

DUNGEONS & DREAMERS

A story of how computer games created a global community
(Second Edition)

BRAD KING & JOHN BORLAND

Dungeons & Dreamers: A story of how computer games created a global community
Copyright © by

Brad King and John Borland

&

ETC Press

2014

ISBN: 978-0-9912227-2-8

Library of Congress Control Number: 2013958438

TEXT: The text of this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License
(<http://creativecommons.org/licenses/by-nc-nd/2.5/>)

IMAGES: All images appearing in this work are used and reproduced with the permission of the respective copyright owners, and are not released into the Creative Commons. The respective owners reserve all rights.

Bios

Brad King earned his master's from the University of California at Berkeley's Graduate School of Journalism in 2000. While there, he won the *Wired* magazine "Excellence in Technology Writing" award. After graduating, he worked for *Wired* and *Wired.com*. In 2004, he was the producer and senior editor for the *MIT Technology Review* Web operation. He's been an advisory board member for South by Southwest Interactive for more than a decade, and he's hosted its Accelerator program since 2009. King is currently an assistant professor of journalism at Ball State University in Muncie, Indiana, where he's also the director of the university's Digital Media minor.

John Borland has been writing about technology and its effects on popular culture, politics, and communication since the mid-1990s. A graduate of Stanford University and the University of California at Berkeley's Graduate School of Journalism, he began his reporting career covering politics and elections for the *California Journal* in Sacramento. With more than a little geek in his blood, he migrated to the Internet early, working for CMP's TechWeb and then CNET News for nearly a decade. At CNET, he won a number of national and regional journalism awards, including the Society of Professional Journalists' Sigma Delta Chi award, the Society of American Business Editors and Writers' Best in Business award, and the Northern California SPJ's Excellence in Journalism award. Since 2006, he has lived in Berlin, Germany, as a freelance writer.

*For my wife, who patiently allowed me to hide in
my room for weeks on end.*

– Brad King

*For Aimee, who reads every word I write with
empathy and just the right amount of criticism.*

– John Borland

CONTENTS

<i>Introduction to Dungeons & Dreamers: The First Edition</i>	8
<i>Introduction to Dungeons & Dreamers: The Second Edition</i>	14
<i>Prologue: The Tabletop Game</i>	20

PART I: THE NEXUS

ONE <i>Inklings</i>	28
TWO <i>The Dungeon Master</i>	38
THREE <i>Machines at Play</i>	42
FOUR <i>ComputerLand</i>	52
FIVE <i>The Expansion Pack</i>	60
SIX <i>Creative Anachronism</i>	64
SEVEN <i>The British Invasion</i>	68
EIGHT <i>Origin's Story</i>	76
NINE <i>Brave New Worlds</i>	80
TEN <i>The Moral Code</i>	84
ELEVEN <i>Origin's Endgame</i>	92

PART II: A SEISMIC QUAKE

TWELVE <i>id and Ego</i>	100
THIRTEEN <i>Commander Keen and the Way Out</i>	108

FOURTEEN	<i>Planting Seeds</i>	114
FIFTEEN	<i>The Doom Connection</i>	120
SIXTEEN	<i>Gamequake</i>	126

PART III: CONNECTING COMMUNITIES

SEVENTEEN	<i>Frag Together</i>	134
EIGHTEEN	<i>The First Superstar</i>	142
NINETEEN	<i>The Women Who Fragged</i>	154
TWENTY	<i>Feels Like Home</i>	158
TWENTY-ONE	<i>A Mod Life</i>	168

PART IV: A DARKNESS FALLS

TWENTY-TWO	<i>Columbine</i>	178
TWENTY-THREE	<i>Porn and the Pinball Wizards</i>	184
TWENTY-FOUR	<i>A Virtual Space to Call One's Own</i>	190
TWENTY-FIVE	<i>The Very Long Trial of Computer Games</i>	198
TWENTY-SIX	<i>Seduction of the Game Industry</i>	206

PART V: THIS IS NOT A GAME

TWENTY-SEVEN	<i>"We Were Not in Control"</i>	212
TWENTY-EIGHT	<i>A God Deposed</i>	218
TWENTY-NINE	<i>Knights of the Guilded Realm</i>	230

THIRTY *Proliferating Worlds* 249

THIRTY-ONE *Worlds Without Ends* 252

EPILOGUE

The Adventure's End 264

CODA

Would You Like to Play Again? 268

Introduction: The First Edition

In the beginning were the pencil, and graph paper, and the rattle of twenty-sided dice rolling against a tabletop.

To generations that have grown up associating games with screens, keyboards, and multi-buttoned controllers, this might sound as quaint as hand-cranked automobiles or phones with wires. But in truth the seeds of one of the world's largest entertainment industries, as well as of some of the most vibrant cultures native to the new digital environment, lie here. From pencil, paper, and dice came digital swords and magic spells, chainguns and rocket launchers, clans and guilds, and, ultimately, rich virtual worlds filled with people who, in many cases, wanted to do nothing but talk.

This book is about the rise and maturation of computer game developers and communities of computer game players since the early 1970s. As the story opens in 1972, the arcade video game craze was just starting to build, driven by game designers and players at Atari and other smaller companies. But in the small Wisconsin town of Lake Geneva, a group of people was gathering who had no interest in playing games electronically, and saw no point in moving pixels around a screen. They were concerned instead with storytelling, and with the ability to play parts in each other's stories. That desire and the *Dungeons & Dragons* game that resulted from it would over time have a profound impact on the development of computer games and their players' communities.

It's almost impossible to overstate *D&D's* role in the rise of computer gaming. Scratch almost any game developer who worked between the late 1970s and the early 2000s, and you're likely to find a vein of role-playing experience. Some of the biggest computer games have explicit roots in *D&D*.

Richard Garriott's landmark *Ultima* series was originally based directly on his high-school *D&D* games. The 1996 hit *Quake* was named after a character in the long-running games played by the developers at id Software, and the game was originally conceived as a medieval-themed role-playing game. Indeed, without *D&D* creators Gary Gygax and Dave Arneson, the history of computer gaming communities would likely have taken a radically different path.

Role-playing games had roots in earlier games, just as computer gamers could later look to Gygax and his kin as predecessors. Serious, adult-oriented war games that utilized toy soldiers as virtual armies had become popular in Germany in the late 1800s, and the games had spread across Europe and America. Even committed-pacifist author H.G. Wells had been a devotee, writing a book on the subject called *Little Wars* in 1913. In mid-twentieth-century America, a game publisher called Avalon Hill started releasing strategy games based on the Civil War, the Revolutionary War, and World War II, which helped renew interest in war gaming. Gygax and Arneson had been among devotees of that company's games, and their local groups in Lake Geneva and Minneapolis were dedicated to that type of play before the advent of role-playing games.

"Paper gamers," as they would come to be known after the rise of the computer age, served very much as prototypes for the kinds of digital communities that would come later. The players were mostly male, mostly young, and mostly white and middle class. Computer researchers and programmers, a group drawn in disproportionate numbers to fantasy novels like J.R.R. Tolkien's *Lord of the Rings* series, loved the game. They played it in its original form, and because their medium was code and computer, not paper and dice, they tried to replicate its magic on their machines. Throughout the 1970s, digital versions of the game appeared on university and other publicly accessible networks, and spread quickly through programming circles.

Paper games were heavy on violence and fantasy, as computer games later would be. In the best cases, storytelling and genuine role-playing defined play, although these elements varied with the quality of the imaginations of the people running the games. In Gygax's mind, it hasn't been an accident that so much of gaming tradition centered on violence, from chess to war games to *D&D* to *Quake*, nor that players tended to be male (though other game scholars have certainly emphasized the cooperative elements of play,

even in violent games).

“Games tend to answer a lot of deep instinctive things,” Gygax said. “Maybe it’s men’s male aggressiveness that makes them want to play games. There’s a competitive aggressiveness to games, even *Monopoly*. You’re there to win.”

But whoever was playing, *Dungeons & Dragons* created the kind of communities sustained by simple physical presence. The games were played in garages, basements, and dorm rooms across the country by small groups of people. The fact that their games took them outside the mainstream of American popular entertainment culture helped solidify these players’ bonds. Throughout the course of a night, a weekend, or even months—and amid piles of empty soda cans, pizza boxes, and more than a few marijuana roaches—players worked together to get out of each dangerously lethal situation their game master threw them into.

The spread of *D&D*-like games onto computers and computer networks changed the boundaries of the paper game. It opened up geographic borders, linking people from around the world in ways barely imaginable before. It gave storytellers, now in the form of programmers and game designers, a different canvas on which to paint their universes, changing the dynamics of their narrative fictions. Over time it gave the players themselves opportunities to interact with storytellers’ worlds in new ways, changing the games in ways developers never intended.

Indeed, the high-tech story of computer game communities is about people searching for a place that feels like home, surrounded by others—even if they are only virtual representations on a computer screen—who understand them. Gygax and his Lake Geneva circle of tabletop gamers knew this well. Their influence ultimately helped millions of others find and shape game communities of their own.

The narrative of this book explores the people who have made up those communities over the years, as well as the people who created the games that have made those communities possible. We focus primarily on one developer, a Texan named Richard Garriott, whose own story stretches from the moments of his exposure to computer programming and *Dungeons &*

Dragons to the present. But the real subject of the chapters that follow is the broader population of gamers: the people who play, the people who create, and the people who sustain gaming communities.

This book doesn't cover the entirety of video and computer gaming culture. Many different strands make up that history, and this book focuses on the parts of the culture that we believe best tell the story of the rise of today's digital gaming communities. At virtually all times covered during this book, sales of video games for home console platforms, such as those made by Atari, Nintendo, Sega, Sony, and Microsoft, far outstripped most of the computer games we've examined here. The histories of those games and cultures have been told with grace and thoroughness elsewhere. Interested readers may want to pick up a copy of Steven Kent's *The Ultimate History of Video Games* for the most complete history of the arcade and video gaming industry available. J.C. Herz's *Joystick Nation* and David Kushner's *Masters of Doom* also explore the culture of video and computer games through the lens of players and developers, although *Joystick Nation* focuses more on video games, and *Masters of Doom* focuses specifically on the id Software community.

But, as has become common in the era of the Web, smartphones, and social media, the geekier side of computer gaming culture blazed a trail ultimately followed by the mainstream. The types of games—and most particularly the types of communities—that sprang up in the wake of home computing and Internet connectivity bled into the arcade and home console market. In Asia, “PC bangs,” a kind of arcade room where people play games on networked personal computers, proved largely responsible for the growth of online game communities populated by millions of people. The same phenomenon is taking off in the United States, although in the U.S., the cybercafés are often populated with more action-oriented games than are their Asian counterparts. Home video game consoles now have network connections, and the same games that spurred the growth of online communities on the PC are becoming integrated into the Nintendo, Sony, and Microsoft consoles.

This book will make no broad claims about who gamers are or why they play; nor may this type of generalization be possible given the increasing breadth of gaming communities and the diversity of games available. This is not a book of psychology or cultural anthropology. Rather, we hope to

explore the role and importance of community within the computer gaming world. These games play an important role in many peoples' lives, even if it seems at times that players are simply staring at screens filled with scenes of violence and bloodshed. The content of these games can often play a secondary role to their socializing effects, a point that is typically ignored in the periodic panics over the alleged effects of violent content on players.

It might sound a little grandiose, referring to computer gaming as a sweeping, socializing force. These are just games. But really they're not so different from many other components of modern life. Much of what we do with our lives, from organizing our music and movie collections to joining recreational sports teams, is about finding other people who like what we like, and making the connections that make us feel less alone in a hurried world.

For millions of people, computer and video games have provided an opportunity to find other people who share similar backgrounds, stories, hopes, and dreams. It may seem strange to think of computer game communities in the same light as sports teams, writing groups, or ordinary offline friends, particularly if you've never logged on to hunt digital terrorists in a cybercafé or listened to a bard flirting and singing songs in *EverQuest's* land of Norrath.

But for gamers, those virtual worlds are now just an extension of the real world.

Introduction: The Second Edition

Stories have a way of finishing on their own time. Even in 2003, when we completed and released *Dungeons & Dreamers: The Rise of Computer Game Culture from Geek to Chic*, the definitive history of computer game culture, we had an idea the story wasn't over.

It wasn't a bad time to release the book. The game industry was exploding, the world-building craze was reaching its height, and the wave of creativity and mainstream interest that would push computer games and gaming to new societal relevance was just beginning to crest. But for that very reason, we could see that much of the sociocultural arc we'd sketched wasn't yet complete.

We went on to other things. We had imagined writing a series we referred to as the Geek Canon, which would have tied together much of what we considered to be the foundational components of cultural geekdom: computer games, anime, and science fiction. It may still be a good idea, but like many such, it got lost in the passage of time.

But our original story didn't. Titles like *World of Warcraft* and *Second Life* seemed to complete arguments we'd left hanging. More sobering, *Dungeons & Dragons* co-creator Gary Gygax passed away in 2008, followed not long afterward by his former gaming and business partner Dave Arneson. Perhaps more than anything, this provided a sense that both a narrative arc and a gaming era were coming to a close.

Maybe, we thought, it was time to revisit the story.

When we initially began the first edition of *Dungeons & Dreamers*, there had been plenty of other books about games themselves, but none that focused broadly on the creators, the players, and the culture to which

the games had given rise. We spent the better part of a year interviewing designers and players, game-business and technology-company executives, and cultural commentators studying the growth of these virtual worlds.

By the time we'd finished our reporting and writing, we'd spoken with more than a hundred people. It was a fascinating journey through time. We talked with Gygax and Arneson. We talked with Nolan Bushnell, one of the original figures behind Atari, at Buck's of Woodside, the famously kitschy restaurant at the epicenter of Silicon Valley's venture-capital scene. We spent many hours with Richard Garriott, the primary subject of our book, and John Carmack, id Software's co-founder and, in many ways, a foil to Garriott in the game-design world.

We also had the chance to speak with characters you absolutely could not make up. Perhaps our favorite: David Shapiro, better known as Dr. Cat, one of the merry band of pranksters who seemed to follow Garriott through the various incarnations of his game companies. Cat simply arrived on Garriott's doorstep one day, car filled with all of his belongings, and set about working on the early *Ultima* games.

By the time we finished, we had vastly more material than we could use. We had been thorough, and we were consistently amazed at the historical threads that tied these designers, players, and cultural commentators together in a logical way. We'd felt we'd written a story that illuminated the complexities and importance of the industry's burgeoning virtual worlds, from a social rather than a business or technological perspective.

The first edition was published in 2003 and there it sat, to our mind increasingly and obviously unfinished as the world went on. But luckily for us, very little about this industry is set in stone.

Through our negotiations with McGraw-Hill/Osborne, we received the rights to the book back after it went out of print. In 2006, our friend Dr. Drew Davidson at Carnegie Mellon's Entertainment Technology Center agreed to publish an updated version of the book. We imagined this as including several new chapters, as well a substantial rewrite of the main narrative to make the story cleaner. We expected to finish the second edition by the middle of 2007, with a publication date sometime soon afterward.

We were excited to write the book.

We didn't write the book.

In 2007, we spent hours arguing about the structure of the story, the

extent of the rewrites, and the amount of research we would need. We made a timeline, and divided up tasks.

Time passed. We again failed to write the book.

In 2009, following the news of Gygax's and Arneson's deaths, we decided again to tackle the project, which now didn't loom over us as much as it pricked us like a thorn in our asses. The mere mention of the book brought audible sighs, ruining whatever good time we were having *not* working on the book. It really was time to write the book, we agreed. The game landscape demanded we update the story. The console wars between Sony, Nintendo, and Microsoft had virtually eclipsed the computer-game industry, while alternate-reality games had matured enough to create a whole new subgenre of mixed-media, often even live-action play.

We were set to go. Again. We thought we'd have everything outlined and ready to go by the end of December.

We think you know what's coming.

December came and went. At a certain point, the story of us *not* writing the book began to bore even us. We no longer brought it up in conversation, even involuntarily. It became the bad relationship we'd finally escaped. Even the topic of games became taboo, which was more difficult for Brad, as he taught courses that dealt with games, writing, and storytelling. Still, we managed to stay clear of anything that could pull us back into the book.

And yet, if you are reading this introduction, you've probably gathered that we have, in fact, finished the second edition.

What continually brought us back to the project was the memory of the experiences we had tracking down the stories, interviewing this wide range of characters, and discovering their communities. Their stories resonated with us, in large part because they were so often about something other than just playing with a computer. In virtually all cases, the stories were about making connections with other people, and collectively finding the fun in creation and play.

As we've revisited our characters, we've seen some big changes since 2002. Here's where some of the major players are now:

John Carmack, the genius behind id Software, told us that he was tiring of the game industry, and wanted to pursue his dream of working on space flight. His aerospace company, Armadillo Aerospace, has spent nearly

\$3.5 million developing low-orbit vehicles, and it continues operations today. He continued to do development for id Software until late 2013, when he joined Oculus VR, a company creating an advanced virtual-reality headset.

John Romero, the more flamboyant co-founder of id Software, has pursued a wandering course through the game-design world. He now runs Loot Drop with his wife, Brenda Romero, and id Software alumnus Tom Hall.

Will Wright, the developer of *SimCity*, *The Sims*, and *The Sims Online*, created a think tank called the Stupid Fun Club after leaving Electronic Arts. This ultimately grew into a gaming and entertainment company called Syntertainment.

In 2004, Brad took a job as the executive producer for *MIT's Technology Review* magazine Web site, where he had the opportunity to edit a handful of columns by Henry Jenkins, then director of the Comparative Media Studies department. Several of those columns were rolled into Jenkins's seminal work, *Convergence Culture*, an analysis of transmedia storytelling. Jenkins left MIT in 2010 to take a joint professorship at the USC Annenberg School for Communication and the USC School of Cinematic Arts.

The Cyberathlete Professional League, which organized some of the largest and most lucrative computer game tournaments in the 2000s, is still operating after years of financial problems. In 2010, Angel Munoz sold the CPL to WoLong Ventures Pte. Ltd. of Singapore.

Longtime anti-video game crusader Jack Thompson, a lawyer who for years brought negligence cases against video game companies after school shootings and other violent events, was disbarred by the Florida Supreme Court in July 2008 after he made a string of abusive threats toward game companies, litigants, and even judges.

As for Richard Garriott, the main character in our story . . . well, we'll get to him in the book's new chapters.

We hope you enjoy reading the book as much as we enjoyed writing it (once we got around to it). It might even take you a little less time.

Prologue: The Tabletop Game

On a cool fall afternoon in 1972, a trio of Minnesotans pulled into Lake Geneva, Wisconsin, a picturesque lakeside town about an hour north of Chicago. They puttered through the four-block downtown, pulling into a driveway just a few streets outside the tiny main street. Two of them, Dave Arneson and Dave Megarry, anxiously rechecked their bags as they emerged from their car. They'd driven across the state in part to show off games they'd made. If they'd forgotten anything, it was too late to go back, but they wanted to make sure all their materials were in order.

Lake Geneva then, as now, was an unlikely gaming mecca. A resort town with a population of five thousand people, (a figure that quadrupled in the summer when people came to swim in the lake's uncharacteristically clear, rock-bottomed waters), it had been better known as the summer home for wealthy families such as the chewing-gum Wrigleys and the home-appliance Maytags. It was also home to the thirty-four-year-old Gary Gygax, a game player and game writer whose peripatetic energy and immense curiosity had already earned him a prominent place in a community of Midwesterners fascinated by military- and history-themed games.

Arneson and Gygax had met before, at the Gen Con gaming convention that Gygax had started in Lake Geneva a few years earlier. The two had collaborated on a sailing game called *Don't Give Up the Ship*. Now Arneson was working on a new adventure game with a style of play that was as close to theater as it was to the community's wargames—open-ended miniature soldier battles that involved players moving figurines around an open play space as opposed to a more traditional board. Megarry, too, had been trying out a new board game, played more conventionally with dice

and cards, but set underground in a monster-infested dungeon. Gygax had heard about them and wanted to see both.

“Come on in,” Gygax told the visitors. “I’ll show you around.”

He let them inside, showed them where they would be sleeping, and then led them down to the basement. Gygax had built a sand table, twelve feet long by six feet wide, where his usual weekend group played its open-ended, often war-themed games. One of these was Gygax’s own *Chainmail*, in which players used little figurines, improvisational storytelling, and dice rolls to simulate medieval battles. He’d recently modified the game, adding elements of fantasy, such as trolls and dragons and magicians that shot fireballs, (which, not so coincidentally, had the same blast radius as the cannons used for other games played on this table). The new version had proved wildly popular, sometimes attracting as many as twenty or thirty gamers to the table.

As the sun set, the little group gathered upstairs to play at Gygax’s dining room table. A few other people from the Lake Geneva scene had joined them, including Gygax’s own twelve-year-old son, Ernie. They tried Megarry’s game first. The players traversed a board made of graph paper, running into monsters and fighting them with magic spells. “I said, ‘Wow, this is a great adaptation.’ It was *Chainmail* in a dungeon,” Gygax remembered later.

