version of the game suggests that: "Your type of street cleaning takes place where the dirtiest deeds go down. But first, a training level lets you target practice and take out your frustrations, then on to reality." The implied lesson of the game is that you can solve your problems with a gun, and that you move from the hyperreal experience of the simulation into reality.

A label on its box states that *Lethal Enforcer* is rated "MA-17" or "Not appropriate for minors." This is part of the voluntary, and less than effective, rating system put into effect by the video game industry following Congressional Hearings in December 1993. It does not, however, guarantee that the game will not get into the hands of children. Nor does it stop a child from purchasing the game in a toy store, or renting it from a video shop or playing it in an arcade. In fact, over the years I have seen the game being played many times in arcades by children no older than seven or eight—children young enough that they had to stand on a stool or chair to be able to reach the gun attached to the front of the arcade version of the machine.

Games that employ a first-person shooter model represent a significant step beyond the tiny cartoon figures that were included in games like *Mortal Kombat* in the mid-1990s. In fact, there has been a continuous evolution of the realism of these games as computing power has increased and become cheaper. In *Mortal Kombat*, for example, human actors were filmed in a wide-range of martial arts poses. These were incorporated into the action of the game characters, resulting in a much more realistic depiction than earlier martial arts video and computer games.

An even more important breakthrough came in the summer of 1993 when the Sega Corporation introduced the video game *Night Trap*. *Night Trap* was based on a very simple virtual reality model in which the player walked through the different levels of a mansion in rural California trying to rescue girls in a college sorority from the clutches of evil figures in black hoods.

It turns out that the black-hooded figures in *Night Trap* are actually aliens who hold their captives still with a giant claw and drill into their necks with a giant motorized drill. When their victims pass out after much screaming and carrying on, they are carried away to the basement of the house where their blood is drained into wine bottles.

Night Trap was an enormously silly computer game. It is none-the-less significant, in that its characters were among the first to be totally based on the use of digitized film or video. Human actors played out the various scenes of the game, and in turn, greatly heightened the realism of what took place on the screen.

Tom Kalinske, the President of Sega when *Night Trap* was released explained in an interview on British television that: "All we are doing is interpreting what one sees in the world today and making some game play out of it... I would think that teachers would think that it's a positive that a child can expand his fantasy, expand his horizons and enter into a fantasy world where he's thinking all sorts of things he's never seen before." Such a suggestion is particularly ironic when one remembers that the students involved in recent school shootings like those in Paducah, Kentucky and Littleton, Colorado, were heavily involved in playing first-shooter computer games.

Kalinske is a bit like the Steve Martin character in the film *Grand Canyon*, who makes violent B-grade action

films. In the film, Martin's character is shot by an armed robber. Traumatized by the violence committed against him, Martin's character declares: "I can't make another piece of art that glorifies violence and bloodshed and brutality... No more exploding bodies, exploding buildings, exploding anything. I'm going to make the world a better place." When asked several months later by a friend how his "new direction" is working out, Martin replies, "Fuck that. That's over. I must have been delirious for a few weeks there." Having said this, Martin then uses the same defense Kalinske does for Sega's games: "My movies reflect what's going on; they don't make what's going on."

Games like *Night Trap* and *Lethal Enforcer* are important because they are some of the first games to use cinematic elements, as well "real view" game perspectives in a computerized virtual reality system that places the player in the actual action of the game. This is what first-person shooters like the *Doom* and *Quake* series do, only at a much more sophisticated level using 3-D graphics.

Doom

Blowing one's opponent away is the basic activity of most first-person shooters. The game *Doom* is typical. *Doom* was first introduced on the Internet in 1993. Id Software brilliantly marketed the game, allowing users to download the first two sequences of the game for free. Once hooked, they would have to pay for subsequent episodes. A total of 15 million games were downloaded worldwide and 150,000 sold directly.

The advertisement for *Doom II* sums up the game nicely: "Bloodthirsty DEMONS from Hell. GUT-SPATTERED Hallways. A Big-Ass, Nasty GUN in your hand. Life is GOOD." When you actually play the game, you choose any of five Skill Levels ranging from: "I'm too young to die"; 2. "Hey, not too rough"; 3. "Hurt me plenty"; 4. "Ultraviolence"; and 5. "Nightmare".