Arneson went next. A heavysset, spectacled young man a few years younger than Gygax, with a big, mischievous smile, he launched them into something very different. The players had to make characters and give them attributes that would determine how strong or smart they were. Those attributes would help them when they attacked monsters or tried to figure out puzzles in the game. Once the characters were created, the game would begin. The players would act out the characters’ roles as they wandered through the swamps of the haunted Castle Blackmoor, doing their best to stay alive. Arneson would play the godlike role of game master, telling the story of what was happening to the characters at any given moment and letting them decide as a group what to do next. Would they fight the monster? Would they run away? Would one member of the group steal everyone else’s treasure and hightail it for a safe house? It was a little haphazard. Arneson kept rules scrawled in a notebook full of loose-leaf sheets of paper, and anything he didn’t know, he simply made up on the spot. He’d been doing

this with his own group of gamers for almost a year now in Minneapolis, and was comfortable using his rules as a framework to guide the improvisational nature of the game's storytelling.

"Deep in the primeval swamps of Lake Gloomey, shrouded in perpetual mist, lies the city of The Brothers of the Swamp," he started, and the party of adventurers was off.

By the end of the weekend, Gygax and the rest of the Lake Geneva crowd were enthusiastic. Collectively they saw the tabletop-gaming experience, the underground dungeon exploration scenario, and this improvisational role-playing mode of gaming morphing into a something new. Arneson gave Gygax copies of his notes from which to work, and Gygax began creating a full set of rules, drawing from these and from *Chainmail*, and making up new elements to fill in the blanks. By the time he finished a draft of the 150-page rule book early the next year and began showing it around to his friends, he had a name for the new game: *Dungeons & Dragons*.

"We were having a tremendous amount of fun, but we figured we were crazy," Arneson said years later. "We had no inkling that this would turn out to be something so big."

Big indeed: Over the next quarter-century and more, the game conceived in Gygax's living room would go on to obsess millions and transform people's lives. Its draw would be particularly strong within a community of, mostly, young men who were at the same time discovering the power and creativity offered by computer programming. In seeking to combine these two loves, this group of programmers, developers, and game players would over time profoundly shape an industry that would ultimately come to rival Hollywood in terms of scope and influence.

Among the myriad young people who fell in love with the social storytelling of Gygax's games and sought to replicate their dungeon-crawling experiences in digital form was Houston teenager Richard Garriott. A programming novice when he first started this work, Garriott would go on to become one of the industry's leading figures, creating a series of games that entranced players for more than two decades. His work and experiences are as representative as any of the euphoria and creativity—and at times, the heartache—that defined the computer gaming industry as it grew and matured.

Garriott's medium wasn't that of Gygax, Arneson, and Megarry. But

it owed a vast debt to them and their work. That afternoon in Lake Geneva carried the seeds not only of a geeky tabletop pastime, but of an entertainment industry and culture that in the course of decades would sweep across the world.

PART I

The Nexus

One *Inklings*

Richard Garriott flopped onto his bed in the small, two-bunk dorm room at Oklahoma University and surveyed his options. There didn't seem to be many. His parents had dropped him off seven hours from his home and high-school friends so he could attend a seven-week summer computer camp. While inquisitive by nature, Richard was used to summers full of weird art projects and near total freedom. The bit of programming he'd previously picked up hadn't captured his imagination—certainly not enough for him to get excited about ditching the geeky-cool confines of a home near the National Aeronautics and Space Administration's (NASA's) operations center.

Resigned, he sat up and kicked the bag he'd flung on the floor. He was trapped with the computer nerds.

Not to say that Richard wasn't excited about tinkering with computers, at least in theory. In the summer of 1977, computers were still out of reach for most people, and sixteen-year-old Richard's parents wanted to make sure he was on the cusp of the technological revolution. He agreed with them that far, at least. His family and most of the kids Richard had grown up with already lived in something that looked a little like the future, with rocket scientists and astronauts as their neighbors in suburban Houston.

His father, Owen Garriott, was one of those astronauts, and had temporarily shared the title for the longest space flight any human had ever taken. Later he had uprooted the family and moved them to Palo Alto, California, while he studied at nearby Stanford University. It was here that Richard's parents had gotten the computer religion. Richard had done some work on the computer terminals that had been placed in every classroom

in Palo Alto's technologically advanced high school, but hadn't been nearly as impressed as his parents. Dedicating almost a whole summer to the machines seemed like a waste.

It soon became clear that others didn't share Richard's hesitations about computer camp. Before long there was a knock on his dorm room door. He roused himself, finding a small group of boys outside.

"Hi," one of the boys said.

"Hello," he replied.

"Did you say hello? Nobody from around here says hello," one of the boys said, frowning a little.

Richard had been born in England, but his parents had moved to Houston when he was a baby. He had no discernible accent at all, and he had no idea what the boy was talking about. This just solidified his preconceptions about the kids at this camp. Definitely weird, even by his own generous standards.

"Okay, you're 'British,' then, the boy decided, tagging him with a nickname that would follow him through much of the rest of his life. "Welcome to camp."

This was the welcoming committee, and in this group he'd be known as "British." *Fine*, he thought. The group moved on to the next door, repeating the sequence. Knock. Answer. Bestow a nickname. Move along. Richard followed as the group made its way down the boys' corridor, through the main lobby, and into the girls' corridor. By the end of the circuit, everyone had a new name.

The rest of the day was taken up in meetings: meetings about rules, meetings about courses, and meetings about the campus. The day that had started miserably began looking more promising when he met the girls, but turned sour again as they were set to work. All of that lasted until after dinner, when he found himself in the common area. There he noticed a small group of students gathered around a table playing some kind of game, surrounded by soda cans and crumpled candy wrappers. He was intrigued. He'd already decided that the way to make the most of his time at programming camp was to try to make a game—just as he, his brothers, and often his mother had thrown themselves into ambitious creative projects during previous summers. If he couldn't be at home, he'd do his best to bring home to computer camp.

He sauntered over, but didn't say anything, hovering for a minute behind the person who appeared to be leading the game. This boy had a stapled booklet laid out on the table in front of him, and was slowly describing a landscape and scenario. The other players responded in turn, explaining how their characters would react to the story: exploring, opening doors, and fighting monsters. Every once in a while, someone would roll some weirdly shaped dice that would resolve some conflict. Richard was confused. There was no game board or pieces to move around. If this game had rules or immediate objectives, they certainly didn't seem obvious. The players were simply talking about fighters, dragons, dwarves, elves, and magic. It sounded a little like the books he'd read earlier in the year, J.R.R. Tolkien's *Lord of the Rings* trilogy.

After several minutes, Richard leaned down, tapped the leader on the shoulder, and asked him what they were doing.

"It's *Dungeons & Dragons*," the boy responded, not looking up. "It's a role-playing game." That didn't help much. Richard had never heard of the game, and he associated role-playing with the occasional acting he'd done in a local theater. He stuck around for a little longer, listening to the game unfold as the dungeon master, the person who created the story with which the players interacted, wove the tale. Other students drifted over, and before long the original group had to stop and explain in more detail.

Richard and a handful of others soon joined a game. By the second night, the little lobby was filled with several gaming groups, all telling each other stories of dragons and skeletons and orcs. Girls were as eager as the guys to play, and threw themselves into character with just as much bravado. The role-playing helped them talk to each other in ways that shy high-school kids might otherwise have had trouble doing. It was a little silly at first, pretending to be a dwarf or elf or magician—and "British" Garriott exchanged embarrassed grins with other players more than once—but once the stories started flowing, they lost themselves in these magical worlds.

With the initial social awkwardness fading, other barriers fell too. Among the first to go were the gender-segregation rules imposed in the halls. The college-age chaperone tasked with keeping boys and girls apart moved one of the female students into his room, and the other girls and boys quickly paired up. One enterprising student figured out a way to jimmy the locks that kept them out of the closed half of the dormitory, and soon

the theoretically off-limits rooms had become hideaways or clubhouses for couples and gaming groups. Richard and his summer girlfriend laid claim to a particularly choice room with a door labeled “The Crypt” in dripping blood-red letters, and with an interior featuring a full-room mural depicting a swamp creature about to abduct an oblivious half-naked woman.

Programming computers, though, was the reason the teens were there. Even Richard was soon won over. They learned and worked in the FORTRAN programming language, feeding punch cards into the big machines as a means of input and control. The techniques they learned were simple, certainly not sophisticated enough to fulfill Richard’s vague notions of writing a game, but they hinted at a vast potential power.

Just as powerful was the shared social experience. People spoke the same language here. It was the first time that many of the students had experienced a sense of community around this kind of activity. Spending time with computers, programming, technology, fantasy, and role-playing games was okay. It didn’t make them nerdy, or dorky, or strange. The group just accepted this as perfectly logical and natural, no stranger than athletes practicing after school or cheerleaders doing routines between bells. For Richard, the environment would prove to be deeply influential and bitterly hard to give up at the close of the seven-week camp.

“It was a summer of programming and girls,” Richard would say later. “It was one of those pivotal moments. A lot of firsts happened there.”

That Richard would find a shared community at that computer camp was less strange than he may initially have suspected. He grew up in a Houston neighborhood just a hop and a jump away from Johnson Space Center, where the NASA influence could be felt everywhere. His father, Owen, was a former Stanford physics professor and Navy officer who had been tapped by the manned space flight program in 1965, and the Garriott family had quickly become a part of the tight-knit NASA circle. Their own immediate clan—Richard’s two older brothers, Randy and Robert; a younger sister, Linda; and Helen, Richard’s free-spirited artist mother—was even tighter. They’d all shared the national spotlight briefly in 1973 when Owen had gone up in Skylab 3 for fifty-nine days, doubling the amount of time any

human had been in space. Growing up in that kind of environment tended to undermine any kid's sense of the impossible.

The Garriott household had long been a mix between a mad scientist's laboratory and a surrealist artist's studio. Richard's father, a thin, mustachioed man with an angular, serious face, had routinely brought home expensive government gadgets from NASA headquarters, tinkering with them for days on end and taking them apart to see what made them work. When he emerged in the evenings from his study, he often brought the coolest science projects imaginable with him. In the mid-1970s, years before weekend warriors would know what night-vision goggles were, Richard and his brothers had chased each other through the darkened neighborhood wearing prototypes provided by Owen.

On another occasion Owen appeared with a pair of glasses with special prisms that reversed the wearer's vision, flipping the world by 180 degrees. Reach out your right hand, and the glasses inverted the image to make it appear it was your left hand. The distortion was mind-wrecking for a time after the wearer donned the glasses, making it impossible to accomplish even the simplest tasks, such as grabbing the handrail on the staircase. The space agency was using cats to study how long it took the mind to adjust to radical vision problems, but Richard and his brothers were happy to serve as unofficial test subjects.

"It was like magic," Richard said later. "There was always something at our house. I didn't realize that this wasn't necessarily true in other places."

Owen rarely had the time or the inclination to work closely with his youngest son. Robert, Richard's serious-minded older brother, was closer in disposition to the reserved astronaut. When Richard and his father did work together, however, the results were impressive. Late in Richard's high-school career, the two teamed up on a science fair project they dubbed "Wave Propagation with Computer Analysis." Owen had taught and studied electromagnetic theory and ionospheric physics, and he showed his son a little about how light and radio waves moved through air, water, and other substances. By that time, Richard knew enough programming to create a fairly sophisticated computer simulation of radio waves' motion. Their combined efforts helped Richard win the U.S. National Science Fair, and place fourth in an international competition.

If the practical-minded Owen was forthcoming with his scientific

knowledge, he was decidedly less so with his own experiences. Despite constant questions, Owen seemed reticent to talk about his Skylab trip. “My dad has never told me anything about being in space,” Richard said years later, leaning back in his office chair and shrugging his shoulders. “He once said it was kind of like scuba diving, but he never said anything with any kind of emotion.”

Richard was much closer to his mother, an artist whose interests took her from pottery to silversmithing to painting and well beyond to conceptual art. Her garage workshop was always open to the kids, and Richard in particular took frequent advantage of the open-door policy, working with his mother on clay sculptures or little metal designs of his own. These were the little diversions. Helen thought big, and she wanted her sons to be just as ambitious. She taught the boys to be totally committed to their projects, a lesson the brothers willingly followed.

“I like to think that I do big projects,” Richard said. “But I definitely acquired that drive from my mother.”

That drive had a way of getting out of control. For instance, the Boy Scouts required its members to construct a series of scaled prototypes to obtain a Model Design and Building badge. Richard, Robert, and Helen decided instead to build an airplane in the backyard, starting with two-by-fours, shaping the skeleton, and then paneling the sides. They rigged the wing flaps with a pulley system allowing them to be raised and lowered using a handle in the cockpit, which also came with a working gearshift and a movable steering stick. That was good, but lacked the realism that Richard craved.

The inspiration for something better came at the dinner table, where the boys would on rare occasions get a glimpse of life at NASA. One evening, Owen mentioned tests astronauts had to endure before being allowed into the cockpit of an actual spaceship. One of the toughest tests involved a g-force accelerator that simulated the crushing effect of gravity several times stronger than Earth’s, similar to what astronauts would feel as their capsule catapulted out of the atmosphere.

A light bulb went on in Richard’s head, and The Nauseator was born. Four feet long and two feet wide, the structure as conceived would spin whoever climbed into the little box 360 degrees in any direction, with the motion controlled by motors. The controls consisted of two joysticks

that would in theory guide both horizontal and vertical movements. When the engineering for electronically controlled joysticks turned out to be far beyond the boys' capabilities, they substituted old-fashioned elbow grease for a motorized experience. Once an "astronaut" was strapped into the contraption, three people would set the device spinning, producing the dizzy feeling of a plane spiraling out of control. In the anarchic realm of childhood this was something like the ultimate game. There was no point other than to avoid throwing up, and by those standards there weren't many winners. In the end, the thousand-pound behemoth took up much of their garage and was, in Richard's words, "staggeringly dangerous."

"We'd just spin the rings and you'd come out and recover feeling pretty good," Richard's older brother Robert said years later, half-laughing at the memory. "Then you'd get this stomach thing going after about ten minutes, just when you thought you were going to be fine, and you'd just throw up all over the place. It was really staggering. Ten minutes. Every time."

These were the elements Richard added to his Oklahoma experience as he found himself drawn to creating computer games. He wanted to make a game that was visceral, that challenged the players, and that made you feel a little bit weird ten minutes after you stopped playing. It proved to be a short step from *The Nauseator* to games that would sweep up dozens of people in his neighborhood, and put him on the path to a starring role in computer-game history.

Two *The Dungeon Master*

With summer nearly over after camp's end, Richard returned to Houston, where he spent his waning free days building bike ramps and tree forts with his sister Linda and friend Keith Zabalaoui, who lived in a house behind the Garriotts'. His mental decompression didn't last long. He couldn't shake the feeling he'd had while playing *D&D* with his fellow campers. He missed the energy and the camaraderie, and he wanted to find a way to get it back.

He decided to bring a little bit of computer camp to Houston by starting his own *D&D* game. On the first day of school, he tracked his friends down one by one, pitching them on the idea of a weekly role-playing game. He cornered Bob White, then Elizabeth Froebel, Chuck Bueche, Rene Hans, and finally Zabalaoui. Each agreed to join, although few had any idea what he was talking about or how the game was played. Like Richard, they were a bit geeky, and experience had taught them that he could deliver on his promises of fun. That was enough.

Richard spent the week preparing for the game, bent over notebook paper, mapping out an imaginary world. By the time Friday rolled around, his nerves were frayed. Word had spread through his extended circle of friends, and his small gaming group had swelled to nearly a dozen people. His mother loved the idea too, and offered to prepare dinner and snacks. As the gamers arrived, Richard led them back to the formal dining room table, which the family rarely used. It was large enough to let everyone stretch out and eat while Richard wove his fantastic story. Hours passed while the group played, laughed, and talked, oblivious to the appearance of the dawn sun through the curtains.

By any measure, his first time leading a role-playing adventure proved a success. Monday morning, the weekend gamers found each other before the school day began, eager to relive their weekend session and plan the next one. As they saw each other in the hallways, in classes, and during lunchtime, conversation turned repeatedly to the game. Eavesdropping friends asked questions, and Richard and the others preached the game's virtues. As a result, several new gamers showed up at the Garriott household the following Friday. Another batch arrived the week afterward. Before the end of the first month of school, two games were underway: one in the formal dining room and another in the family's living room.

Word continued to spread through the school, first to the science and math geeks, and then to other social cliques. Throughout the day people would wander up to Richard and ask if they could spend the weekend with him. He was more than happy to oblige. By winter, games were being played throughout the house, eventually forcing Helen out of her garage art studio. In its place she set up two large table tennis tables, minus their nets, to accommodate more gamers.

The Garriott home became ground zero for weekend gaming. Adventures would stretch into early Saturday mornings, and after brief rest periods for food and catnaps, they'd slowly pick up again in the afternoon. With so many players, the sessions took on a diverse personality. What had started as a small group of hard-core geeks turned into a social cornucopia. By early 1978, parents started showing up with their kids. The front porch became the recreation area for smokers and drinkers. The group garnered enough attention that the notoriously conservative Boy Scouts even asked Richard's eclectic group to become part of its organization.

This was new territory for Richard. While never unpopular, he hadn't participated in many school activities outside the science fair. Athletics didn't much interest him, and social clubs weren't really his thing. He was one of the ordinary students that roamed the Clear Creek High School hallways waiting for the end of the day so he could go on to more interesting events. The weekend games changed that. He was now "Lord British."

The stars of the weekend games were the dungeon masters (or DMs), the storytellers who devised the adventures. The best game leaders could transport a room full of players sitting in a living room in Houston to a place where anything was possible. The only limitation was the imagination of the

players, and these players in particular had grown up where the impossible was already routine.

Richard didn't excel as a DM; his interest lay in other areas. He'd take his spot at the formal dining table every Friday, ready to follow Bueche or White's lead, but his mind inevitably drifted to the computer.

Indeed, from the moment he'd returned from Oklahoma, Richard had begun scheming ways to get himself back in front of one of these machines. On the first day of his junior year, the same day he began enlisting friends for his weekend games, he walked into the main office and asked to see the principal about a proposal just as close to his heart.

The previous year he'd finished the school's only computer-related class, a basic math accounting workshop. He'd spent most of that class daydreaming or sketching. The truth was that his programming skills now far outstripped those of any other student in his class, thanks to his Stanford and Oklahoma camp training. The school's undeveloped computer department had little left to offer him. Fortunately, his science fair successes convinced the administration that, unlike other students, Richard worked well when left alone with his own projects. Now he'd see just how far he could push that reputation.

A secretary waved him to the back. There Richard launched into a long rant about his proposal before the principal could utter so much as a hello. His pitch was simple: He'd conceive, develop, and program fantasy computer games using the school's computer, presenting the principal and the math teacher with a game at the end of each semester. There wasn't even a computer teacher on staff to grade him on his skills. To pass the class, he'd simply have to turn in a game that worked. If he did, he'd get an A. If it didn't, he'd fail.

It was an easy sell. Making a computer game absolutely seemed like an educational activity to school administrators living in the shadow of NASA. Richard smiled as he walked out of the office, pulling one of his favorite spiral notebooks out of his book bag and labeling it *D&D 1* as he walked down the hallway. By the time the bell rang for first period, he'd already started writing lines of code.

His initial plan was to build an epic story based on parts of his adventures at the Oklahoma camp. As Richard's own *D&D* group grew, however, he began incorporating its tales as well. It was clear to him that the

appeal of his *D&D* games was grounded in the interaction between players, and he wanted to replicate this in some way. To give the games a more fantastic touch, he began work on a language of runes, mystical looking symbols that were much like Tolkien's Elven script. All this was enough to seed a dungeon adventure.

Like most similar institutions at this time, his school lacked its own personal computer, a technology still in its infancy. Instead, students had access to a central machine through Teletype keyboards and terminals that they could use to input code. Richard thus spent his free period at the Teletype keyboard in the math lab.

Progress was slower than he'd hoped. Limited Teletype access meant he spent most of his "programming" time going over code in his head, trying to anticipate problems before they happened. Considering the electronic wonderland at home, this situation was intolerable. Unfortunately for Richard, Owen saw video games as having little future and ignored his son's constant pleas for an Apple II, the machine that was then almost singlehandedly igniting the infant home-computer market. Increasingly frustrated, Richard finally marched into his father's den one evening, notebook in hand.

"Dad, if I can make this game work at school, without any bugs, then you buy me an Apple II," Richard said, handing his dad the *D&D 1* notebook with 1,500 lines of code, scribbled symbols, and charts outlining the mathematical rules for determining the results of combat.

Owen laughed. He'd long ago stopped doubting his son's ability to attack a problem until it had been solved. "If you can make it work without any flaws," he said, "I'll split the cost with you."

Satisfied, Richard stood up and walked out, a grin spreading across his face. It was a devil of a deal. The game was nearly finished, save for a few bugs that needed working out. Not that he was satisfied just with making a game that worked. He had bigger ambitions. Throughout the year he burned through notebooks, labeling each one sequentially: *D&D 2*, *D&D 3*, and so on, until he reached *D&D 28*. Whenever he hit a snag or came up with a better idea than the one he was working on, he'd start over with a new version of the game. He would flip through his most current notebook during other classes, scribbling notes and ideas on the cover. He was obsessed with making a game that mirrored those weekend roundtable games.

With the final bell of his junior year, Richard had aced his independent study project and nearly worked out the idea for a much larger adventure. The stories that would go into the game were falling into place. His BASIC programming was rock solid. Even the language he was creating was nearly complete. While his weekly game group served as inspiration and a venue for play-testing his own stories, he used his school days to test the efficiency of his game's language. He created crib sheets for his tests using his runic script, scribbled on his notebooks and book covers. Throughout his entire junior year, he cheated in front of the uncomprehending eyes of his teachers.

As his programming skills were improving, Richard's desire to recreate his communal gaming experiences reached a seemingly insurmountable obstacle. His simple games lacked the social appeal inherent in a community of people led by a storytelling dungeon master. For Richard, creating the game was just as fun as playing, but he recognized that even a single-player computer game was fundamentally about sharing the experience. Playing basketball alone on a court was practice, but playing with a group of people was a game.

Great storytellers could transport players into a game, creating rich worlds where anything was possible. Sitting at a terminal alone seemed somehow less exciting. Richard hadn't figured out how the computer could solve that problem. For the moment, *D&D 28* was just practice.

Three *Machines at Play*

The collision between computers and game players was already an old one by the time Richard first started typing his *D&D 28* code into his school's Teletypes. For nearly two decades, university computer departments had been continuously populated by a playful subculture of programmers who saw games as a valuable way of testing the limits of the giant new machines to which they'd gained access. In this early environment, the distinction between players and designers was often moot. Almost anyone with access to a computer also had the ability—and often the desire—to create or modify games.

The first real computer game to spark a lasting community was created by a group of students at the Massachusetts Institute of Technology in 1961. The computer science program there was one of the most advanced in the country, with brilliant minds studying topics ranging from artificial intelligence to database construction. This particular group, initially associated with the campus model railroad club, fell in love with the ability to manipulate the mainframe computers in unconventional ways, and its members spent virtually all their free time playing. They created a series of software programs ranging from the whimsical to the intensely practical that had little to do with their official curriculum.

Among these was a game they called *Spacewar!*, which featured two spaceships stalking each other around a screen, firing torpedoes while trying to avoid the gravitational pull of a sun in the center of the screen. It looked much like Atari's *Asteroids* would many years later, minus the giant rocks. At the time, it was a stunning leap forward in the virtually nonexistent field of graphics technology. It was also fun. MIT students gathered for all-night

tournaments, and the game quickly spread to other campuses and computer facilities.

As the years went on, each new wave of students found ways to improve or modify the version of the game created by their immediate predecessors. Tens of millions of dollars in U.S. Defense Department funding poured into the computer research labs at MIT, Carnegie Mellon, and Stanford, earmarked for serious research, while recipients of the funding spent hundreds of hours figuring out better ways to model space battles. As early as 1963, Stanford administrators ordered students and faculty to stop playing *Spacewar!* during daytime hours.^[1] In 1973, *Rolling Stone* magazine reported that IBM had instituted a total ban on the game, but had rescinded it after a few months due to employee complaints.^[2] In that same *Rolling Stone* article, reporting on the Stanford “Intergalactic Spacewar Olympics,” writer Stewart Brand wrote: “Reliably, at any nighttime moment (i.e. non-business hours) in North America hundreds of computer technicians are effectively out of their bodies, locked in life-or-death space combat computer-projected onto cathode ray tube display screens, for hours at a time, ruining their eyes, numbing their fingers in frenzied mashing of control buttons, joyously slaying their friend and wasting their employers’ valuable computer time.”

Two parallel computer networks in particular served as conduits for the spread of this and other games and as early hosts for communities of game players in the United States. ARPANET (the Advanced Research Projects Agency Network), the public university and research network that would ultimately evolve into the public Internet, was home to much of this development. A separate, university-supported network called PLATO (Programmed Logic for Automatic Teaching Operations), first developed at the University of Illinois in the early 1960s and expanded throughout the country in the 1970s, carried much of the most advanced technology of the time and attracted some of the most dedicated game hackers.

A few of these early games fired imaginations nearly as much as *Spacewar!* A simple game called *Hunt the Wumpus*, written by Gregory Yob in 1972 for the Berkeley-based People’s Computing Company, was translated into several computer languages and spread quickly and freely around university computer departments and ARPANET-connected research companies. Presented with text descriptions of a dodecahedron-shaped maze (“If you don’t know what a dodecahedron is, ask someone,” the

game's cursory instructions read), the player's task was to hunt and shoot the Wumpus, a mysterious creature with a taste for the player's flesh. Other hazards included playful giant bats and bottomless pits. A sample of a very short game might have run something like this:

```
>BATS NEARBY!
>YOU ARE IN ROOM 2
>TUNNELS LEAD TO 1 3 10
>SHOOT OR MOVE? (S-M)? M (the player has chosen to move)
>WHERE TO? 1 (the player has chosen room 1)
>ZAP—SUPER BAT SNATCH! ELSEWHEREVILLE FOR YOU!
>YYYYIIIIIIII . . . FELL IN PIT
>HA HA HA—YOU LOSE! [3]
```

When Gygax's *Dungeons & Dragons* game rippled through these circles in the mid-1970s, programmers immediately saw the potential for new computer games. In many ways, *D&D* was already like a computer program overlaid with a dungeon setting. This game progressed on an if-then model familiar to programmers: *If* the character slays the orcs, *then* he is allowed to open the door and find the treasure. Many of the game's critical moments, from combat to success in picking a lock, were determined by rolling dice, the physical world's equivalent of a computer generating a random number.

Students and other programmers already primed by reading the *Lord of the Rings* series saw in Gygax's game a rich source of material and inspiration, and almost immediately began work trying to translate it into code. The game proved particularly inspirational for a talented young programmer named Willie Crowther at the Boston-based Bolt, Beranek and Newman (BBN), a computer company involved in creating much of the early ARPANET's basic technologies.

Not long after the release of Gygax's game, Crowther's marriage had begun to fail, and he separated from his wife. In a bid to maintain contact with his two daughters, he decided to write a computer game for them, basing it in part on the tabletop dungeon games he'd played, and partly on the real-life spelunking he and his wife had avidly pursued. His wife Pat had been immortalized in spelunking circles for finding a passageway

connecting two segments of the world's largest cave. Willie turned parts of that cavern into the setting for his daughters' game, which he dubbed *Colossal Cave Adventure*.

Crowther's *Colossal Cave Adventure* (often simply called *Colossal Cave*) lacked even the simple graphics of *Spacewar!* or the *Pong*-style games just beginning to sweep the market. Like *Hunt the Wumpus*, it was all text, and like *D&D*, it relied on players' imaginations to fill in the most visceral elements of the world. Crowther wanted to let ordinary non-programmers like his daughters play the game, so he made the game respond to natural language commands like "go north" or "take stick." The details of the environment itself were drawn from the weird beauty of the real Mammoth Cave in Kentucky, from the soaring domes and twisting narrow passageways called "crawls" to a massive column of orange stone based explicitly on a real-life counterpart. ^{[4] [5]}

Released in 1976, Crowther's project turned out to be one of the most influential computer games in the medium's early history. He'd put a copy of the game on a computer at Boston University, and the code spread quickly as programmers made copies and passed it around. At night, players installed it on the giant computers they worked on during the day, and other people would find the code there, start playing it, and then pass it along to others on the ARPANET.

A few months later in 1976, Don Woods, a first-year student in Stanford's graduate computer science program, stumbled across a copy of Crowther's game. He liked it enough to want more. Crowther was still credited in the much-copied code, but without any contact information. Woods was too much of a programmer's programmer to let a simple hurdle like that stop him. He sent an email to every single one of the sixty-plus host machines then on the ARPANET looking for a "crowther@[thatmachine]." One mail didn't bounce; he'd found the author. After a short exchange of emails, Crowther readily gave Woods permission to modify the game.

Woods was a game player, but unlike Crowther he hadn't played *Dungeons & Dragons* or any of its spin-offs. It didn't matter. His first task was to debug and streamline the code, eliminating rooms that had entrances but no exits, for example. He also began adding puzzles to the game with the aim of making it more challenging to play. "Crowther had really developed the program more as an 'explore and find stuff' game than as a 'solve the puzzles'

game,” Woods said years later. “I wanted to make it trickier so it would take longer for a player to finish the game.” That model, along with a wry sense of humor in responding to players’ commands (“Don’t be ridiculous,” the game would tell someone that tried to eat a lamp, for example), helped make the final game enormously popular and hugely influential for later game writers.

When Woods re-released the game as *Adventure* on the ARPANET in late 1976, and again with improvements in 1977, players around the country were entranced. The first step into the building or down the road led players into the most richly developed computer game world any of them had ever experienced.

You are standing at the end of a road before a small brick building. Around you is a forest. A small stream flows out of the building and down a gully. In the distance there is a tall gleaming white tower.

Crowther and Woods’ game quickly proved a stepping-stone for other programmers interested in creating these *D&D*-influenced worlds. While hundreds of other games were created, the work of one group at MIT stands out for the influence of its games and the commercial impact the team would have a few years later. By early 1977, *Adventure* had made its way back to Boston, to the same department where *Spacewar!* had been created sixteen years previously. Just as that game had, *Adventure* captured the imagination of the programmers at MIT, and many of them spent weeks trying to solve the game (one tongue-in-cheek estimate of the game’s influence said *Adventure* “set the entire computer industry back two weeks”).^[6]

A group of MIT students initially led by former political science student and committed *D&D* player Dave Lebling decided they could do better. Lebling had already worked on several games, including a network 3D exploration game called *Maze*, in which several people at once could wander around a labyrinth trying to shoot each other. Almost immediately after playing *Adventure*, Lebling started writing a command parser, a software component like the one Crowther had built into *Colossal Caves*, writing a natural language command parser.

As Crowther and Woods had understood, this kind of intuitive interface

made games more accessible to players and created more opportunities for interesting interactions between player and computer.

Another pair of students, Marc Blank and Tim Anderson, used Lebling's work to create a rudimentary four-room game prototype similar to *Adventure*, with all-text descriptions. It was a simple world that contained a band that played "Hail to the Chief," a bandbox, a "peanut room," and a "chamber filled with deadlines." They showed it to Lebling, who tested it, found it promising, and almost immediately went on vacation for two weeks, which left the pair to their own devices.

Unable to wait for his return, Blank, Anderson, and another student named Bruce Daniels started mapping out a more complicated world with puzzles and problems scattered throughout that would make it a real game. They dove into all-night programming sessions, barely stopping to eat or sleep, and by the time Lebling returned, they had a real prototype. Lebling pitched in, and by the end of the summer of 1977, they had a functioning version of the game. The world wasn't nearly as large as it would grow to be over the next two years, but was recognizably the game that would come later. Players entered the Great Underground Empire to contend with the forces of Lord Dimwit Flathead the Excessive, and found the deadly grue in dangerous dark corners of the world. The programmers called their project *Zork*, a hacker-slang nonsense word they often used as a name for unfinished projects, and which wasn't intended to be the game's real name. This time, however, the name stuck.

The game's *Adventure* lineage was evident from its opening.

*"You are standing in an open field west of
a white house, with a boarded front door.
There is a small mailbox here."*

Entering the house would provide the player entree into a dangerous underworld where thieves and monsters abounded. Walking into a dark room would result in a message reading:

*Oh no! You have walked into the slavering
fangs of a lurking grue!
**** You have died *****

They put the game on MIT's computers, where it quickly gained a following well beyond the school itself. Many people could use the school's big mainframes simultaneously and the access software had been written with the idealistic mores of the programming community in mind; it had almost no security provisions built in. As a result, anyone who could use a modem and had the right equipment could call up the MIT computers, log in, and browse around to see what might be interesting. That wasn't a large number of people in the late 1970s, but it was enough to create a little community of "Net randoms" who found their way to the students' game to try it out. These early players ranged from MIT artificial intelligence luminaries to twelve-year-olds in Virginia who'd gained access to a computer and a modem.

About halfway through the process, the group decided to name the game *Dungeon*. That didn't go over well. TSR, *Dungeons & Dragons* creator Gary Gygax's company, claimed trademark rights in the name. MIT lawyers told the team that TSR was probably overreaching, but Lebling and the others didn't want a fight and elected to keep the *Zork* name after all. In the meantime, a clever hacker at Digital Equipment Corporation who'd figured out how to break through the authors' attempts to encrypt it had downloaded the game's source code. Another programmer rewrote the source code in the FORTRAN computer language so it could run on machines other than the giant mainframes. That unfinished version of the game kept the name *Dungeon*, and wound up spreading around the ARPANET as a separate game.

Zork wasn't initially intended to be a commercial product. As the game was being finished in 1979, some of its main programmers were putting the early touches on a plan to create their own company. They didn't know what they wanted to sell, exactly; they just knew that they were smart, creative people who could surely offer the world something and have fun doing it. Lebling and Anderson were part of this group, as was the assistant director of the lab, Al Vezza. Everyone kicked in a little money of their own to start the company, and they settled on Infocom as a name. After deliberation, a home version of *Zork* was launched.^{[7] [8] [9] [10]}

"Would you shell out \$1000 to match wits with this?" read one of the company's subsequent full-color magazine ads, showing an absurdly primitive, pixilated, red video-game-style monster against a black

background. They were determined to make a virtue of their dependence on text, even as Atari and other home console games sold millions of machines by emulating the graphics of arcade games. Another ad depicted a glowing brain, reading: “We unleash the world’s most powerful graphics technology.”

Without access to these university connections, Richard was largely oblivious to what was happening on these networks as he grew up. A few of his future colleagues were already seeing these network games and falling in love, however. One of these figures was a quirky programmer later known as “Dr. Cat,” who would weave in and out of Richard’s personal and professional life for the next several decades. In 1977, Cat was a high-school student in South Bend, Indiana, still using his real name of David Shapiro. His mother was a professor at the local Indiana University campus, where they were experimenting with a PLATO network connection. “My mom had access to this, and told me about it,” Cat said later. “She said no one was using it on Saturday or Sunday, so I immediately rode across town on my bicycle to try it out.”

A friendly hacker who was guarding the trial terminal told him that if he wanted to play a game, all he had to do was type the words *BIG JUMP* into the keyboard. He did, and immediately a list of more than three hundred games scrolled down the screen in blurry orange text: space games, adventure games, and quite a few titles that were obviously inspired by *Dungeons & Dragons*. Cat was thrilled; he returned the next day to spend hours devouring as many of the games as possible, and then pedaled across town to tell the bookstore owner who had brought *Dungeons & Dragons* to town. *D&D* was at the university too, but on a *computer*, Cat excitedly told the older man.

Cat’s high-school brush with PLATO was typical of the experience many tech-savvy programmers had in the early days of public networks. The discovery of games on a network supposedly dedicated to dry research and education topics often came as a kind of revelation, highlighting the quirky, creative side of computing culture. Moreover, people wanted to share their discoveries, to tell other people about this new thing they’d found, and especially let other people play games they’d written themselves. Word of

mouth, like Cat's message to the bookstore owner and the helpful hacker's instructions to Cat, was a powerful means of advertising.

Many of the most influential of these early network games were written at about the same time Richard was starting his programming. Despite the significant graphical limitations of the networks and screens of the time, games such as *dnd*, *Orthanc* (the name of the wizard Saruman's tower in *Lord of the Rings*), *Oubliette* (French for "dungeon"), and *Avatar* displayed simple line drawings of dungeon maps similar to the graphical interfaces that Richard would develop over the next few years.

These games proved incredibly popular with the research and student communities on the PLATO network, inspiring some of the same tensions that had accompanied *Spacewar!* in the late 1960s and early 1970s. Cat later told of a pair of enterprising Indiana hackers who had become obsessed with *Avatar*, one of the most advanced of the *D&D* spin-offs in the late 1970s. Anxious for their characters to improve in the game, they'd driven all the way to PLATO's home on the University of Illinois campus, somehow made their way into the central operations room housing the machine where all the *Avatar* files were stored, logged into the computer, and changed their characters to make them all the highest level possible and give them the most powerful weapons available.

"It was so blatant, they were quickly caught," Cat remembered. By the time he arrived at Indiana's Bloomington campus in 1980 as a seventeen-year-old freshman, an automatic "enforcer" program had been installed to make sure none of the students there could waste PLATO network time playing games. He started to write a hack to get around the block but then realized there was another way: One of the computer lab's system administrators was a dedicated game player, and whenever he was on duty, he would simply turn off the enforcer.

Cat and other students in the know timed their visits to the school's computer lab to coincide with this staffer's hours, allowing them to spend hours fighting through line-drawn dungeons or programming their own games at one of the system's terminals. Other administrators at other schools pursued similar attempts to stop the games from taking up so much computer resources, usually with similarly little effect.

As Richard found for himself in Houston, once the computer game bug bit, it didn't let go.

Four *ComputerLand*

As university students and older programmers swapped programs online in 1978, Richard was concerned only about getting his own computer. He'd completed his game, winning his bet, and his father promised him the family would get its first computer before the end of that summer. When his father finally walked through the front door carrying the Apple II computer box, Richard nearly ran the astronaut over. He'd been working on *D&D 28B*, the latest and most advanced version of his continually evolving game, but without access to the school's Teletype during the vacation, progress had been difficult.

With the Apple II now hooked up at home, Richard could dive into his passion unhindered. He tore into the machine, poking around the instruction manuals and prodding the machine with simple code. He came across *Escape*, a simple game that asked players to find their way out of a maze. He popped it in the tape drive (very early computers stored data on magnetic cassette tapes rather than floppy disks or CD-ROMs) and watched as lines began appearing on the screen, giving him an overview of a labyrinth.

He was taken aback at the apparent simplicity of the problem. The answer to the puzzle was appearing on the screen as he watched.

Then something magical happened, which would change how he would think about games for the next two decades. As the map was drawn to completion, the screen went black. The next view was a first-person perspective looking down a long hallway drawn with vector graphics. Long, straight lines reached from the edge of the screen to connect in the middle, giving the illusion of depth and allowing him to wander through the maze seeing only what would be in his direct line of sight.

“As the maze dropped down into that low perspective, I immediately realized that with one equation, you could create a single-exit maze randomly,” he recalled. “My whole world changed at that moment.”

As students on the PLATO and ARPANET networks were also discovering, this rudimentary 3D view went a long way toward transporting players inside the game. Richard too saw the possibilities. His games to this point had included graphics, but he had used simple ASCII characters such as asterisks, parentheses, and ampersands to represent objects. As he now walked down hallways, turned corners, and ran into dead ends, he began to understand the computer’s potential to put players directly in the hero’s boots, something even his *D&D* games couldn’t do. Here on screen players saw through the hero’s eyes—became the hero—as they sought escape from the labyrinth.

He played for an hour, trying to figure out how the game worked, looking at the code, and sketching out dungeons while revamping 28B. When players went into his next dungeon, he decided, they too would see only what was in front of them, just as if they were exploring a real maze. It would be like an Alfred Hitchcock film, in which the viewer’s imagination was forced to invent details of menaces only hinted at on screen.

This new perspective came with a new set of complicated problems, however, taking him into unfamiliar mathematical territory. He imagined a character standing at the beginning of a hallway, facing south, for example. The player would see both walls bracketing the corridor. But turn directly east and only a single wall would be visible, without the character having shifted position. Enabling the computer to redraw this perspective as the player turned in all four directions would require Richard to understand and program a complex series of mathematical relationships, well beyond the coding skills he’d previously honed.

In the end, creating the mathematical equations and graphical representations he needed for his game became a Garriott family affair. For days, Richard doodled in his notebook, trying to visualize the creatures that would inhabit the new world. Helen occasionally appeared over his shoulder, and before long, she was drawing next to her son. Richard sketched out ladders, bats, skeletons, and chests using geometric shapes, but it was his mother who helped him create 3D graphics by explaining the use of perspective. For instance, to create the illusion that a corridor ran

off into the distance, objects had to appear to get smaller as they became increasingly distant from the character's position. A treasure chest several feet away would correspondingly become larger as the character walked toward it. It was a simple concept for an artist, but less immediately obvious to a high-school student.

Richard wrote the graphics code using geometric equations to plot the lines needed to draw each shape. Next, he needed to create the dungeon housing these items. He tinkered with the math that created the *Escape* maze on the Apple, but wasn't sure he'd gotten it correct. Owen solved this problem, whipping out a few trigonometry equations and assuring his son that he was on the right path.