Doom II sold 1.5 million copies. The series was completed with *Final Doom*. The realism provided by *Doom* is perhaps best reflected in the fact that *Doom II* was adopted by the United States Marine Corps for training recruits. *Doom II* had many features that made it attractive to the military.

In 1995, under financial pressure to keep costs down while providing the best training possible, the Marine Corps turned to off-the-shelf video and computer games. As Lieutenant Colonel Rick Eisiminger, team lead of the Modeling and Simulation Office for the Marines explained: "We were tasked with looking at commercial off-the-shelf computer games that might teach an appreciation for the art and science of war." Dozens of games were reviewed and it was determined that *Doom II* could readily be adapted to the Marine Corp's needs.

In the Marine version of *Doom II*, military images and weapons are superimposed on the original game using digital photographs. The game is played with a four man team—just like an actual marine combat or "fire unit." Compared to training people with live ammunition, instructing military through the use of a game like *Doom II* provides an inexpensive and safe means by which to provide recruits with hours of practice at relatively little cost. The games are also perceived as being very effective. As Lieutenant Colonel David Grossman, a former Professor of Psychology at West Point, argues, first person shooter video games like the *Doom* series "are murder simulators which over time, teach a person how to look another person in the eye and snuff their life out."

It is particularly disturbing to note that Eric Harris, who along with Dylan Klebold was responsible for the Columbine High School shootings in April 1999, created his own customized game of *Doom*, which had two shooters, extra weapons, unlimited ammunition and victims who could not fight back. His modification of the game clearly model the key features of the Columbine shooting that he and Klebold carried out.

Using simulations to train people in the military makes perfect sense. Having navy pilots practice landings on an aircraft carrier in a flight simulator is an excellent way to give them pre-flight experience before they get into cockpit of an actual plane. Highly realistic combat simulations are probably the best way to give military trainees a sense of what warfare is really like without putting them seriously at risk.

The connection between the use of simulations and video games and the military is by no means new. In the early 1980s, military recruits at Fort Eustis, in Virginia, played the video arcade game *Battle Zone* in which realistically silhouetted enemy tanks, helicopters and armored personnel carriers were targeted and destroyed. President Ronald Reagan, the military's Commander in Chief during this period, argued that video games probably helped people prepare for the military.

What seems to be increasingly the case, however, is that there is a blurring between what is a game and what is the reality of war. During the Gulf War, for example, the American public was presented with warfare as though it was just another type of video game. Throughout early 1991, Americans spent night after night watching smart bombs and missiles zero in on their Iraqi targets. War looked just like the video games in the arcades. Following the Gulf War, video games based on military scenarios from the encounter became hugely popular. Spectrum Holobyte, for example, released a tank game based on the Army's SIMNET land combat training program. Absolute's *Super Battletank* put the player into the cockpit of an M-1A Abrams tank in Kuwait. As J. C. Herz explained in *Joystick Nation*:

Operation Desert Storm was just the ticket. It was the greatest thing to happen to interactive entertainment since Sonic the hedgehog. Everyone in America had seen missile footage through laser guided sites on television. Now they could play the war on their very own home computers. Within a year of the Gulf War, Spectrum Holobyte released a tank game based on the Army's SIMNET land combat training program. Shortly thereafter Absolute's *Super Battletank* put you into the cockpit of an M-1A! Abrams tank in Kuwait, where in a curious reversal of America's Gulf War odds, you got to play the U.S. Armed Forces as underdog.

The violence of the Gulf War was being translated into a "look alike" video simulation for the general public. Of course, what the video games, and the government's carefully edited film and video footage of the Gulf War did not show, was the actual death and destruction caused by the smart bombs and missiles as they zeroed in on the targets.

The line between the reality of warfare and entertainment has recently become even more confused with efforts on the part of the United States military to link the development of military simulations with the entertainment industry.

Late in the summer of 1999 the Secretary of the Army, Louis Caldera, announced that the Army was giving the University of Southern California \$45 million to set up a research center to create military simulations. At the new center, The Institute for Creative Technologies, film students and video game designers are supposed to work

together to create state-of-the-art multimedia systems that can be used for military training. Part of the idea behind the program is that technology developed for the military can also be used by the entertainment industry. Louis Caldera, Secretary of the Army, describes this as "a win-win for everyone."