Once the graphics issue was solved, Richard was ready to start working on the game code. As he'd done the previous years, Richard again proposed an independent study project that focused on his new obsession. He even got a helping hand from the administrators—while the old Teletype remained, the school's principal persuaded the school board that an Apple II was needed on site to help with administrative duties. This gave Richard unfettered access to computers both at school and at home. He attacked the code relentlessly, writing the game by hand and debugging as he went.

Again, he had a built-in test audience on the weekend as the *D&D* games picked up. During breaks, Richard would borrow his friends Chuck Bueche or Bob White to evaluate his latest work. As they skulked through his dungeons, battling demons and searching for treasure, Richard played the role of computer-mediated dungeon master, watching to see whether his creations had the desired effect on players.

By this time, Richard and Elizabeth, the young woman he had asked to play in the first *Dungeons & Dragons* weekend game the year before, were spending much of their time together. An avid gamer herself, she'd drive over on weeknights and watch Richard code. Engrossed, he'd sit intent on the screen, typing with his girlfriend's arms wrapped around his waist, her head resting on his shoulder. He'd bang away for an hour, then shake her awake, step back, and watch as she played his game. It may not have been the most traditional foundation for a relationship, but it was certainly good for his productivity. Once again he found gaming mixed well with socializing, even if their date nights looked a little different than those of most other high-school couples.

Indeed, programming the game had fully become a community activity. His father, his mother, his game group, and his girlfriend each added something to the experience, helping him create a software engine capable of depicting a rich, rudimentarily realistic world. His friend Keith, one of the early *D&D* game-night players, sketched a knight walking into a dungeon that Richard used as cover art. The game—his first complete one, in his own opinion—was finished before the first semester was over. He dubbed it *Akalabeth*, a mystical-sounding word he believed he'd made up (but which sounded suspiciously close to “Akallabêth,” a word in J.R.R. Tolkien's fictional Adûnaic language).

With his game complete and a high-school diploma in hand, Richard's game development could easily have ended there. School was out, and the *D&D* group disbanded. Computer gaming was a nice hobby, but Richard had already been accepted to the University of Texas, located three hours north in Austin. He'd decided to major in electrical engineering, just as his father had done. He'd been surrounded his whole life by the best technical minds in the country, but that wasn't going to get him a job at a game company. There wasn't even anything like a game industry around. The real programming action was happening on the coasts, at MIT and in California, hundreds of miles away.

He'd heard of Silicon Valley's West Coast Computer Faire and Homebrew Computer Club, two of the dozens of computer hacker groups at the heart of the emerging home-computer industry in 1979, at which hackers shared information with each other by toting their homemade computers to meetings. Among hackers and programmers, those years in the Valley are remembered fondly as the golden era of hacking, and it was in that environment that Steve Wozniak had created the Apple II, the computer Richard would use religiously for years.^[11]

But that was a world away, and Richard didn't consider himself a hacker. He ended up settling for a job at a local ComputerLand store. While hardly the epicenter of the American hacker community, it was at least a way to keep close to computer culture. When the store's manager discovered he'd created a game, Richard gave him a demonstration of *Akalabeth*. Gratifyingly, the manager loved it, and pushed Richard to publish it himself. People would actually pay money for the game, he said. It was good enough that it might even help persuade people to buy a computer to play it.

Self-publishing didn't take much work. Richard made his own packages, spending two hundred dollars on resealable bags and photocopying for the cover sheet and manual. "Beyond adventure lies Akalabeth," the black-and-white cover hand-drawn by his mother read. "10 different Hi-Res Monsters combined with perfect perspective and infinite dungeon levels create the world of Akalabeth."

With only limited funds available, and fearful that he'd end up with a mass of unused five-dollar disks, he produced only sixteen copies of the game. He hung plastic-bagged packages on ComputerLand's wall and waited for customers to discover the magic. Fifteen copies sold. It wasn't much, but Richard was thrilled with the sales. Fifteen strangers had wandered into a store looking for something to make their computer more interesting, and they'd chosen his game.

Excited by his game sales, Richard hadn't noticed a copy was missing.

A few weeks later, he got a phone call at home from someone who evidently wanted to talk about *Akalabeth*. Richard didn't recognize the voice, which confused him. As far as he remembered, he hadn't spoken with anyone about the game outside his gaming group and his boss at ComputerLand. The man introduced himself as Al Remmers, the owner of California Pacific, an actual game company based on the West Coast. It emerged that Richard's boss, himself enthusiastic at his employee's success, had sent the company the missing disk. Now Remmers wanted to fly Richard out to California to talk terms. "You need to publish this game professionally," he told Richard. "This could be big."

By the time the phone call ended, Richard's heart was thumping. Twenty minutes before, he had been thinking about what he was going to do next. *Akalabeth* represented two years' worth of programming, but he had never envisioned it extending beyond his friends. It was a school project meant to get him out of class. Yes, he was proud of the game, and of the packages hanging on ComputerLand's wall, but this was like taking a job in the IBM mailroom and having the president of the company stroll into the basement to invite him upstairs to talk strategy. He was overwhelmed.

He talked to his parents about the phone call and the potential for his game to go nationwide. Together, they decided he should go to California to investigate a business partnership. He was thrilled; in just a few years, he'd gone from being a gaming geek to a computer programmer with a vision. He

had wanted to recreate the weekend gaming experience that had evolved at his house: the camaraderie, the excitement, and the total immersion players felt in entering a skilled storyteller's world. Now it looked like he might get the financial backing he'd need to realize this vision. "Until that point, I'd never considered gaming a career," he said years later, sitting in the office of his second game company. "I had been happy just doing what I had fun doing."

He was in for a surprise. The first hackers' era was coming to an end as academics left their labs and hobbyists left their basements for the lure of profits. With Apple now selling tens of thousands of computers a year, the consumer software business looked like a gold mine, and entrepreneurs of widely varying degrees of reliability were pouring in.

As with other past gold rushes, the reality would often be something less than pretty.

As Richard's plane rolled to the gate in northern California, he let himself imagine a publishing success that would make the fifteen copies he'd sold to date seem like a joke. Yet even this was secondary to a more immediate draw. In just a few hours, he thought, there was a good chance he'd be standing face-to-face with Bill Budge, one of his programming idols, who published games for California Pacific.

Budge had first made his name by writing a *Pong*-style game called *Penny Arcade*, which he traded to Apple Computer in return for a printer while still a graduate student. The game also drew the attention of California Pacific's Remmers, who hired Budge to write *Space Album*, a title subsequently ranked by computer hobbyist magazine *Softalk* as the eleventh most popular game of 1980. Over the next few years, Budge would gain more prominence as the author of a 3D graphics system for the Apple II, the self-published *Raster Blaster* pinball simulation, and *Pinball Construction Set*, which let players create their own virtual pinball tables.

Yet even at this point, in 1979, Budge was one of the few programmers Richard admired. The older programmer seemed to have similar ideas about how to make games, even if Budge's products were worlds away from Richard's *Akalabeth*. Both were concerned with taking games from another

medium and translating them to the Apple computer, despite its limited graphics and technical capabilities. Budge's work to date had largely been focused on arcade-style games, but his success had been undeniable. Richard was already running into trouble figuring out how to bring the experience of paper role-playing games to the computer screen, and he hoped that Budge's experience and expertise might help him.

"These guys publish Bill Budge," Richard repeated to himself. His heart pounded as he left the airplane. Memories from his year-long exile in Palo Alto flashed through his head. The computer culture had been springing up all around him, almost literally in his backyard, and he'd barely been aware of it. He'd spent most of that year dismissing it, longing for Houston. Maybe that'd been a mistake; but now he had a second chance.

He emerged from the walkway to see Remmers holding a handwritten sign with Richard's name on it. For Garriott, the sight was like something out of a Hollywood movie. Nor did the next few hours change his impression. Although the plan was to head back to the California Pacific offices, where Richard had hoped to run into Budge, Remmers claimed he had to make a stop first. "It's too late to get you back home, anyway," the man said.

They drove to a one-story apartment near the airport. Remmers hopped out of the car without explanation, and Richard, feeling a bit uneasy, followed. Inside, Remmers introduced him to a tall, scruffy man, and the two disappeared into the back of the house. Shaken and travel-weary, Richard stood in the middle of the room, his heart racing. Was something illegal happening here? He'd grown up next to NASA, where there was barely any drinking and certainly no drugs. Evidently life among California's young software developers was different.

"Houston wasn't the Bible Belt. It was just that that kind of thing wasn't heard of," he remembered later. His would-be publisher had disappeared, he was 1,700 miles from home, and he didn't know anyone else in the area he could call. He waited nervously until he eventually passed out on the couch, exhausted from the adrenaline of the trip and his current adventure.

Remmers shook him awake at the crack of dawn, and they left as quickly as they'd arrived. Ghost-white, Richard climbed into the front seat. Though still convinced that everything would end well, he was underwhelmed when they finally arrived at the California Pacific office, a small building with few offices and fewer people. He was also disappointed

to find out that his idol, Budge, was nowhere to be found (although the two would meet later). The company contracted for most of its work, so there was little overhead and there were few full-time employees. It was the antithesis of Richard's experience both in Oklahoma and in Houston. There was no community here, and he had no desire to stay. He'd been half-scared out of his wits since he got off the plane. He signed his contract and left as quickly as he could.

Yet even if the experience had been less glamorous than Richard had imagined, the success excited him. With *Akalabeth* finished and a contract in his hand, he couldn't complain. A few days after he returned home, he called Ken Arnold, a boy about his age he'd met while working at the computer store. They'd decided to work together on a new game, and Richard wanted to get started as quickly as he could. Time was short. He was leaving for the University of Texas in just a few weeks, and the three-hour drive to Austin would limit their ability to work together.

He and Arnold were determined to make a better version of *Akalabeth*. The basic structure of the game remained the same—a hack-and-slash, hero-driven adventure—but the two didn't want to replicate the first game's experience completely. The weekend *D&D* games had formed the backbone for *Akalabeth*, but now Garriott wanted a grander experience, with richer interaction between the player and the world. Arnold began constructing a basic graphics subroutine using assembly language, which Richard hadn't yet bothered to learn, while Richard hammered out the rest of the game's particulars. When they were finished, Richard wanted to have a game that every *D&D* player would want to play.

Meanwhile, the professionally published version of *Akalabeth* was starting to take off. The game eventually sold thirty thousand copies, earning Richard royalties in the neighborhood of \$150,000, about three times what his astronaut father earned in a year. Not bad at all for a school project.

Five *The Expansion Pack*

The computer games business Richard was entering was a decidedly amateurish enterprise in the late 1970s and early 1980s, with isolated pockets of like-minded people often having little idea of what was happening elsewhere. Many of the era's software companies were haphazard outfits, often launched by people who had started programming as a hobby rather than as a profession. Brøderbund software founder Doug Carlston, at the time a lawyer in Connecticut, later told of writing games for his RadioShack TRS-80 computer largely as a means of supporting his own computer habit. Monetary royalties weren't even the biggest draw at first; many publishers would pay for games simply by sending free copies of all the other software they published. "I'd send the software off, and get thirty or forty freebies back in the mail," Carlston remembered.

Computer software publishing companies were often tiny affairs, run out of homes and dorm rooms, conducting business through ads in local publications or one of the growing number of national hobbyist computer magazines. They were hungry for software to sell, particularly games, and some of the more obvious business standards that would develop later in the industry's history were simply ignored. Carlston, for example, often sold the same program to two or more publishers. A lawyer by day, he told his correspondents at the companies clearly that the games had already been released elsewhere, but few cared. It helped that most publishers had little ability to distribute their wares nationally. At the time, only a few chain stores sold computer software, and most sales were regional or occurred through the mail. There was little likelihood that the same game, released by two separate companies, would end up sharing shelf space somewhere. Crowther

and Wood's *Adventure* was a beneficiary of this phenomenon, released for the Apple II by Microsoft, Apple Computer, and a company called Frontier Computing.^[12]

In these early days of hobbyist computing, many games also came from something other than what would today be viewed as a traditional software publisher. According to *Softalk* magazine, the most popular pre-1980 game for the Apple II was a *Space Invaders* clone called *Super Invader*, distributed by the popular *Creative Computing* magazine in 1978. The founder of that magazine, David Ahl, had earlier written a book called *BASIC Computer Games*, which in 1979 became the first computer book to sell more than a million copies.^[13]

As personal computers spread, hobbyists increasingly turned pro. Richard's surprise at seeing *Akalabeth* suddenly selling thousands of copies wasn't a unique experience, though the scale of its success was somewhat exceptional. Budge's first game with Remmers earned him a surprising \$7,000 in its first month.^[14] Carlston too saw royalty checks start trickling in from publishers he'd almost forgotten about, hundreds of dollars at first, and then thousands.

The years 1979 and 1980 proved important ones in the formation of several influential gaming companies. Carlston packed his computers into his Chevy Impala early in 1980 and drove across the country, winding up in Oregon, where his brother Gary lived. The two agreed to start publishing Doug's software themselves. They called the new company Brøderbund (*broder* means "brother" in Swedish, while *Bund* is German for "alliance"), and the company started off with barely \$7,000 in working capital, mostly donated by family members. Sales were slow at first, hampered by distribution difficulties. Doug drove across the country again, stopping at retail outlets wherever he could find them, trying to sell the company's software. The tactic worked, and he simultaneously gained a clearer idea of the young computer industry's noncorporate character.

"It was as if it had been left to geeks to create the universe. It was kind of warm and fuzzy from top to bottom," he said. "The people who were running the stores were the kind of people who wanted to invite me home and show me all the hacks they had running on their own computers."

Infocom's *Zork* was also released for the Apple II in 1980 by an outside publisher, although the game did poorly until Infocom's ex-MIT

programmers took control of distribution themselves. Sirius Software was formed in Sacramento, California, by a Vietnam veteran and computer store manager named Jerry Jewell, who had found in college student Nasir Gebelli a brilliant programmer with a talent for bringing arcade-style games to the Apple II. On-Line Systems, later to be renamed Sierra On-Line, released its first game that year. That company would touch Richard's life more deeply than the others.

On-Line Systems was the product of collaboration between husband and wife Ken and Roberta Williams, both of whom were new to computer games in 1980. Ken had begun as a temperamental corporate programmer with little interest in games but with an ambition to create his own company. His decidedly nontechnical wife, Roberta, had fallen in love with a copy of Crowther and Woods' *Adventure*, and decided to write her own adventure game called *Mystery House*. After initial skepticism, her husband pitched in and added a graphic element that pushed the boundaries of Apple II display technology beyond anything that had been done before. They toyed with taking it to a "real" software publisher, but instead decided to keep the profits themselves, and took out a magazine ad for their *Hi-Res Adventure #1*. They made \$11,000 in the course of the next month. On-Line Systems was renamed Sierra On-Line when the Williamses moved to a little town near the California Sierra mountain range not long afterward. ^[15]

These publishers grew to be a part of a small network of friendly companies, and their founders came to know each other well, developing a sense of community that would stay intact through much of the 1980s. They met at trade shows like the West Coast Computer Faire and Applefest, and spent time together away from the shows when they could. The Williamses hosted a series of rafting trips over the years that would often draw fifty to seventy people from various companies out into the woods for water fights. The programmers were drawn together in large part by a shared sense of purpose, and occasionally by a beautiful and incredulous sense of having lucked into their new lives.

"We were all in it out of a sense of wonder," Carlston remembered. "All of us either had no lives before or had thrown them over because of these stupid machines. We hung out together because we were all the same sorts of jerks."

That didn't make them good business people. Some of their

companies did very well, borne aloft by their programmers' talents and a market hungry for whatever software it could find. The computer games market represented a tiny fraction of the billions of dollars being spent on arcade and home consoles like the Atari, but it didn't matter. For the most part, these people were in the industry because they loved programming on the temperamental new machines, and the draw of bigger money elsewhere simply wasn't a factor. Over time, real-world business concerns would swamp some companies, and would undermine the hacker culture in others, but as these companies first found their way, financial and accounting issues were simply new problems to be solved as quickly and painlessly as last week's graphics hack.

“Most of these guys were in the industry because they loved it,” Brøderbund's Carlston said. “It was a very hackery kind of thing. You didn't go to business school, you didn't read the rules, you were just going to go out there and figure it out. It was a blissful ignorance of the real world that united everybody.”

Six *Creative Anachronism*

Richard and Arnold certainly fit the blissfully ignorant hobbyist-hacker mold, even as *Akalabeth* proved to be wildly successful. For the moment unconcerned with distribution and contracts, the two plunged into work on *Ultima*, the name for their planned follow-up to *Akalabeth*. They plotted a story in which the player would try to stop the evil wizard Mondain from wreaking havoc throughout a land called Britannia. Yet with school and life commitments looming, they didn't have much time together to finish the project. Just a few weeks after returning from California, Richard piled into the car with his parents and headed three hours north to Austin's University of Texas, where the plan was to master the more advanced arts of computer programming.

His first days in Austin weren't so different from his first days at computer camp just a few years before. He was cut off from his community and miserable. Gone were the weekly games of *Dungeons & Dragons* and the friends that had developed over two years, which had been such a source of inspiration for him. He was separated from his creative partner, but in some ways this helped him get his work finished. With few friends in Austin, he spent weeks sequestered in his room tinkering with the new game. On weekends he'd drive back to Houston, holing up in his house with Arnold and kicking around ideas, but they were keenly conscious of their lack of progress. As hard as they tried, the extended breaks retarded the game's development. By the time Richard came home for the Christmas holidays at the end of 1979, he was depressed. He was too far away from Arnold to get serious work done, and too much commuting meant he wasn't acclimating up north. He made a New Year's resolution: It was time to explore Austin

and find like-minded people and interesting groups to join.

He tried the fencing team first, but there was little time for social interaction there. He picked up a campus newspaper one day after class—fittingly, while wandering through the student union’s arcade—and found an advertisement for a group called the Society for Creative Anachronism (SCA). Each week these people would get together to recreate aspects of medieval society, complete with full garb, role-playing, and sword fighting. In a way they were the real-life manifestations of the *Dungeons & Dragons* games he’d played and the computer games he hoped to create.

The SCA was a curious group started in the shadow of a different kind of renaissance. Formed on the weird streets of Berkeley in 1966 by a handful of science-fiction and fantasy fans who wanted to bring the worlds they were reading about to life, the group was imbued with a sense of honor and mutual trust its early members felt were missing from 1960s culture. By the late 1970s, the group had spread nationwide. The Austin chapter had existed since 1977, and was started by Steve Jackson, another game designer who was preparing to start his own company out of the large metal barn behind his two-story house. A longtime tabletop gamer, Jackson wanted to create a hybrid of the war games released by established companies such as Avalon Hill and Simulations Publications and role-playing games like Gygax’s *Dungeons & Dragons*.

That was business. The SCA was something different: part fun, part philosophy, and part medieval craft. Over a bottle of whiskey, SCA members would discuss the guiding principles of chivalry they thought should rule not only their weekly fencing matches but also their lives. It quickly became a safe haven for the science-fiction crowd, the tabletop gamers, and the computer programmers—three distinct groups that were starting to realize their common interests.

After reading the SCA’s newspaper ad, Richard tracked down the group in Waterloo Park, a grassy area southeast of the university, where it held weekend gatherings and fencing matches. Two fencers were thrusting and parrying when he arrived, and he watched with a practiced eye. The two fencers were David Watson, then a thirty-year-old craftsman, and twenty-year-old Greg Dykes, Watson’s roommate. Richard asked to join them, and the trio soon became inseparable during the Sunday-afternoon fencing sessions. They practiced constantly, challenging the others to duels over any

issue that came up, no matter how trivial. When Dykes, known as Dupre in the Society, became agitated over Richard's insistence on calling him "Super Duper," he challenged Richard to a duel on Watson's front lawn. Richard quickly dispatched Dykes, winning the right to use the nickname for six months, after which the challenge would be reissued.

The older Watson seemed the odd man out in the trio, but his meticulous attention to detail and his eccentric personality meshed well with Richard's interests. Fascinated with archery since his days as a history graduate student in the early 1970s, he had by this time taught himself to craft functioning crossbows.

"The four of us—David Martinez joined the regular foursome—really all hung out and camped together at almost every SCA event," Dykes later remembered. "We got into the philosophy of the group. We'd sit around drinking and talking about proper behavior, the rules for living your life, and honor. Sure, there was some straight tavern stuff too, but we always did things with a certain style."

Richard found significant inspiration for his *Ultima* game in this crowd. He used the group's code of honor as a foundation for later games, and drew on his friends' personalities to make believable characters. Showing up at Waterloo Park one day with notebook in hand, he tapped people on the shoulder one after another and asked them, "What would you like to say in my game?"

"The thing about the characters is, Richard takes the best qualities from these people, from our friends, and he's used them in the game," Watson said years later over tea, his receding hair and goatee peppered with gray, belt and black-leather riding jacket doing little to hold in a now-considerable belly. "When Dupre," regarded by his friends as a good-hearted but flawed man, "is the Paladin, there is truth in that."

Richard also got feedback from gamers among the SCA crowd. He and Jackson in particular talked more abstractly about SCA-related issues and medieval combat than about computer game theory. Jackson was interested in computer games, but was so focused on his own projects that he never dug deeply into the world Richard was helping create. "I have always been very interested in the computer game world, but through bad decisions, bad luck, or both, I never got very far into it," Jackson said years later.

Meanwhile, California Pacific, mired in financial trouble, pestered Richard for his latest game for nearly a year. Richard refused to ship the game to them until he felt it was finished, which wouldn't happen until late in 1980. Soon after Richard delivered the finished *Ultima*, the company nearly collapsed. The game was distributed around the country, but by the time Richard was starting to expect royalties, the company had stopped returning his phone calls. It took him some time to realize that it had gone out of business.

He turned to his brother Robert for help in squeezing royalties from the defunct publisher, but this proved to be impossible. Yet while the failure meant he was adrift in the gaming world, it proved useful in some ways. What appeared to be a disaster provided an important lesson. His game would go on to be a success, giving him leverage as he looked for a new publisher. With Robert now at his side to help him with business issues, Richard began work on an *Ultima* sequel.

Seven *The British Invasion*

From Richard's dorm-room desk in Austin, and indeed throughout much of the country's programming community, this nascent gaming world looked like an American phenomenon. In fact it was anything but.

Beginning in 1980, home-computer sales in the United Kingdom were stronger even than in the U.S., driven particularly by inexpensive machines from Sinclair Research. Connections to the digital networks that had linked U.S. universities and computer businesses in the 1960s and 1970s were also spreading to schools, businesses, and governments in Europe. As in the United States, many programmers in Europe turned their developing skills toward game-making, sharing their creations with a growing audience of techno-geeks.

As on the other side of the Atlantic, many of these programmers had also been inspired by tabletop role-playing games and gaming communities. Those shared antecedents meant that games coming from outside the United States were often reminiscent of their North American counterparts. One such—perhaps the most advanced project of its time—was announced in the United States with a teasing cross-Atlantic email that went out across MIT's *Zork* email list in 1980.

"You haven't lived 'til you've died in MUD," the short message read.

MUD stood for "Multi-User Dungeon," and its British creators were taking the line of gaming started by Crowther and Woods' *Adventure* and the MIT programmers' *Zork* a step further. Like Lebling, Blank, and the rest of the Infocom crew, *MUD*'s authors were creating a rich, often funny text-based world in which players could explore, find treasure, and fight monsters. Unlike the other games floating around digital networks, *MUD* let multiple

people play in the same world simultaneously, opening up new possibilities: Gamers could explore dungeons together, battle one another, or even just hang out chatting. The authors of that transatlantic email, University of Essex students Roy Trubshaw and Richard Bartle, would soon be known in computer circles around the world.

MUD had grown out of much the same desire for a computer gaming experience that fueled Richard when he left behind his first *D&D* group in Oklahoma. Bartle had grown up in a tiny town called Hornsea on the English coast of Yorkshire, where there hadn't been much to do. His father had been an avid board-game player who instilled the love of dice and competition in his two sons. As Bartle grew older, he was attracted to science-fiction and fantasy books, and started playing increasingly advanced games at home with friends and through the mail.

In 1975, the fifteen-year-old sent away for a copy of the *Dungeons & Dragons* rulebook, and fell in love with what he found. He brought together a small group of other local gamers, and was soon leading them through fantasy worlds of his own creation. He began writing a small, locally distributed gamers' magazine, and in the last two years before college he took over a national gaming zine called *Sauce of the Nile*, where he printed the rules for his own swords-and-sorcery game, called *Spellbinder*.

Like Garriott, Bartle didn't apply himself overmuch to school. The games called, as did the zine and his computer classes. Academic topics didn't hold his interest. He passed his college entrance examinations unspectacularly, relying on "flair rather than hard work and revision," he later said. Still, his scores were good enough to bring him to the University of Essex, a school about an hour northeast of London with a good reputation for research.

Essex in 1978 proved to be something of a shock for Bartle. The school's cultural and social scenes were dominated by a left-leaning political element that felt far removed from the engineering and scientific frames of mind. A far-left Labour Club and the Socialist Workers dominated the student body's political voice, while communists were viewed as sellouts, Bartle remembered.

He liked computers, and that was enough to put him in a dangerous category in the eyes of much of the student body. Programmers were social misfits, able to master the mysterious beasts in the basement that no self-

respecting radical had any business playing with, at least in those days. Computers were still seen as instruments of a bureaucratic Big-Brother mindset, rather than as an artistic or a revolutionary tool. “All scientists were regarded as nerds, and computer scientists were the nerdiest of the nerds,” he said later.

Yet, if he never quite fit into the broader social scene, his sense of isolation didn’t last long. In Bartle’s first week at the university, he met Roy Trubshaw, the secretary of the student Computer Society, and the pair hit it off. Bartle joined the group, eager for more time on the computers, and became an integral part of the little subculture. Although he’d gone to the school expecting to major in math, he soon abandoned that path to concentrate on computers. Plenty of people were better mathematicians than he. The same wasn’t true for programming.

Like Lebling’s group at MIT, the Essex Computer Society had found its way to Crowther and Woods’ *Adventure* and was collectively captivated. Trubshaw loved it for the programming. Bartle just liked the game. They and others in the student group talked about creating their own version, making something better and more complex. *Adventure*, which allowed just a single player at a time to wander through the text-based environment, hardly compared to *Dungeons & Dragons*, where much of the fun lay in adventuring alongside a band of other people. The Essex group was determined to find a way to bring this collective experience to the virtual spaces of the computer.

Trubshaw began working on the infrastructure for a world of this kind in late 1978, ultimately calling it the *Multi-User Dungeon*, a reference to the hacked single-player version of *Zork* floating around the Net at the time. He created a database able to keep track of the changing states of all the objects and people inside each “room”; this allowed a number of different people to be in the room at the same time, and ensured that if one person picked up a chair, for example, it would stay picked up for everyone else.

By 1980, Trubshaw’s last year at Essex, he had the basics of the project down. It had taken him most of his third and final year there to get this far, and had distracted him enough that his degree project had all but fallen by the wayside. His first version had a hundred locations and a simple set of commands. He called it a game, but it had really been more of a programming exercise. When the elder student left in 1980, Bartle took over and “gamified” the project, creating a framework that encouraged people

to interact with each other in a variety of ways. “My aim was primarily to attract players: A world with no inhabitants is no fun at all,” Bartle said. “I understood that not all people would want to game when they got there, but its being a game would draw them in.”

Bartle’s first task was to make the world bigger. He expanded *MUD* and added a long list of new commands, allowing players a wide range of actions. He added tasks, puzzles, and ways to improve a character’s skills and power. Points were awarded to players who discovered treasure and dumped it into the swamp where no one else could get it. Points were awarded for killing wandering monsters, or “mobiles,” as they were known. Lots more points were awarded for killing other players. The game included a goal worthy of a newly created world: Players who accumulated enough points could become wizards, or even arch-wizards, with power to get behind the scenes of the game and exert godlike power over the environment or even over other hapless players.

The message Bartle and Trubshaw sent to the *Zork* email list at MIT in 1980 brought a few curious Americans into the game, but it was difficult for them to spend much time online until the transatlantic data network had improved. In the beginning, a majority came from within Britain. The university had allowed Bartle and the Computing Society to open the school’s computers to outsiders, but only in the middle of the night; that restriction proved little hindrance. Singly and in small groups, people took up residence in *MUD*. The community that developed was tight—certainly as close as those in the games *Gygax*, *Garriott*, and *Bartle* had played with dice and paper—and almost wholly digital.

To gamers scattered across the United States and Europe, this freedom proved a revelation. Some began to consider building their own virtual spaces, not only to play games but also to develop friendships unrestricted by geography. The relative anonymity of *MUD*’s digital community helped create improbable mixes of players, bonded by their connection to the game. Because *MUD* was a role-playing game, players could be whoever they wanted inside the game, with their status in real life mattering little. In Richard Garriott’s early games, people he knew had found their way into the story as fictional constructs. In *MUD*, the people Bartle knew *were* the game, and ultimately formed the basis for one of the first communities to form wholly inside the context of a game world.

“Jez” was one of those players. In real life, Jez’s name was Jeremy San, a fifteen-year-old prototypical bedroom hacker living at home. His computer equipment was rudimentary. He didn’t even own a modem cable, and so hand-connected his 300-baud modem to his computer with ordinary wires. Because they weren’t shielded, the screen on his computer flashed into gibberish every time his younger brother used his CB radio in the bedroom next door, he remembered later.

When he stumbled upon *MUD*, he found the social aspects of the game most compelling. “Most players in *MUD* went there to converse and play with other players,” he said later. “The game itself was quite good, but it was the multiplayer angle that made it addictive and compelling. The unpredictability of having real human opponents, as well as A.I. (artificial intelligence) ones, made it incredibly enjoyable.” Nevertheless, the hacker in him drove him to achieve “wizard” status by solving puzzles and completing adventures. With his new power, he found he could spy on other players, travel invisibly around the world, and generally act as a benevolent or malicious god toward players who hadn’t achieved his exalted status. For a fifteen-year-old, it was an enormous thrill.

Throughout the next few years he became a standby, popular character in the world, serving as storyteller, gossip, and collective memory for other players. He spent hours a day online, sleeping by day and playing by night, cutting classes when he went to college, or leaving for lunch to catch a few extra minutes of sleep in his little Datsun Cherry. Like so many of the hacker-gamers of that time period, his grades weren’t stellar, but he was already working on the side doing computer consulting work for companies, including British Telecom. He’d even started his own games company. ^[16]

Much of *MUD*’s character was due to Bartle’s influence, Jez said. Bartle was god the creator in the context of the *MUD* world. “He was omniscient and omnipresent. He seemed to know everything that was going on, and he ruled the game as if it was his creation and he had just created the Earth, and we players were the Adams and Eves of the place.” However, Bartle trusted others who had “made wizard” with the ability to change and modify the game, so players felt like they had a stake in the world itself. That helped keep players in the game even after they’d reached the highest level possible. To Jez, Bartle seemed to be an “extremely nice and funny guy, very articulate and creative. He was quite a bit arrogant but deservedly so. He’d

regularly tell me his I.Q. was very high, something like 170 or 180,” Jez said. “This was extremely annoying, mainly because it was probably true.”

Other character-players became the stuff of legend. One of the game’s most famous denizens was Sue the Witch, who dialed in to *MUD* from South Wales and played long hours every night. She worked her way to the game’s highest rank in just four weeks, becoming what Bartle later called *MUD*’s “greatest player.” Spending up to six hours a night online, her phone bill reportedly topped £1,000 a month. Particularly popular because she was female in a predominately male community, she was always online, she was always willing to help, and she always upheld *MUD*’s social ethos to the point of angering some other wizards. Bartle trusted her implicitly. Yet while other players met face-to-face, no one ever saw her. She claimed in handwritten letters to some of the players that she was agoraphobic. Jez was one of those who corresponded with her, and they developed a close relationship. She sent him pictures, and tapes of her favorite music. Occasionally, Jez or someone else would talk to her on the phone, but conversations were always short.

After long months playing, Sue disappeared. She sent a cursory note indicating she was going to Norway to be an *au pair*, and then stopped corresponding altogether. Some of the players were worried; this didn’t sound at all in character for the Sue they knew. A few of them finally tracked down her address in South Wales and made the trip. A woman answered their knock at the door and gave them the bad news: Sue’s real name was Steve. He’d been playing as a woman since the beginning, letting his wife—whose real name was Sue—answer the phone calls. He was gone, but not in Norway. He was in prison for defrauding a government agency, the woman said. Crestfallen, the players returned home.

While shocking to the players in this case, the ability to take on new identities and even genders had in fact been deliberately designed in to the game. In interviews long after the release of the game, Bartle said he had set up the flexibility of the game’s role-playing system to encourage his fellow programmers at Essex to explore parts of their nature in ways they might not otherwise feel comfortable doing. One of his own first characters used to test and debug the game was named Polly. The persona was used in part to test the ability of the database to handle female characters after being created with solely male personas, but he said it was also used to encourage other people to explore other characters.

MUD's popularity sparked successors and imitators. While Bartle tended the first *MUD*, and then created a company that would operate its successor, others followed his lead. Source code for the original began popping up on university systems around the world. Other programmers created different software for doing roughly the same thing, and before long, hundreds of these text-based worlds, populated by hundreds or even thousands of people, were scattered across the world, hosted on university servers, bulletin board systems, or the young commercial online services like CompuServe. Some of these games kept Bartle's swords-and-sorcery theme. Some used other inspirations, drawing from science fiction, Western, or movie themes. Many of them weren't games at all and simply served as venues for social interaction or theatrical role-playing. Some were even explicitly sexual, with text-based actions describing graphic pornography of every conceivable variety.

All of them were played over the networks or online services to which most people had no access until considerably later. The commercial single-player worlds created by Richard and his peers would thus remain most people's main exposure to computer gaming for years to come.

Eight *Origin's Story*

Back in Austin, Richard was still looking for a way to bring his next game to market. Figuring he had little to lose at that point, he put the word out in the gaming industry in 1981 that he was a free agent. If he didn't get any bites, he'd stay in school. If a deal did come through, so much the better.

Initially it appeared as if Richard would have little trouble finding a publisher. He'd already shown that he could publish a game—two, in fact—so he asked for a huge amount of money by prevailing industry standards. He wanted a 20-percent cut of the game sales, a figure that was practically unheard of at the time. Programmers were a dime a dozen. Publishers could find any kid and teach him how to program an Apple II in a few weeks, and have him churning out *Space Invaders* clones in no time. Companies were making money, and none wanted to give Richard too much of it, particularly given his reputation for taking eighteen months to finish a game.

Richard didn't just want money. He also wanted control. He was creating *worlds* where players could bring their imagination to bear. For that virtual space to become something beyond just a series of puzzles on the screen, he wanted to treat its geography as something more than a disposable backdrop. Up to this time, games had typically been shipped in simple resealable plastic bags. Richard wanted his next game in a cardboard box with vibrant medieval-themed graphics on the cover. He wanted his manual included, as well as a cloth map that would give players a visceral sense for his world, something computer graphics were still too simplistic to provide.

When publishers heard that pitch, the offers dried up. Game publishers weren't out to create worlds. They were trying to capitalize on

a burgeoning business opportunity, and nobody knew how long this market would last. Speed was imperative for success. Moreover, the cardboard box, manual, and cloth map would eat into the profits. If Richard took 20 percent *and* his game included expensive add-ons, margins would fall sharply. Publisher after publisher turned its back on him.

One of the few exceptions was Sierra On-Line's Ken Williams, who saw potential in the young programmer. Williams knew how code-slingers' minds worked, and he knew Richard had something most of them didn't. For a product as potentially valuable as the *Ultima* franchise, Williams decided to give up more than he was used to. He signed Richard to a contract for *Ultima II*, and let the programmer go to work. He had enough games in the pipeline that he could afford to give the next *Ultima* some development time. Richard, in turn, began drafting a story that picked up where the first *Ultima* left off, featuring the wizard Mondain's apprentice, Minax, seeking revenge on Britannia.

By the summer of 1982, Richard still hadn't finished the game. For their part, the Williamses had moved their operation into the California foothills, and had bought a house where Sierra's growing group of programmers could stay, dormitory style, while they churned out game after game. To kids who'd never had much of a community before, this environment was better than camp. They got paid, they got to play with their beloved computers all the time, and if an occasional stress-related blowup occurred, it could all be taken in stride.

Richard initially had little desire to join this group, still wary after his first California experience. As development of his game dragged on, however, he realized he'd need to relocate for the summer.

"When I was working on *Ultima II*, I didn't know machine language very well at all," he said later. "I was always calling up there for help, so I went up there even though technically I was freelancing for them."

Once again Richard found himself a fish out of water. He rarely attended the weekend parties put together by the younger programmers and the Williamses. As productive as it was, the summer turned out to be the first wedge in a widening distance between the young programmer and his new publishers.

"From a personal standpoint, I really liked Ken Williams," Richard said, "but I didn't really fit into what was going on up there. I'm not sure they liked me."

The game nevertheless proved to be a success when it was unveiled at that year's San Francisco Applefest conference. Richard attended as Lord British in full medieval garb, a nod to his friends in the Society for Creative Anachronism. Soon afterward, he packed up his suitcase and returned to Houston for a short time before heading back to the University of Texas at Austin.

The success of his latest game only deepened the gap between Richard and Sierra On-Line. When Williams offered Richard what the young programmer thought were less than desirable terms to translate the Apple II version of *Ultima II* into a game for the new IBM PC, he decided to cut off his relationship with the company. This time he decided to strike out on his own. He hadn't been overwhelmingly impressed with either of his experiences with publishers, and figured he could do better.

His disillusionment with game publishers was matched by a growing disdain for his college professors. His computer classes in Austin were proving to be infuriatingly slow, and irrelevant to what he thought he needed to make great computer games. His annoyance came to a head when a professor in one class introduced assembly language programming for the latest Apple II, which used a 6809 processor. It was an important subject, one that would theoretically help Richard in his own work and if he wanted to get a job as a serious Apple programmer after graduation. But his work had used a different kind of processor, the 6502, than the class was using. It was a less advanced unit, but it worked for him. The work he'd done with it had made him hundreds of thousands of dollars.

He refused to learn what the new processor could do. He completed his assignments, but refused to include the latest features of the new processor in his work. Unamused, his professor knocked points off Richard's grade for each successive sign of intractability. With each dropped point, Richard's motivation waned until he finally hit bottom: an F in the class. It was the last straw, convincing him finally to drop out.

Free now from publishers and professors alike, Richard sat down with his brother Robert to concoct an alternative future. Together they hatched a plan to create their own company using the *Ultima* series as its primary revenue generator. There was only one problem: an overachieving NASA astronaut parent who hadn't ever been completely at ease with his son's fascination with computer games. Now here was Richard, the computer

genius of the family, coming home with his tail between his legs because he had failed, of all things, a programming class. Quitting was clearly the right choice for Richard, but as Robert said later of their father, “We were pretty sure he was going to kill Richard.”

Instead their father surprised them: He cut another deal with Richard. The games-writing business just might make sense, he said, but only as long as they were making money. The practical-minded Owen was sure this computer games boom was a fad, albeit a profitable one in which an unfocused college dropout could make lots of money. With their father’s conditional blessing, the two brothers launched Origin Systems with \$70,000 in working capital, a sum Richard fronted largely with the profits from his previous games.

“When this ends,” Owen told his son, “you’ll go back to school and get a real job.”

Nine *Brave New Worlds*

Out of school, Richard moved back into his parent's Houston house. Along with his friend Chuck Bueche, he set up residence in the loft of the three-car garage the Garriotts had built after Helen's art space had been commandeered by the weekly *Dungeon & Dragons* games. The space was mostly barren, with just a few desks and cots peppering the room. They gave their new company, Origin Systems, a motto full of hubris: "We Create Worlds."

The reality of Richard's company was much less impressive than that initial claim, but the little group was nonetheless promising. He gathered a close-knit collection of friends who could help create and sell the games. Robert, now living in Massachusetts with his wife Marcy, would handle the business operations, commuting between New England and Texas. Mary Fenton, a customer service representative from Sierra On-Line, joined the team, and Jeff Hillhouse, an ex-college-basketball player and fellow Sierra On-Line refugee, came with her.

Like any startup, it was a ragtag operation with little money and little in the way of management. What they lacked in resources they more than made up for in pests, Hillhouse recalled later. "My first look at the living quarters..." he said, his voice trailing off. "I'd never slept on a cot before, but that turned out to be all right. But if I left anything in the trash at night, I'd wake up and hear a scuffling, a rummaging. Houston has a reputation for huge cockroaches, and when I worked for Richard I found that the reputation is true."

The roaches took up residence in Origin's computers, too. The sweltering Texas heat and the ungodly humidity wreaked havoc on the Apple II machines. To combat the pest problem, the programmers would remove

the computer tops each night, prop them up against the wall, and allow the motherboards to cool down. The warmth acted like a homing beacon for the roaches. The employees' morning routine often consisted of peeling fried bugs off the computer and wiping up any water that had leaked through the windows in the course of the night.

One night a few months after they'd settled into their new digs, the doorbell rang as they were having dinner with Richard's mother. Richard got up, sauntered through the house, and opened the door. Standing in the doorway was his brother Robert, who'd flown in from New England, and a stocky man who was built like a fireplug—a bit round through the chest, with a long, bushy beard. He introduced himself as “Dr. Cat from Indiana.” Cat had sent Robert a note after seeing an advertisement announcing the formation of Origin in a gaming magazine published by Steve Jackson. As Cat walked by, Richard gave him a distinctly skeptical once-over: On the newcomer's feet were fuzzy bear slippers, and he was wearing a Watchimal, a watch hidden in a stuffed animal that wrapped around his arm. A stuffed dragon perched on his shoulder.