If millions of dollars are spent to create highly realistic simulations of the violence found in warfare, and if it is shared as part of a "win-win" situation with the entertainment industry, then it seems obvious that the result will be the creation of increasingly realistic and graphic movies and video games.

Sharing simulation and video game technology in this way would seemingly be the height of foolishness. The military is using first-person shooters, and simulation technology because they are highly effective means of training people to kill. Making this technology available to the entertainment industry, where it can eventually filter its way into use by children and adolescents, let alone civilian adults, however, seems highly irresponsible.

Quake

Like Doom, the Quake series has been enormously popular. *Quake III* appears to be a more sophisticated version of *Quake I* and *Quake II*. The games are essentially very simple. The scenario of *Quake II*, for example, shows a deep space transporter making its way into a planetary system. Descending on a planet or moon (which is not clear), it releases dozens of spaceships into the atmosphere. The ships proceed to a massive structure—perhaps a futuristic city—where the player is introduced onto the surface of the planet.

At this point, the actual game gets underway. The player finds him or herself in a series of dimly lit corridors. Different resources can be collected such as points for health, weapons, and so on. Armor-clad opponents eventually appear who must be shot, or else they will destroy you.

Quake II is mostly about running around in simulations of multilayered rooms shooting at a relentless enemy. The game, as are many of the first-person shooters, is often described as having "adrenaline pumping action." John Carmack, the main creator of *Quake*, sees the game as being nothing more than "playing Cowboys and Indians, except with visual effects."

Quake, however, involves much more than Cowboys and Indians. The game includes blowing people's heads off and getting "gibs" ("getting it in the brains"?). In an interview when Carmack was reminded that in the past kids playing Cowboys and Indians weren't able to blow their brothers' heads off, his response was to laugh and say: "But you wished you could."

This is why the hyperreal violence of first-person shooters is so interesting and so frightening. Players are not responsible for what they do. As Mark Slouka explains in reference to the CD-ROM video game *Night Trap*, the game allows its players: "To inflict pain. Without responsibility. Without consequences. The punctured flesh will heal at the touch of a button, the scream disappear into cyberspace."

First-person shooter videogames profoundly distort the realities of violence. One of the most interesting characteristics of the games is the idea of multiple lives and "health." As a player fights and shoots his or her way through a game scenario, a meter measures the remaining "strength" or "power" of the player. Your "health" measure diminishes as you are shot or struck by an opponent. Having your "health" go to zero means that you lose the game. "Health" never seems to involve the delivery of a single fatal blow. In the game *Tomb Raider*,

"Lara Croft can take several bullets in the torso or get savaged by a tiger while losing only an eighth of her 'health.'"

First-person shooters let their players act out their most violent fantasies. Some say there is little difference between what goes on in a first-person shooter game and in playing a game of paint ball, where players divide up against one another and hunt each other down in a woods or elaborately constructed game room.

Paintball, however, takes place in the real world. You run around a little, get tired and winded and bumped and scrapped. There are serious consequences for getting out of control as you play—in other words—the fact that the game is physical and tangible means that it has limits. These limits include not only your own endurance, but the limitations, rules and procedures demanded by your fellow players.

In a game like *Quake* there are no boundaries or limits. One literally plays to one's limits. The more "extreme" one is—a terminology often used in describing the action of the games—the more likely you are to win.

Describing John Romero's first-person shooter game *Daikatana*, Paul Keegan explains how:

Physical reality suggests that you are sitting in a chair operating a mouse and a keyboard. But with the computer screen replacing your field of vision, you believe you're actually creeping around a corner, causing your breath to shorten. Afraid an enemy is lying in wait, you feel your pulse quicken. When the monster jumps out, real adrenaline roars through your body. And few things in life are more exhilarating than spinning around and blowing the damn things to kingdom come, the flying gibbs so lifelike you can almost feel wet blood.

What is going on here is clearly different than what goes on in just a game of Paintball or Cowboys and Indians. It is particularly frightening in light of the new technologies that are becoming available for video and computer games. In several earlier articles and book chapters, I have argued that as computers becoming increasingly powerful and we refine virtual reality simulators, we are creating a new and extremely powerful electronic medium—something that seems to be a combination of television and video games.