Richard was flabbergasted. Robert hadn't said a word. Origin Systems was barely a company. They were just a bunch of kids crammed into the Garriotts' garage, and here Robert was already proposing new programmers without so much as consulting him.

Yet after a few minutes of discussion, it became clear that Dr. Cat was a believer. He sounded like a pretty good programmer as well, exactly the type of person the team needed. He had an encyclopedic knowledge of the game and computer industry, young as it was. It was clear he'd never fit into the corporate environment that Richard too was desperately trying to avoid. While Dr. Cat didn't join the team full-time until 1986, over one of Helen's home-cooked meals he became part of the family.

With his team growing, Richard found he needed a larger space in Houston. The move was also an indication to the outside world that he was committing more fully to his own role in this fast-growing industry. Indeed, if Origin sometimes felt from the inside that it was being held together by little more than string and chewing gum, outsiders saw something different—a young star in an industry that seemed to be growing without bounds.

Richard's Austin circle watched his rise into the forefront of the new computer gaming industry with bemusement. He had maintained his Austin

connections despite his move back to Houston, both because he valued the friendships and because they helped him understand how gaming industry and culture was changing.

And changing it was. Game players, even those enamored by the storytelling and community spirit of *D&D* and its followers, were increasingly defecting to video and computer games. Atari, Activision, Intellivision, and others were making millions of dollars a year in the home-console business. The computer gaming industry was expanding beyond the avid community of Apple II users thanks to the popularity of such systems as the Commodore VIC-20 and Commodore 64, respectively released in 1981 and 1982. The latter machine would ultimately reach more than twenty million households.

In Austin, Richard's friend Steve Jackson now had his tabletop gaming company up and running, and was producing successful if not gigantically profitable games. One of his early employees was the young Warren Spector, who would later go on to play a key role at Origin, but was at the time only a cash-strapped University of Texas graduate student. Spector later remembered Jackson's company as a bootstrap organization, where every dollar counted.

"It was total chaos working there," Spector said. "If you spent \$1,000 badly, you were in serious trouble." One month, a dozen underpaid workers would work together into the wee hours of the night. The next month, double that number would show up, as contractors were brought in to help fill orders for *Car Wars* and *Illuminati*, two of Jackson's most popular games.

By contrast, the computer game industry seemed like a wholly different world. Spector got his own glimpse of just what this meant a few weeks after signing on with Jackson. Taking a break to stretch his legs, he wandered out of the barn that housed the company and noticed a black Mitsubishi pull into Jackson's driveway. It was an odd sight, particularly here. Most of the workers drove rundown beaters if they had cars at all. Curious, he walked up closer to get a better look. The door swung open, and Richard Garriott stepped out of the car dressed in black slacks and black shirt, with silver necklaces hanging across his chest, and his signature single braid falling down his back. The visitor walked to the front door, knocked, and Jackson, his longtime SCA friend, ushered him in.

"Now that is a success," Spector thought, shaking his head as he

walked back to the chaos of the barn.

Origin Systems' Houston tenure would ultimately last less than a year. The company was eating up much of Robert Garriott's free time, and he started pushing for a change. He was spending three weeks each month in Austin while his wife, Marcy, whose career at Bell Labs was taking off, stayed in Massachusetts. She was on the fast track to the upper echelon of management, expecting a promotion in two years that would allow her to move anywhere in the country. For now she was stuck in New England.

Late in the fall, Robert arrived in Austin with a proposal. If the programmers would move to New England for three years, the group could decide on a permanent home after Marcy's promotion came through. After a short debate, the ragtag crew decided to pack their bags and move to Massachusetts. Once again, Richard was being uprooted from his home. This time, however, he would bring his friends along for the ride.

"We were thrilled with the idea, because it would end my commute," Robert said later, recalling his wife's joy about the move. "This was going to end that separation."

The group loaded up their cars, and one pair volunteered to drive the rental trucks full of equipment. They'd head north through Arkansas, make for New York, and then turn east to Massachusetts. There was just one problem. The Texans hadn't considered that they were moving to New England in the middle of winter. They had walkie-talkies that kept them in touch as they slid back and forth across icy roads, however, and they all managed to make it to the same hotel that night to laugh about beating their first winter storm.

"The move itself was a disaster," Richard remembered later. "We had seven people, and seven vehicles. Some people were driving rental trucks, and this was in the dead of winter. By the time we got to New England, these southern Texas drivers, with rear wheel drive and no experience on snowy roads, had terrorized drivers across America."

Those hard roads and the dangerous drive were a portent of things to come. Richard's parents were hundreds of miles away, and he was responsible for a little community of seven people who'd followed him across the country because they believed in his vision. Life was about to get more complicated.

Ten *The Moral Code*

In Massachusetts, Richard, Chuck Bueche, and Mary Fenton rented a large, three-bedroom, two-story house on the edge of the woods. As might be expected, the young team began their New England tenure by turning their new home into a playhouse. Even before they'd finished unpacking, Richard used some of the money he'd made selling his first three games to outfit the house with \$10,000 worth of electronics, stereos, televisions, computers, and enough gadgets to satisfy the team of programmers who'd braved the northern winter. The group spent so much time buying new equipment that they didn't have time to open everything before having to start work on Monday. That meant most of their gadgets remained boxed up in Richard's room. Unfortunately for the Origin Systems crew, the thick woods behind the house turned out to be a perfect hiding place for thieves. When the trio arrived home that night, they found their welcome to the neighborhood had taken the form of a ransacked house.

Richard called the police, filed an insurance claim, and, when the check came in, replaced every piece of equipment that had been stolen. Unbelievably, thieves broke into his house a second time, carting everything off on snowmobiles. This time, a neighbor spotted the heist and phoned the police, who gave chase unsuccessfully on foot.

The neighborhood at large was only marginally more hospitable. The Austin newcomers didn't seem to speak the same language as the staid, small-town locals. Richard and his band of merry programmers set off to the local bar as often as they could, but the locals seemed to distrust either their Texan openness or apparently frivolous lifestyle. They found themselves isolated.

This new adult world was proving much more complex than Richard had ever imagined. Adding insult to injury, it was bitterly cold. Within two months, the Origin Systems team was ready to leave this winter wasteland. There was only one escape: diving into developing games, which was the point of being there in the first place. With nothing else to distract them, *Ultima III* was released that year as the first Origin title. It became Richard's biggest hit to date, even if it was little more than an updated version of his previous hack-and-slash games. The first order for the game tallied ten thousand units, netting the company \$350,000, which was more than enough to put the company in the black if they could figure out how to manufacture and distribute that many games.

At the time, Origin Systems consisted of just eight people: five programmers, two customer service representatives, and Robert. If the company was going to survive, they were going to have to fill the orders themselves. Every night, the group sat around the house watching television and folding boxes. During work hours, they copied disks one at a time. After the games were boxed up, they used a shrink-wrap machine to finish the job. Once the games were shipped, the team of programmers took over the massive customer service job, handling phone calls that ranged from people getting stuck in the game to people reporting defective products.

Yet, even as they focused on fulfilling the *Ultima III* orders, Richard was feeling at a creative loss. Part of this was the environment. While he was happy to be on his own, his surroundings were making him miserable. His house had granted him unprecedented freedom, but robbers had twice invaded it. A sense of uncertainty began slipping into his assessments of his own previous work. The simple graphics of *Akalabeth* and the *Ultima* series bore little resemblance to the images of the world of Britannia he painted in his head. He still wasn't sure how to create worlds even a fraction as vibrant as the role-playing he'd experienced within the Society for Creative Anachronism.

"I wasn't sure if I knew what I was doing anymore," he remembered later. "It was a time that I just sat back and tried to figure out who I was and what I was going to do next."

For inspiration, he turned to other projects. Three months before Halloween, he decided to transform his home into a haunted house. He enlisted the aid of Hillhouse and Bueche, along with other programmers

who could spare their time at night. It would be work, but an expression of the same principle that guided his game-making: Build a world where people could play.

The team spent weeks strategizing. A project like this had to be done right. Richard studied the internal floor plan for his house, first crafting the longest pathway possible through the house from entrance to exit, and then determining what they could do in each section. They carted in bales of hay and crafted mutilated bodies, monsters that could be controlled with electronics, and spooky sounds. Before long, the front lawn looked like a scene from a particularly grisly video game, while every nook and closet inside the house was pressed into service to launch some concocted horror. A staircase that climbed three stories was turned into a winding tower with walls of cardboard painted like stones. As a group ascended the tower, Richard rigged it so that one member of his team could yank a rope, collapse the walls, and then reset it before the next unwitting group came along.

The haunted house wasn't his life's work, but it was helping him stretch, letting him see people's reactions to the physical manifestations of his imagination. "It's not terribly exciting, putting together a video game," he said later. "You release it, and hopefully it sells well. What you rarely hear is positive feedback. It's mostly negative feedback. With the haunted house, you are standing there watching people going through. It's a real-life performance. It's like writing a song. You play it, and they clap. In our business, you don't get that."^[17]

Richard's creation shocked his New England neighbors, particularly as they regarded the aftermath. Never particularly good about cleaning up after his experiments, Richard simply threw himself back into his computer work after Halloween, leaving little time for pedestrian thoughts like picking up after himself. As winter set in, hay bales turned into blocks of ice. Even that wouldn't have drawn as many raised eyebrows from neighbors if these ice bales hadn't still had remarkably realistic-looking decayed body parts sticking out of them at disturbing angles. As the snow came, Richard's yard became a virtual graveyard for monster and human body parts, with heads and bloody arms peeking out above the snow.

Years later, Robert still winced with the recollection, shaking his head. His house, next door, had been the neat one, with a meticulously kept lawn. "You have to understand," he said, "Richard would roll his garbage can

down to the curb, let it get emptied, and then leave it there until he needed it again. So you can imagine what happened when he had the mess of a haunted house.”

But Richard didn't care, and even took a little pleasure at the disgust of his neighbors. He wasn't there to make friends. His goal was to create games around which communities would form. Sometimes that got messy.

Now that he and Robert were handling their own distribution, the brothers were also handling customer feedback, which meant they were discovering just how completely Richard's games had struck a nerve with players. Maybe his publishers had gotten mail before and had simply never forwarded it. Whatever the reason, he was hearing from players for the first time since he'd started developing computer games.

“I'd had very little feedback for the first two games I'd done, but *Ultima III* was different because we'd basically published that out of our garage,” Richard said later. “When I started getting mail, everyone was telling me they were having a great time playing my games, and I began to see people reading things into my games that were simply statistical anomalies in the programming. They thought I was putting messages into the game.”

He heard from more than just fans. On the basis of the red demon with fiery wings spread across the cover of the game, one person accused Garriott of being “the Satanic perverter of America's youth,” he fondly remembered. He was in good company. Conservative Christian groups of the time were also attacking *Dungeons & Dragons*, accusing that game of encouraging violent behavior, suicides, and worship of the occult. This all served as an excellent reminder that he was creating his worlds partially as a refuge from those who either couldn't or wouldn't try to understand the games.

The mail also started Richard thinking about his next game. With each successive *Ultima* title, he'd attempted to take the expectations of the player and turn them upside down. Now he'd discovered that that dynamic caused players to search for hidden meaning beyond anything he'd imagined. If people were reading that much into his games without him actually putting messages there, the games were clearly vehicles for provoking thought.

He didn't want to be dogmatic about any particular message, but he was developing a more complex vision of the universe. He wanted his games to create moral quandaries for players as they moved through the game and faced problems with ambiguous solutions.

Until this time, most games had allowed their protagonists to act with little fear of consequence. The most evil characters in the games usually wanted nothing more than old-fashioned world domination, while players came into the world, killed virtually everything they saw, stole money from anyone or anything that had it, and walked off with smiles on their faces. The hero of an adventure should be held to higher standards, Richard now thought. His own experiences—the bills, break-ins, disappointments, haunted houses, even the office rubber-band fights—began coalescing for him into a vision of a morally more ambiguous world.

With *Ultima IV*, he decided to introduce a system of ethics into his game world. He wasn't interested in teaching any specific lesson. Rather, his next game would be about making people think about the consequences of their actions. He locked himself away with a whiteboard and books of literature, poetry, and philosophy, bound and determined to break life down into fundamental principles. It was very much a programmer's approach to moral philosophy. "I started writing down all the virtues and vices I could think of, throwing them on the whiteboard," he said later. "Many of them were overlapping. But what I started to see was that all the virtues and vices were derivatives of truth, love, and courage, just like the characters in *The Wizard of Oz*."

He decided the game would incorporate eight tests of virtue, focusing on honesty, compassion, values, justice, sacrifice, honor, spirituality, and humility, although none of this would be immediately obvious to the player. Gamers would visit eight cities, each representing some combination of these virtues. In each location, players would have two missions: one quest they'd been told about and one test that would take place without warning. Players whose Avatar (the game's main character) failed the moral tests would find themselves unable to complete the game as effectively as those who had acted to uphold the land's system of virtues.

Throughout the game, Richard hinted to players that the world no longer functioned on a consequence-free hack-and-slash basis. For example, a blind merchant repeatedly offered characters items that they needed for

successive elements of their quest. When players purchased an item, the merchant could tell if she was being paid enough money. If only one coin rattled in her tin cup, she'd make a comment that the player was being a bit cheap. If the player threw in two, she'd say nothing, even though it wasn't really enough. Many people quickly realized this and dropped in as little as they could, thus saving their funds to buy more powerful weapons or magic items.

Unbeknownst to them, the old merchant was remembering their avarice. No simple two-dimensional computer monster, she had a long memory and a temper to match. Near the end of the game, the player turned out to need the help of the blind woman again. If they'd been cheapskates throughout the game, she had only bitter words for them, and it was too late to apologize. If they'd paid her enough throughout, she helped graciously.

Fundamentally, Richard wanted his game to fall somewhere between the interactive stories of *Dungeons & Dragons*, the enthralling world of *Lord of the Rings*, and the social structure of the Society for Creative Anachronism. He wanted his games to reflect the spirit of a community, but also wanted every individual to consider his or her place within that environment.

While unlikely to describe his efforts this way himself, he was in fact trying to do what writers, filmmakers, and artists have always done. He didn't need his games to mirror the real world, but genuine elements of the world had to be reflected in them. The characters had to be believable, or at least exhibit some rudimentary sense of motivation. Plots and stories could be simple, but had to sweep up the player with a sense of urgency. He was seeing that assigning complex consequences—recognizable from real life—to interactions with non-player characters would make his worlds more compelling.

He was taking a gigantic risk with his new game. The fate of Origin Systems rode on his shoulders. If *Ultima IV* failed, his team would likely be out of work, thousands of miles from home. During the programming, his stomach would cramp up, forcing him to lie down to try to calm his nerves. "I thought people might completely reject this game because some folks play just to kill, kill, kill," he said later. "To succeed in this game, you had to radically change the way you'd ever played a game before."

For the first time, Richard was getting a taste of the business risks he'd ignored before, and he didn't like it. He sometimes wished he'd never agreed

to take responsibility for the young company. Fortunately, his instincts about how to make the world more compelling proved accurate. Released in 1985, *Ultima IV* was his first game to top the bestseller list, selling more than 200,000 copies, a considerable total for a computer game of the time.

Robert Gregg, a longtime *Ultima* fan then in his freshman year studying computer science at Carnegie Mellon, later remembered the game as a major leap forward in the industry. In school, he'd been writing little dungeon-crawl adventures like *Ultima II* himself, but the new game showed that the stakes were now higher.

“You had to be able to actually write, not just code,” Gregg said. “When the scripting and interaction got to the level that you actually stopped and thought about the moral implications of what you were doing, computer games started to leave the realm of games that involved little more than tapping buttons and moving characters, and actually became art. The game was commenting on society, and on the observer himself, just like other forms of art. That was the most exciting part to me: watching the emergence of a new form of art coming right off the computer.”

Eleven *Origin's Endgame*

By 1987, the Origin System team members had fulfilled their promise to stay in New England, and it was time to figure out the next step. The original team assumed they would relocate back to Austin, then a thriving, hip, and—a particular point in its favor—*warm* town. But Robert had another trick up his sleeve. Though Richard and his group of programmers assumed they would be the only ones voting on the move, the company had by now relocated to a larger office space in New Hampshire and hired forty new employees. Most of the newcomers were local, and any vote that included the whole employee base was likely to result in a resounding defeat for the Texas programming team. The prospect incensed Bueche so much that he quit the company, packed his belongings, and moved back to Austin on his own.

The brothers fought constantly over the issue. Arguments spilled out of closed-door meetings and into Origin's hallways. On several occasions, Richard insisted he'd start his own game company and leave Robert high and dry in New Hampshire without any games to publish unless Richard could move back to Texas. Tension around the office got so bad that the brothers brought in their parents to mediate. Richard eventually got his way, moving game development operations back to Austin, while the manufacturing, publishing, and marketing teams stayed in New England.

In Austin, the team rented a small office, just fifteen desks along a single hallway. Richard began assembling a new team, although it wasn't as easy as he'd imagined. Denis Loubet, the artist who helped with the box art on the original *Ultima*, jumped at the chance to join Richard and left his job at Steve Jackson Games. Talented new programmers, including Chris

Roberts, creator of the popular *Wing Commander* series, also signed on.

“Chris would sit down in a room, and he would describe from beginning to end, in every detail, a game that he’d be working on, and I’d go ‘Jeez, why couldn’t I think of that,’” Richard said later. “I’m a researcher. I go through massive amounts of data and pull out little pieces of inspiration. I consider that an incredible amount of labor, but when I finish, I can tell you everything about my world. Chris can just sit down in a room and do that off the top of his head.”

Richard’s own success with *Ultima IV* had emboldened him to continue pushing his work beyond the simple hack-and-slash adventure model that was still so common. His belief in the power of games to tell stories and provoke thought validated, he used his next game, *Ultima V*, to explore what would happen if dogmatic leaders were to use positive virtues as a force of social engineering. In the game, Lord British has been captured by the evil Shadowlords. His replacement, Lord Blackthorn, has turned the religious virtues from the previous game into law, punishing anyone who doesn’t follow the strict code of behavior. The player, once again taking on the role of the Avatar, has to rescue Lord British in order to restore order to the kingdom.

Meanwhile, the New Hampshire team started transferring slowly to Austin, and by 1988, when *Ultima V* was released, Robert had relented and moved the rest of the team back to Texas. That same year, Warren Spector, now in Lake Geneva and working for TSR, the company in charge of the *D&D* franchise, packed up his office and came home to work for Richard at Origin. “He knew we were changing the gaming world, and that we weren’t making games for kids,” Spector said later. “This was like a family, and he was a visionary. He saw what the games could be.”

The Austin office reflected Richard’s own growing confidence, as well as his need for diversion. The team worked hard, but the atmosphere was fun. They played laser tag in the hallways after nightfall and went on spontaneous rock-climbing trips in the middle of the day. “He was a lightning rod for other guys that wanted to be just like him,” remembered Brøderbund founder Doug Carlston, whose own company was more sober-minded. “It was a 24/7 kind of lifestyle thing. As long as you were dealing with a whole bunch of young singles, it was more important how you played, and that you lived and worked and played all in one place.”

By this time, Richard and his team were hard at work on *Ultima VI*, the last in the Avatar series and the title that would complete his second trilogy of games. In the final installment, Richard would force the players to come to grips with the realization that their actions in the previous games had cast them as the villain in this installment. The Avatar begins the game tied down on an altar surrounded by gargoyles, with a sword raised over his body. Once the player escapes, he or she faces the task of figuring out why anyone would want to kill such a righteous hero. In the course of the game, the Avatar repeatedly fights the demons that had tried to kill him, until the player ultimately realizes the actions taken to defeat opponents in the previous games had caused earthquakes and devastation in these monsters' subterranean home world.

The moment is one of pure perspective switch. The religious texts of the demons, found in the course of the game, prophesy the coming of a figure like the Avatar who will destroy their race, and they quite naturally do their best to prevent their version of Armageddon. The player finds that he or she has become an antichrist instead of a hero, and faces the challenge of saving the creatures' world without also destroying Britannia.

For those who came of age playing the games, Garriott's second *Ultima* trilogy was a high-water mark both in terms of storytelling and game play. As much as any rival, he had managed to combine some of the best elements of games and stories to turn the computer into something more than just a machine. It became a transformative vehicle in the same way as a book, a film, or the *Dungeons & Dragons* tables of his youth could be. The gritty *Ultima VI* forced players to evaluate the consequences of their actions on other cultures, a theme Richard was only then beginning to explore for himself. The game, in which his characters and players were forced into moral dilemmas that weren't initially identified as vital tests, reflected his own experiences trying to assimilate into new environments without knowing the ground rules beforehand.

In real life, such ethical tangles are virtually always complicated by the presence of other people. But while familiar with *MUD*, Garriott hadn't yet made the leap into multiplayer gaming, which at the time still existed almost exclusively on university servers. For years he'd linked computers together in Origin's offices, first in Massachusetts, then in New Hampshire, and now in Austin. Makeshift networking and some clever coding allowed

players to go through *Ultima* adventures together, although the computers of the time weren't powerful enough to make joint adventures very enjoyable. Often, it took as long as thirty seconds for the graphics to be redrawn on the computer screen. For now, he had to settle for creating a game community for one.

Despite Origin Systems' success, it was increasingly clear that the technology world was changing. As they worked on *Ultima VI* and other games, the Origin programming teams continued to blaze away on code for the Apple II even as that machine was on the decline. His programming teams were also creating versions of their product for the Macintosh, Atari, Amiga, and Commodore 64. Richard toyed with the idea of porting *Ultima VI* over to the IBM PC, but, after testing the machine, he decided to ignore the cumbersome device. Surely nobody would waste time with such a clunky, slow computer.

"We looked at the IBM PC and thought it was a piece of garbage," Richard remembered later. "We had six games in development at that time, and we decided to go with the Apple and then convert the games to other systems. But we were a small company, and by now Electronic Arts and other large corporations were getting really big. They could afford to miscalculate a platform because their other sales would make up for it. We were small, and the industry wasn't about being small anymore."

Before *Ultima VI* was finished, it was clear that the company had miscalculated. Money was getting short. The company was overextended, and it was increasingly apparent that the bet against the IBM had been the wrong way to go. For the first time in his life, Richard could sense failure, and it nearly incapacitated him.

Tallying up their resources, Robert saw one chance to save the company. They had \$1 million in credit from the bank. Richard had \$500,000, though he'd just bought a house—his castle in north Austin. Robert had some money put away too. All told, they had enough money to last about a year, which would get them within thirty days of the release of *Ultima VI*. If the game tanked or if any delay cropped up in the publishing cycle, Origin Systems and its eighty employees would be dead broke, and Richard and Robert would be \$1 million in the hole.

"We sat down and had a big strategy meeting, and we calculated our sales and added up everything we had in the bank: ten years' worth of

savings,” Richard said later, wincing. “I was paying off a house, so I was going to lose my house if this didn’t work. We chewed our nails. We had financial meetings every day. My stomach was in constant pain, and I’d just curl up in the corner.”

Despite their financial concerns, the game came out on time. Like the previous *Ultima* games, it wowed the gaming public and gave the brothers a reprieve. However, the months of bitter stress had taken much of the fun out of the business. This wasn’t an environment either brother could stand. They saw only three possible scenarios for the company: They could find venture capitalists willing to invest money in exchange for a sizable equity share, and perhaps control of the operation. They could purchase smaller companies in an attempt to diversify their game business, and thus be less reliant on individual titles. Or they could sell the company to a large corporation.

They dismissed the first option. The venture money would be only a stopgap. Eventually the money would run out, and they’d be in the same position again. Moreover, neither could imagine willingly turning over a large part of the business they’d built. The second option seemed more palatable, since it would leave them in charge of Origin. For two years, they looked around, targeting businesses, doing economic analyses, and meeting with developers, but eventually realized that adding more people to the payroll would simply add more pressure to the bottom line. Richard’s stomach couldn’t take that.

Left with few other options, Robert began looking for a corporate suitor while Richard threw himself into developing *Ultima VII*, the first game he’d create for the newly dominant PC. The latest game had a simple concept: An evil character called the Guardian was trying to take over Britannia by establishing a new religion called the Fellowship (an homage to Tolkien’s first *Ring* book, *Fellowship of the Ring*) and the Avatar had to expose the group. However, the game would be anything but simple. Instead of building one large, complex game, the team released the game in two parts, *Ultima VII: The Black Gate* in 1992 and *Ultima VII Part Two: Serpent Isle* in 1993.

Meanwhile Robert was courting larger game companies. Some of these were offering buyouts that would have made the brothers millionaires ten times over, but the Garriotts were reluctant to pull the trigger. Ever since Richard’s experiences with California Pacific and Sierra On-Line, they’d

both been skeptical of outside corporate influence. Grudgingly, they decided in 1992 to sell their company to Electronic Arts, then one of the premier gaming companies in the world. Origin Systems had originally been built on the premise that its programmers would become stars, and even if that idea had fallen somewhat by the wayside, Richard hoped he'd have the freedom he needed to finish out his third and final set of planned *Ultima* games, the end of a trilogy of trilogies. Electronic Arts was big enough that it wouldn't have to depend on Richard to pump out his games on a hard deadline to stay afloat, which was another advantage.

As it turned out, EA didn't really have much interest in the *Ultima* series. The company would release the second *Ultima VII* part and a related expansion game in 1993, but EA CEO Larry Probst was far more interested in Chris Roberts's *Wing Commander* series, whose cinematic scope offered the opportunity to create a movie and television franchise.

The *Ultima* series, for all the fervor of its fan base, was already being pushed out of the spotlight by action-oriented console-style games and new genres of play that reduced or removed the role of the storyteller. Richard would spend the next five years struggling to integrate his company with Electronic Arts, constantly fighting with executives whose eyes were squarely focused on the bottom line instead of creative goals.

He hated it. It was depressing. He was spending too much of his time playing corporate politics and not enough time developing games. He'd set out to create worlds where people like him could gather, interact, and play. Instead he was spending his time arguing with corporate executives who had little interest in the community of gamers. In many ways, the experience echoed what he'd felt at Sierra On-Line.

But as Richard began to fade into the margins of gaming culture, much like the tabletop gamers he had helped displace just a few years before, other developers were working to expand virtual spaces and game communities in unanticipated ways.

PART II

A Seismic Quake

Twelve *id and Ego*

Id Software “biz guy” Jay Wilbur sat in front of his computer in Mesquite, Texas, cursing to himself. He was in an endless line, as surely as if he’d been waiting at the post office, and this line wasn’t moving. There were dozens, maybe hundreds, probably even thousands of people virtually piled in front of him. This was a genuine Internet traffic jam. And right there was the problem. Every single person was waiting to get his or her hands on the computer program he had on his machine. No one wanted to leave until he could upload it to the University of Wisconsin’s servers, but he couldn’t upload it until some of them logged off.

They were at an impasse. Much of that was Wilbur’s own fault. For months his company had been teasing the game community with tantalizing promises about its new game, *Doom*. Today, December 10, 1993, was D-Day. Eager fans had bought entirely into the hype. They were convinced this was going to be the biggest thing ever to hit PC gaming circles. The game would put the player in the role of a space marine armed with a startlingly powerful arsenal—including machine guns, chainsaws, and the soon-to-be-legendary Big Fucking Gun (BFG) -- battling wave after wave of demons released from Hell. The first-person perspective, stunning visuals, 3D mazes, and lightning-fast action had started a buzz on the Net that had been growing ever since the company’s New Year’s Day press release almost a year before:

Stationed at a scientific research facility, your days are filled with tedium and paperwork. Today is a bit different. Wave after wave of demonic creatures are spreading through the base, killing or possessing everyone in sight. As you stand knee-

deep in the dead, your duty seems clear—you must eradicate the enemy and find out where they're coming from.

Even by the standards of the time, this didn't show outstanding narrative invention. But there was more. This time, players weren't going to be alone. "See your friends bite it!" the press release continued. "Cause your friends to bite it! Bite it yourself! And if you won't bite it, there are plenty of demonic denizens to bite it for you!"

Doom sounded as if it would top anything that had come before. Few could have predicted just how influential it would also prove to be for game culture more broadly; but right now, Wilbur just needed to get the game loaded onto a server where people could download it. In the afternoon, he'd tried logging on to the FTP site where it was to be released, and he tried again as evening turned into night. He was getting anxious and angry. He finally contacted an administrator where the server was, in theory, ready and waiting for the files. "I can't get in," he said. "The FTP is full."

The administrator checked the server. "Okay, I just added a slot, you should be able to get in."

In the time it took Wilbur to read the message, somebody slipped on before him. This logjam had no end in sight. "No good," he reported.

The Wisconsin student tapped a few commands into his computer, on the other end of the line. "Try again," he said. "I just added ten more slots."

Rolling his eyes, Wilbur tried again. Still no luck. The would-be *Doom* players were *fast*. "This isn't working," he said. "You've got to clear the way."

Sitting in front of their computers around the country, fans were starting to grumble. On Usenet newsgroups dedicated to PC gaming, people posted angry notes, losing faith that id Software would deliver that day as promised. Eventually an explanation for the delay emerged after one would-be player said he'd managed to log on to the site and had seen a message: "Sorry, the incoming directory is full, no one can upload any files until it's clear."

Enough fans got the message. Some of them had to get out of line and unclog the connection, or they'd never get the game. Slowly, connections began to drop away, and Wilbur was able to start uploading the file. That only

served to feed the frenzy. As soon as parts of the game were available, people started downloading them, even before Wilbur had finished his job. It was a digital riot, with anxious gamers grabbing and pulling at the files as quickly as they could. File transfers, both up and down, slowed to a crawl. Ready to throw his computer out the window, Wilbur called the administrator back.

“Okay, okay, I know what to do,” the administrator said. With a few simple keystrokes, he effectively barricaded the doors of the digital room, locking out everyone who was trying to log on from outside the university. The move angered many who had been waiting all day, but created the necessary breathing space. Wilbur’s upload finally sped up, downloads began in earnest, and the age of *Doom* had come at last (several hours behind schedule).

The game would explode like a rocket shell in the collective consciousness of PC gamers, changing the way that people thought about the computer as a gaming platform and inspiring whole industries of imitators. The first-person perspective captured the imagination of gamers everywhere, just as it had for Richard Garriott when he’d peeled open the Apple II box years before and watched the *Escape* maze appear before his eyes. The “shooter,” as *Doom* and its clones would come to be called, essentially took the kill-fast-or-die concept of *Space Invaders* and blew it up into a fully realized 3D world defined by demonic creatures and blood-spattered walls. Missing were Richard’s storyteller’s sense and artistic aspirations, replaced by a blazingly fast game in which players ran between rooms, stopping only long enough to kill everything that moved.

Content aside, *Doom* did more than any other single title to usher in an era of networked games and gamers. Here, and even more so with id’s later games, the digital playing field shifted from a player’s own computer into cyberspace itself as players learned to battle each other online. Communities coalesced around the game and its successors, fed by id’s repeated decisions to help players modify and extend the games with almost unprecedented ease. To a degree far beyond that of the *Ultima* series, the culture and character of play defining *Doom* and its spiritual successor, *Quake*, were created as much by players as by developers John Carmack, John Romero, and the rest of the id Software team.

Id’s vision nevertheless changed the face of gaming. To be sure, the company was in some senses simply in the right place at the right time,

creating a popular network-capable game at precisely the moment in technological history that home computers were joining the networked universe in droves. Yet while other companies released networked games, id's developers provided a unique mix of game-writing panache, the ability to see and take advantage of trends a step ahead of their rivals, and a corporate ideology that valued giving players as much power over the gaming technology as possible. This combination laid the infrastructure for passionate networked gaming communities on a scale that had never been seen before.

The core figures behind id's early years, the ebullient John Romero and the taciturn, ultra-focused John Carmack, were a yin and yang of programming. Each was a visionary in his own way: Romero was a talented programmer and game designer who believed in games and gaming with a missionary fervor. He communicated that infectious optimism to his company and the world. Carmack wasn't much for small talk, but became one of the recognized titans of game programming—to the point where even technology industry luminaries such as Apple's Steve Jobs and Microsoft's Bill Gates would seek his blessing for their products.

Like Richard, each had grown up with a love of programming in general and games in particular. They were a few years younger than Richard, but had still cut their teeth on the Apple II computer. Both counted Richard's *Ultima* series as one of their biggest early influences. Romero actually went to work at Origin Systems as his first real job in the computer industry, and the first games that Carmack sold to hobbyist magazines in the late 1980s were deeply influenced by the *Ultima* worlds. Each programmer had a much more unsettled adolescence than Richard; whether that contributed to the far darker worlds they created is hard to say, but it's certain that each of them found programming to be a refuge from unhappiness elsewhere in their lives.

Romero grew up in the small California foothill town of Rocklin. His parents divorced when he was young, and his mother remarried an engineer who helped encourage his interest in programming. He was mostly interested in games: initially arcade games, and then the mainframe games like *Adventure* that he found at the local community college in 1979, and finally in writing games for his own Apple II. He moved to England for high school, returning afterward to bounce unhappily back and forth between his

separated parents' homes, looking for direction. He sold games to hobbyist magazines like *Nibble* and *UpTime*, but wound up working at Burger King and Taco Bell to make ends meet before finally screwing up the courage to go to San Francisco's Applefest computer trade show in 1987 to look for a real job.

Wilbur, at that time an editor for *UpTime*, remembers the young Romero as one of his top freelancers, even at the age of eighteen. "He was very smart, a brilliant young man," Wilbur said. "He was very energetic, very happy, very enthusiastic. He just exuded a desire to do nothing in life but write games on the Apple."

The San Francisco tradeshow turned out to be Romero's first big break. He showed employees at the Origin Systems booth one of the games he'd written, and they were impressed. A few months of persistent calling finally got him an interview for a job in the New Hampshire office of Richard's company, programming the Commodore 64 rather than his beloved Apple. "I had never used one, but I told them I was completely confident that I could learn the entire computer in a month," Romero said later. "I said, 'Okay, dude, I'll do it. Anything, I just have to get in there.'"

He got the job, impressing the programmers that interviewed him, and moved to New Hampshire. He met Robert Garriott and a host of others he already knew by name and reputation. He watched the newest *Ultima* being play tested. He wandered around the Origin shipping offices, looking at the stacks of game trinkets, colorful boxes packed full with some of his favorite games, and Richard's cloth maps. For a young hacker who'd been working at burger joints not long before, this was the Promised Land.

Even then Romero was restless and ambitious. He lasted at Origin only six months. His supervisor quit to form a little startup nearby in New Hampshire, and asked Romero to join him. After some soul-searching, he agreed to go. That job, too, lasted only a few months before the startup's Apple-based contracts were canceled, a casualty of the growing market perception that the Apple II was a platform past its prime. In 1988, Romero finally followed his old friend Wilbur to Louisiana, where both were hired by Softdisk, a company that published monthly disks full of software for Apple and PC owners. After a year there learning how to program for the PC, churning out what he considered to be boring utility programs, Romero told Softdisk's owner that he wanted to start writing games again, or he'd

leave. The company's owner agreed to start a new division for him, and said he could look for help.

Two states away, in Kansas City, Missouri, barely making ends meet, John Carmack was slowly building the skills that would make him one of the weird geniuses of the gaming industry. A slight, blond man with a baby face and a perpetually distracted gaze, he would in many ways be Romero's opposite, as intensely private as Romero was public. Interviewed years later, he spoke with a verbal tic, a slight gulp between phrases and sentences, his words flowing with the unemotional evenness of code itself. He was as focused as any human being alive; his work days were legendary, and his co-workers joked that he rarely actually spoke to them. The collaboration between the two men would prove explosively productive in its early years; the tensions between their styles and visions would later tear the relationship apart.

Carmack's early years were perhaps even more unsettled than Romero's, with both providing a stark contrast to Richard's more utopian childhood. Carmack's parents too had divorced when he was young, leaving him shuttling between his parents' houses. He was a smart kid, taking all the gifted classes available at school, but had little use for others' advice. His disregard for boundaries or conventional paths brought him quick proficiency in almost anything technical. In other realms, the anti-authoritarian streak in him took riskier expression. At the age of thirteen, he was arrested for breaking into a local school, and he subsequently spent a year in a juvenile reform home.

He knew from an early age that he was a programmer. By the sixth grade he was already writing games. Unlike Garriott, whose focus was on the construction of great immersive worlds, Carmack saw game programming as a vehicle to provide him with the technical challenges he craved. At his mother's house, he had a Commodore VIC-20 computer that he mastered, but its limitations soon proved maddening. He begged his mother to buy him an Apple II like the one at his high school, but she simply didn't have the money. He begged for permission to tap the college fund his parents had created at the time of the divorce, but his mother refused, echoing Owen Garriott's insistence that game programming might be a hobby but certainly

wasn't a career. The conflict worsened a relationship that would stay rocky well into his adult years. "When I was writing computer games, it was just playing to her, and she didn't take it seriously," he said. "It wasn't until I drove up to the house in a Ferrari that I proved my point."

Stuck with the Commodore at home, he used it as many hackers of the age did, tapping into pirate bulletin board systems and other people's networks. He dabbled in phreaking, an activity that involved mapping the secrets of public telephone networks and manipulating them in ways only technicians were supposed to be able to do. He continued to learn the ins and outs of the Apple II and eventually bought a cheap stolen machine from one of his reform-school friends.

After high school, he'd taken a year of exclusively computer classes at the University of Missouri, Kansas City, but like other young computer whizzes had found little reason to continue. "All through high school and when I went to college it was really clear that I was the big programmer around," he said later. "I never got the sense that any of my professors was a hot programmer in any way. Obviously they knew some things, but in some cases it was really frustrating. I didn't think they were even on the right track in how you should go about things." Years later he would realize that he could have gotten more out of the college environment, he said, but as a teenager, he simply didn't have the patience to wait.

Yet by the time he dropped out of college, he had his tool of choice. Carmack's grandfather left him about \$1,500 when he passed away, enough to buy his Apple IIGs. His mother mocked his decision, saying it was stupid to buy a computer when he couldn't even afford a printer. He didn't care. He threw himself into writing his own games. He studied Richard's *Ultima* games in particular, digging as deeply into the code as the programs would let him, creating his own similar titles. He sold a few of these to some of the same hobbyist magazines that Romero had started with. One of them, a top-down, swords-and-sorcery role-playing game similar to Garriott's *Ultima* titles, found its way to Wilbur, Romero's mentor, who was then working with freelancers at Softdisk.

After this point, Carmack started writing games regularly for Softdisk, though this barely brought in enough money to survive. Though he lived on little else than pizza and books, he had trouble paying rent without occasionally borrowing cash from friends and family. He finally came to the

same conclusion Richard had reached just a few years before: If he wanted to support himself as a programmer, he would need to learn how to code on the PC, which was beginning to dominate the market despite being maligned by Apple lovers for its poor graphics, nonexistent audio support, and cumbersome operating system.

“What I did was rent a PC for a month, and converted some of my Apple programs over to the IBM, and sold them to the other branch of Softdisk,” he said later. “Evidently that really, really impressed a bunch of the people there, that I could just go rent a PC and learn a whole new architecture. At that point they started pressuring me to go down and interview.”

He held off for months. He liked the freedom of working alone, but destitution was beginning to wear on him. When Softdisk contacted him about working in Romero’s new *Gamer’s Edge* division, he decided he’d take the company’s offer a little more seriously.

The company flew Carmack to Shreveport. With little personal stake in the success of the meeting, he didn’t take much care to impress, showing up in a T-shirt and jeans torn at the knees, dressing the same way he ordinarily dressed at home. He talked to the management, but they didn’t seem particularly inspiring. He looked at the town a little, but was similarly unmoved. He spent most of his time working; the place around him didn’t really matter.

But when Romero and fellow programmer Lane Roathe took Carmack to dinner, something clicked. This pair struck Carmack as being serious people. He loosened up at last, and they wound up talking for hours over Italian food. By the end of the conversation, he was ready to come on board. “It was really the first time I had met programmers who knew more stuff than me,” Carmack said. “I decided to take the job there almost exclusively because I had been very impressed with John and Lane.”

Romero too was impressed, seeing Carmack as a perfect addition to the new games team, although he didn’t immediately grasp the younger programmer’s full potential. “I thought he was pretty cool, although he wasn’t the raging monster genius he is now,” Romero said years later. “But he really seemed excited. He was just a normal guy who was going to learn to program.”

Thirteen *Commander Keen and the Way Out*

The small Softdisk game-development team bonded quickly. Wilbur, Carmack, and Roathe rented a house together on the shores of the nearby lake, much as Richard had done with his team of Austin programmers in Massachusetts. This proved very much a bachelor pad, complete with a hot tub in the master bedroom. They took up kneeboarding out on the water, competing to top each other's stunts.

Still, it was clear that Carmack was a little different than the others. The house was filled with entertainment reading: Tolkien's *Ring* series, William Gibson's *Neuromancer*, and other standards of the programmer's literary repertoire. Carmack's light-reading material tended more toward the details of Intel processors. His focus in the midst of projects was single-minded. "When he was programming, there was nothing else but programming," Wilbur said later. "I'm sure there were days where he didn't eat."