In addition to being interactive, this new medium can connect real players with one another in a virtual online space. Individuals playing the games can be located literally anywhere in the world. Thus instead of playing against the hard logic of a game's program, players are increasingly pitting themselves against other human beings. Unlike in the game of *Paintball*, however, you never need to actually confront your opponents.

Playing games online also changes the realism of the game. In conducting interviews and observations with teenage game players for this book, I discovered that they believed that online playing of the games against real people was much more intense than playing the game against the "machine."

Julian Stroleny, a high school Freshman, and an avid video game player explained why he and his younger brother Clayton are attracted to online gaming. According to him, "Online is a lot harder. It's just funner." Playing requires you to anticipate the moves your opponents, rather than just "having them standing there for you to blow away."

In many respects, the content of violent video games—specifically first-person shooter like the *Doom* and *Quake* series—represents a giant social and educational experiment. Will these ultra violent games actually teach

children to behave and view the world in markedly different ways? The fact is that video and computer games are, in fact, highly effective teaching machines. You learn the rules, play the game, get better, accumulate a higher score and eventually win. As Mark Slouka argues, the implications of new technologies like video games "are social: the questions they pose, broadly ethical; the risks they entail, unprecedented. They are the cultural equivalent of genetic engineering, except that in this experiment, even more than the other one, *we* will be the potential new hybrids, the two-pound mice."

Parallels Between Television/Movie and Video Game Violence

Research on television and movie violence is quite extensive, and clearly shows that exposure to media violence causes aggression to increase—both in the laboratory and in real world settings. Psychologist Craig Anderson, summarizing the findings of Bushman, Huesman and others, argues that:

It is now known that even brief exposure to violent TV or movie scenes causes significant increases in aggression, that repeated exposure of children to media violence increases their aggressiveness as young adults, and that media violence is a significant risk factor in youth violence.

Some examples of the findings of various researchers include the following: Edward Donnerstein suggests that correlational data indicate that 5 to 10 percent of adult aggressive behavior can be accounted for by media exposure in childhood. The communication theorist George Gerbner places the figure at 5%, while Karl Erik Rosengren, reporting on a twenty year study of Swedish children, maintains that 10-20 percent of the aggression displayed in schools and neighborhoods can be explained by the direct or indirect effects of television.

How much violence do children experience watching television? The average child, between the ages of 2 and 11, views approximately 28 hours of television per week. By the time he or she has finished elementary school, the typical American child will have viewed 5,000 murders. According to the American Medical Association, by the time the average child reaches the age of eighteen, he or she will have witnessed over two-hundred thousand acts of violence, including sixteen thousand murders.

The narratives underlying these violent acts as depicted on television are highly problematic. This statement is supported by the findings of the *National Television Violence Study*, a collaborative research project undertaken by researchers from the University of California, Santa Barbara, University of North Carolina, Chapel Hill, University of Texas, Austin and the University of Wisconsin, Madison. Researchers randomly selected programs on twenty-three television channels over a twenty-week period. Content analysis of the programs viewed led researchers to conclude that:

The risks of viewing the most common depictions of televised violence include learning to behave violently, becoming more desensitized to the harmful consequences of violence, and becoming more fearful of being attacked.

What about the more specific case of video games? Do their hyperreal narratives contribute to increased aggression and violence?

Video Games and Aggression

Television, films and video games are obviously different forms of electronic media. Yet despite this fact, there are important similarities between them. The most useful and sustained research on media violence and aggression has come from the analysis of television. In this research, two theoretical models have emerged: (1) Stimulation theory, and (2) catharsis theory. According to stimulation theory, individuals who view violent activities have more of a tendency to commit acts of aggression in real life. In contrast, catharsis theory predicts that observing violence purges the individual of the desire to act aggressively. Although the research is not conclusive, the evidence seems to be in favor of stimulation theory rather than catharsis theory.

Although on the surface the parallels between video game playing and television watching seem obvious, there are important distinctions that need to be taken into account. To begin with, television is a passive medium. Viewers have virtually no control over what takes place on the screen. Video games, in contrast, represent an active medium. Television does not require the viewer to pay constant attention. Video games require total concentration. Finally, television presents actual acts of violence (news reports, etc.) or detailed simulations of violence (detective shows, etc.), while video games represent violence at a more abstracted level (space invaders marching in rows across the video screen).

To compare video game violence (more abstracted) to television violence is a much more complex issue than may at first seem to be the case. While the very limited number of psychological studies from the late 1980s and early 1990s on video games and aggression suggest that children and young adults playing video games are less altruistic (Chambers & Ascione, 1987), and more aggressive (Anderson & Ford, 1986; Silvern & Williamson, 1987), these studies are of limited use as we evolve into increasingly more sophisticated and realistic computer gaming technologies.

The fact is that the content of video games, as well as their technology, is rapidly changing. As a result, interpretations of the impact of the games on players based on research drawn largely out of video arcade and home video game studies conducted in the 1980s and early 1990s may prove to be highly misleading. Joseph Dominick, one of the more useful early sources on video games and aggression, argues that:

Video game violence is abstract and generally consists of blasting spaceships or stylized aliens into smithereens. Rarely does it involve one human being doing violence to another, as is often the case on conventional television. Video game violence might perhaps be more closely related to abstract violence in some TV cartoons. (Dominick, 1984, p. 138)

When Dominick first made this argument, it may have been valid. Today, it is increasingly questionable. I would argue that there is a significant difference between shooting a series of stylized and abstracted spaceships, as is

the case in the classic video game *Space Invaders*, and throwing body blocks and head kicks in the martial arts games found on the Nintendo system such as *Double Dragon*, *Bad Dudes* or *Shinobi*, or with the increasingly realistic first person shooter games like *Quake*, *Blood* and *Doom*.

Recent Meta Analysis studies by Craig Anderson and Brad J. Bushman at Iowa State University suggest that video games significantly increase aggression. In a meta analysis of 32 research studies on the effects of violent video games, involving 46 independent samples of participants and 3,800 subjects, more than half of whom were children, it was found that:

...that exposure to violent video games significantly increases aggressive behavior, aggressive affect, physiological arousal, and aggressive cognition. The result also showed that exposure to violent video games significantly decreases prosocial behavior. Finally, the results showed that the effects of playing violent video games did not systematically differ for adults versus children, males versus females, or for true experiments versus correlational studies. In other words, exposure to violent video games seemed to have roughly the same effect on everyone, regardless of the type of study.

Anderson and Bushman posit a model for understanding the effects of media violence that they call "General Aggression Model." Combining the findings of earlier researchers in human aggression, they maintain that: "The enactment of aggression is largely based on the learning, activation, and application of aggression-related knowledge structures stored in memory (e.g. scripts, schemas)." Recent exposure to violent media:

...influence aggressive behavior through their impact on the person's present internal state, represented by cognitive, affective, and arousal variables. Violent media increases aggression by teaching observers how to aggress, by priming aggressive cognition (including previously learned aggressive scripts and aggressive perceptual schemata), by increasing arousal, or by creating an aggressive affective state."

Anderson and Bushman go on to argue that: "Each violent-media episode is essentially one more learning trial."

Anderson and Bushman recognize that their meta analysis of video games has a relatively small number of studies to support it compared to the research on television violence. Most of the studies that are lacking are longitudinal in nature, a result of not only the relatively recent introduction of video games into our culture, but also their changing and evolving nature. Despite these limitations, they are convinced that "exposure to violent video games poses a public health threat to children, and youths."

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Are first-person shooter games like *Quake* and *Doom* that important? Mark Slouka believes they are "because they are part of something larger; the wholesale blurring of the line, as Eco put it, between the original and representation." According to him: "By their very nature, they suggest the extent to which reality, increasingly displaced in our lives by the authentic reproduction, is beginning to lose its authority."

It is frightening to think that the simulation of death in computer and video games is blurring our understanding—or at least the understanding of many of our children and adolescents—of the reality of killing and murder. Yet the simulation of murder and death is only part of the complex problem that I am trying to address in this book. In fact, the problem is further complicated by the fact that as a culture we equate violence with style and romanticize its consequences through the creation of hyperrealities. It is this question that is turned to in the case of films in the following chapter.

NOTES