Carmack was happy. He was making more than he ever had — \$27,000 a year—more than enough to keep him in books and pizza. He was learning quickly in an environment where his programming was taken wholly seriously. The young Kansas City expatriate was also showing off an ability to create game environments that transcended his ultra-focused technical side. His passion for fantastic worlds was fed each Saturday night as his housemates and Romero gathered for late-night sessions of *Dungeons & Dragons*. Carmack ran the games, creating a massively detailed, complex world as setting. The world, its history, and its characters in fact predated these games; Carmack had created them long before moving to Louisiana, and the characters played by his earlier friends in Kansas City occasionally showed up in those lakeside Shreveport games.

Recreation aside, it took some time before Carmack, Romero, and the rest of their team would find their own voice as a development team. Initially they were stuck working on small games for distribution with the *Gamer's Edge* bimonthly disk. They liked the work. They were good at it. It fed their passions. But it was hardly brain-stretching activity.

The downtime between projects gave them opportunities to explore their own creativity. Carmack had been working on a project modeled after Nintendo's *Super Mario Bros.*—at the time, one of the most popular home console games in the world. The side-scrolling game, in which the character runs across an environment unfolding smoothly in front of him, had no direct counterpart in the PC gaming world. Carmack thought he could build something like it. It was an ambitious idea, as the PC wasn't much of a multimedia machine yet, and graphics technology was undeveloped enough that many thought trying to replicate Nintendo's vision on the PC was simply a waste of time.

For quite some time, Carmack kept his experiments to himself, without showing even his closest co-workers his latest work. But one September night, Tom Hall, a programmer from Softdisk's Apple II department, stumbled over to Carmack's office to see what the whiz kid was working on. With the sun going down and the office mostly empty, Carmack's confidence swelled. He showed Hall his side-scrolling game engine. To Hall's eyes, it was amazing, rivaling Nintendo's work.

The two put their heads together, trying to figure out how they could best impress the others in the company. They decided their best bet was to roll it out with a demonstration. Show Romero something big. They borrowed Dangerous Dave, a character from an earlier Romero game, and put him in a near-exact copy of the first level of *Super Mario Bros. 3* running on Carmack's new graphics engine. They called it *Dangerous Dave in "Copyright Infringement."* Together they worked through the night, finally leaving a disk with their work on Romero's desk at 5:00 A.M.

When Romero came into work a few hours later, he popped the disk into the computer. He was stunned. "I knew what we had," he wrote later in an account on his personal Web page. "We had our ticket out." He showed it to other Softdisk employees. Few of them understood his excitement. It didn't matter. When Carmack and Hall got back to work, he pulled them into his office and gushed. His old friend Wilbur, passing by the office,

heard Romero expounding on potential futures and laughed. “I’m serious,” Romero said, and pulled his former benefactor into the office with them.

The team tried at first to convince Softdisk to publish the new game. They could take out the obvious *Super Mario Bros.* 3 graphics, and they’d still have a game that would be unlike anything else then on the PC. But the company wasn’t interested. Carmack’s programming required the use of a monitor technology that was still deemed high-end at that time, and Softdisk was after the mass market. The team decided to aim higher. Wilbur took the game to Nintendo, sending it to a woman on the legal team there. The message he received in return was simple, short, and clear: No. We don’t want it. You can’t use Mario. Destroy it.

They pressed ahead anyway, working on their own game largely in secret. Their days were spent working on their Softdisk games, and they dedicated their evening hours to finishing the game they renamed *Commander Keen*. They hatched a plan for a new company called id Software. At the time, Hall was the story man. He asked the others what they wanted the game to look like, then took their basic ideas, brainstormed for a few minutes, and came back into the room. In the stentorian voice of a 1950s radio announcer, he read the paragraph that would accompany their first game:

Billy Blaze, eight-year-old genius, working diligently in his backyard club house, has created an interstellar starship from old soup cans, rubber cement, and plastic tubing. While his folks are out on the town and the babysitter has fallen asleep, Billy travels into his backyard workshop, dons his brother’s football helmet, and transforms into . . . COMMANDER KEEN—defender of Earth!

All their work was fine, guaranteed to get any game player’s blood flowing once *Commander Keen’s* Bean-with-Bacon Megarocket blasted off. But there was still one important question: Who would publish their game?

The answer turned out to be hanging on the wall in front of them.

While Carmack had been pursuing his secret project, Romero had for months been getting a series of fan letters. They all bore different names, but all were gushing in their acclaim for his games. He’d proudly posted

them on his office door. Then something caught his eye: While reading an advertisement in a computer magazine for a Texas company called Apogee Software, he recognized the address. It was the same as the return address on one of the letters. He looked further, and found the same address on all the letters. They'd all come from the same place. Angry, Romero wrote the seemingly crazy correspondent, demanding to know what was going on.

The mystery pen pal turned out to be Scott Miller, Apogee's founder, and he wasn't crazy. He was simply undercover. He was afraid Softdisk was scrutinizing Romero's mail, and wanted to fly under the radar. "I told him I knew how it looked," Miller said later. "But I was just trying to get in touch with a business proposal."

Miller was a programmer and gamer himself. He'd written a few adventure games and published them through on-disk magazines (which were magazines that were published on floppy disks) or posted them on university servers and software bulletin boards. Through the mid-1980s, he'd release his programs into the wild, allowing people to distribute them to their friends for free. Embedded in the games were messages that asked people to send money to help support him. The shareware strategy, as it was called, did encourage a few people to send money, but certainly not enough to allow him to quit his uninspiring day job as a computer consultant. Somewhere along the way, he had a different idea for distributing his game. He wrote a new game called *Kingdom of Kroz* and released it in parts in 1987, much like a serial movie. He gave away the first section for free and then asked people to pay money to get the rest of the game. This proved vastly more successful, and he was soon pulling in \$500 to \$1,000 on good weeks, nearly enough to support himself as a game writer.

The decade went on, and he continued releasing successive versions of *Kroz* titles. But he started thinking: What if he made this a real business? What if he got other shareware developers on board? He was ambitious enough to start sending the stream of letters to Romero in Louisiana. He wanted to be careful, though. Softdisk was a real company, and was now his competition. Romero was a smart guy, Miller thought. He'd figure the trick out.

Once they talked, Miller's proposal was simple: He wanted to publish a Romero game through Apogee's shareware network. After assuring himself that Miller wasn't actually crazy—or at least no more so than any

number of other reasonably successful people in the video game industry—Romero sent him a candidate. Miller liked the idea, but when he saw a copy of Carmack and Hall’s “*Copyright Infringement*” demo, he lit up. That was the one he wanted, he said. The trio asked for \$2,000 up front. Miller, who had just \$5,000 in his account at the time—unfortunately, he was spending money as quickly as his new publishing strategy earned it for him—wrote them the check right away.

With a publishing plan in place, the id team now had to figure out when they could finish the game. Romero, Hall, and Carmack set themselves a brutal work schedule over the next three months. They recruited a Softdisk art intern, Adrian Carmack (no relation to John), to help them with some of the final graphics. Adrian had just barely started learning computer graphics, but acquitted himself well enough to earn a lasting spot on the team.

Apogee released *Commander Keen* in December 1990. Anybody could have the first two levels for free, but players had to pay to get to the rest. Miller’s optimism paid off. In January, just a month after the game’s release, Apogee wrote them a check for \$10,000.

The money cemented their resolve. The group decided it was time to strike out on their own. They split away from Softdisk the next month. Romero and John Carmack informed their boss over lunch that the team would be leaving together. Adrian was coming with them, they added, although they hadn’t actually told the intern this yet. After lunch, they let the other Carmack in on their plans for him, and he—figuring that if the team he was interning for left, he wouldn’t have a job anyway—agreed. Legal obligations to Softdisk kept them publishing games through the company for more than a year afterward, but their hearts and minds were focused on the future.

Fourteen *Planting Seeds*

The id Software headquarters moved repeatedly through the early months of its existence. The team caravanned from Shreveport to Hall's hometown of Madison, Wisconsin, where the bitter winter cold took many of them by surprise. They lasted only six months before moving to the Dallas, Texas, suburb of Mesquite in April 1992. It was an auspicious choice. A Carmack Street runs through the city, not far west of the little downtown, and the town had been the home to one of the early legal fights over the morality of video games (although the id developers knew little of the city's history). In their minds it was simply convenient, close to Miller's Apogee, and blessedly warm.

New games followed quickly. There were sequels to *Commander Keen*, most of them released through shareware channels. The team was also under contract to Softdisk, and it pushed out a series of hastily written games designed to fulfill these obligations. A few of these games began to lay the technological and theoretical groundwork for their later breakthroughs. A tank game called *Hovortank 3D* drew on ideas of digital tank warfare that stretched as far back as *Battlezone* and Atari's *Combat*. The id programming team had created rudimentary 3D graphics and a first-person view, as though the player were looking through the eyes of the character in the game. The dungeon-crawling *Catacomb 3-D* followed. The two games were developed in quick succession, and because of that, the team noticed something important about the worlds they were creating. The combination of 3D graphics and a first-person view was creating action games that drew players surprisingly deeply into their worlds.

"You could do moody and tense in some ways in a slow-paced game,

but the kind of things that really grab you and make you sweat and jump are the kinds of things that really only happen in the action games,” Carmack said later. “There were really specific things in the *Hovertank* and *Catacomb* games. You’d see people playing a game and they’d open a door and there’d be a great big troll right there, and you’d see them go ‘AHHHH!’ and jump back. You just never saw that in games before. That’s where we said, ‘This is powerful, this is what we should be concentrating on.’”

The 3D, first-person perspective that would become the hallmark of their games had its origins elsewhere, much earlier in gaming history. Several of the *D&D*-influenced role-playing games of the early PLATO network had had simple first-person perspectives of this kind. Richard’s own *Akalabeth* had featured the simplest of line-drawn perspectives. A few games through this early period had even been rudimentary shooters. *Maze* (also known as *Maze Wars*), a multiplayer networked game that *Zork* and Infocom creator Dave Lebling had helped make in 1974, had briefly been responsible for a huge amount of cross-country network traffic between MIT and Stanford. A similar game called *MIDI Maze* in 1987 let Atari computer users network their machines together—each player represented by differently colored happy-face balls—and chase each other around a maze, shooting one another.

It was an *Ultima* spin-off that brought the first-person perspective into the modern age. When Richard had taken the programming side of Origin back to Texas from New Hampshire, a handful of talented programmers had stayed put. They collected a few other like-minded acquaintances and started a new company called Blue Sky Productions. A programmer named Paul Neurath there had been fascinated by the simple first-person perspectives of the mid-1980s role-playing games, and decided he could do better with modern technology. By summer 1990, he’d created a prototype that Blue Sky displayed at the Consumer Electronics Show in Las Vegas. Origin saw it and signed Blue Sky to create the game for its label. Romero saw it, too.

That game wouldn’t be released until 1992, eventually coming out as *Ultima Underworld*, a 3D, action-packed dungeon crawl that was nominally set in the same world as Richard’s popular games. It garnered critical praise and a rabid, if not huge, fan base. “It was the first game that ever gave me a sense of actually being in a real place,” remembered longtime *Ultima* fan Robert Gregg, a Virginia software engineer who later created the Notable

Ultima fan site. “I played it the first time with lights out, and several times just got scared out of my wits. You really did get the very creepy sense of crawling around in this dark, damp dungeon, with real inhabitants and nasty monsters waiting around almost every corner.”

It was id’s next game, released just a week after *Ultima Underworld*, that sent the industry careening into its love affair with the first-person perspective and its bloodiest manifestations. Romero had suggested basing the game—their own this time, not a Softdisk release—on the old Apple II *Castle Wolfenstein* franchise. Their product, *Wolfenstein 3D*, turned out to have a style of game play similar to that of *Hovertank*, although this time players saw the soon-to-be familiar view of their in-game character’s hands holding a gun ahead of himself as he stalked though the world killing Nazis and ultimately Hitler himself. Carmack took a number of technological shortcuts to make the 3D graphics work on the day’s average computer. By the standards of the time, the game looked superlative.

Word of the game spread quickly across bulletin boards, the young Internet, and online services such as CompuServe. Romero in particular was eager to watch what people said about their creation, and showed the others files full of comments that people were posting online. But he also found more than comments: People were hacking into the game and transforming bits of it, changing the way the characters looked (someone created a Barney *Wolfenstein*, letting players shoot the giant purple children’s TV character), changing the way the game sounded, and writing their own virtual mazes. A few people even released tools that would let others hack into the game and create their own game maps. Carmack in particular was impressed. The hackers reminded him of himself just a few years ago. He vowed to help them next time around.

“I’d had a lot of fun going in and trying to decipher the internal working of the *Ultimas*,” Carmack said later. “I clearly remember thinking it would have been excellent to have the source code to one of those games I was messing with. So when we were in a position where we had popular games that people were having a lot of fun with, it made a lot of sense to let people who might be in the same situation that I was back then actually have that come true.”

While Carmack and his team helped drive the gaming world's graphics technology forward, the broader technology industry was in the early stages of a communications revolution. By 1992 more than 3.3 million households in the United States had access to some kind of online computer network. ^[18] Most people were still using one of the commercial online services that had sprung up in CompuServe's wake, rather than subscribing to direct Internet services. Those online companies had divided up the market demographically. IBM and Sears, Roebuck & Co.'s joint venture, Prodigy, the largest of the consumer services with 1.75 million subscribers, had grown quickly with a low price tag bolstered by brash on-screen advertising. The venerable CompuServe appealed to techies and information sophisticates, but was trying to move to the mass market with a new graphical interface. America Online, the new incarnation of the former Quantum Link, was far from the powerhouse it would later become, with fewer than 200,000 subscribers.

A newcomer among these ranks had begun to hint at the promise of networked gaming. Launched in early 1992, the Sierra Network was the first national online service to be dedicated wholly to games and gamers. The service was the brainchild of Ken Williams, the Sierra On-Line founder, who had published Richard's second *Ultima*. Sierra had never previously had an online component, but in interviews at the time, Williams said he'd been dreaming of the networked gaming service since at least 1982, and had simply lacked the capital to start up a national network. ^[19]

With respect to gaming, the Sierra Network outstripped any commercially available network play, even though most online services had offered multiplayer networked games for years. Some of these were MUDs modeled after Richard Bartle's invention (the term MUD came to be a generic descriptor for this type of text-based world, alternately standing for multi-user dungeon, multi-user dimension, or multi-user domain). Others were games with simple graphics, much like what could be found on PLATO in the 1970s. Consumer modem speeds of the time had made games with all but the simplest graphics impossible to play over the telephone networks.

Sierra launched with a few basic games, such as bridge, chess, checkers, and hearts, allowing people to chat with each other while they were playing. When players signed up, they created little cartoons (called avatars) to represent themselves that other players would see as they were chatting.

The service quickly added a multiplayer flight simulator called *Red Baron* that allowed subscribers to dogfight with each other in the digital sky. An adults-only LarryLand, based on Sierra's *Leisure Suit Larry* games, allowed subscribers to role-play lounge lizards while playing blackjack, roulette, and other casino games. MedievaLand opened up a dark-ages role-playing game called *The Shadow of Yserbius*.

It was clear as 1992 drew to a close that cyberspace (as it was already being called) in general, and online gaming in particular, wasn't just for geeks anymore. Mainstream newspapers wrote breathless stories about the various "videotext" services. "You'd better get your tongue around the term 'interactive multimedia,' because it's shorthand for a revolution," *Fortune* magazine gushed later that year. ^[20] Cable companies, telecommunications giants, and computer companies were strategizing ways to capture and control this brave new world. Most of the smart money was on the cable companies, whose coaxial cables passing 90 percent of the homes in America could carry more data than could ordinary telephone lines. But the big phone companies and AT&T weren't taking that bandwidth deficit as a sign of their own weakness. AT&T was on the warpath, looking for multimedia companies that could help it capture a big slice of the new digital world, even purchasing 20 percent of the Sierra Network and renaming it the ImagiNation Network in 1993.

These corporate giants' dreams of a captive, cable-network-like online subscriber base evaporated almost as quickly as they had arisen, however. In January 1993, a University of Illinois computer science student named Marc Andreessen sent a terse email across a handful of techie email lists, announcing that he and a few other students were creating a new graphical program for reading and browsing those corners of the Internet already being called the World Wide Web. Released as a finished program in April 1993, Andreessen's Mosaic took the Internet by storm. The dry world of text databases and research archives suddenly blossomed with pictures and color. Local Internet service providers began springing up by the hundreds, offering their customers access to this sprawling, decidedly uncorporate, digital Wild West rather than to private, closely tended information services.

Carmack and Romero saw themselves as part of this revolution from below. Their sympathies were with the independent-minded hacker, not the online bridge-player, and certainly not with the big corporations' desire to

colonize and control this new cyberspace. As they watched these networks grow, and watched their own *Wolfenstein* become a cult favorite in PC gaming discussion groups on CompuServe and on the Internet's sprawling Usenet bulletin-board newsgroups, they decided it was time to make their next game multiplayer, and to let people play it over these computer networks.

Years later, Carmack would downplay the innovation of this step. "It's an obvious thing. If you've got two computers and you can connect them together, you're going to make a multiplayer game. It's like a law of nature," he said. "If anybody looks at a video game with somebody playing there, the first thought is 'Wouldn't it be cool if I was in there, too?'" They might have done the same thing with *Wolfenstein*, but their office simply didn't have an internal network. Once they got that up and running, network gaming was a foregone conclusion.

It might have been obvious from a technical perspective. The consequences for gaming communities were altogether harder to predict.

Fifteen *The Doom Connection*

The team began work on *Doom* in September 1992, two years after Carmack and Hall had stayed up all night to finish their *Mario Bros.*-inspired game. They tried initially to negotiate with Hollywood lawyers to get the rights to do a game based on the *Aliens* science-fiction film, but it hadn't come together. The programmers had wanted to keep absolute control over what happened in the game, and the studio wasn't ready for that.

While the company couldn't secure the rights to the big-budget *Alien* franchise, Carmack found a way to modify the idea. Instead of aliens, he argued, why not use demons released from Hell? They would be just as frightening as any *Aliens* creatures. Romero later said the idea might well have been spurred by their most recent *Dungeons & Dragons* session, which had finished when "demons had overrun the entire planet and destroyed the whole game." Whatever the genesis of the idea, the excess of that image—a world and its heroes drowning under a flood of demons—appealed to the team. It might not have been terribly original, but it would certainly serve as a skeleton for a game. Hall got to work on the story ideas. He wrote a set of memos the company called the *Doom Bible*, which laid out the basic narrative of the game (simple at its core: space marine on Mars must fight his way through demons accidentally released from Hell). The rest of the team started following that plot, working from rough sketches of monsters and level maps.

They sacrificed some things along the way. Initial press releases spoke of amazing detail to the game's graphics, game-play elements that would include a scoring system, and treasures that players would pick up along the way with evocative names like "Demonic Dagger and Skull Chest."

By the next summer they'd decided to simplify things. The new goal would be simple and twofold: Kill everything that moves; get out alive.

Carmack did keep his promise to feed the online hacker community that had developed around *Wolfenstein*. He remembered how much he'd wanted to see *Ultima's* source code, and if he wasn't quite ready to release that much information along with the new games, he did want to give the hacker-players tools to dig into the game. He contacted one of the *Wolfenstein* hackers and gave him tools to write a level-builder for *Doom*. He built in ways for people to change the look of the game relatively simply. He decided to release code for some of the tools that id developers themselves used to create elements of the game.

The buzz surrounding the new game climbed to fever pitch long before it was released, at least on the online forums that followed PC games. Game developers are notoriously late with their work, and Carmack would become legendary for missing ship dates. This time was no exception. Hard-core *Wolfenstein* fans spent considerable time online, on chat groups and Usenet newsgroups dedicated to computer games, speculating about features, mulling over the bits of information that had been released, and joking about the delays. The bombastic promises that id had released to the community became the source of considerable parody. Constant questions asking "Where can I get *Doom*?" from newcomers who'd heard of the game and didn't know the full story exasperated people on the discussion groups. This simmering interest wound up producing some of the game's first moments of collective community history even before the software's actual release.

A few weeks before the game's ship date, a fan named Eli Bingham posted a suggestion to one of the interested newsgroups: Maybe id should pick a less catchy name for their next game, he said, so there wouldn't be so much crippling pre-release interest. Something like, say, *Smashing Pumpkins into Small Piles of Putrid Debris*. The giddy newsgroup picked up the name and, within hours, jokes about the fictional game *SPISPOPD* were flying. Finally another player named Seth Cohn announced that he was the official author of the FAQ (Frequently Asked Questions) document for "ego software's" hottest new game, *SPISPOPD*. People mailed him suggestions for game features, and within a few days he had a long spot-on parody of a real id gaming FAQ, making ludicrous promises for the fictional game. It fooled

many gullible people online, who quickly wrote him and asked him for the game. It amused the developers at id, who incorporated the name of the fictional game into *Doom* itself as a secret cheat code, able to give a player extra power.

By the time Wilbur finally got the game online on December 10, the online community was ready to pop with excitement. The University of Wisconsin servers were full for days with people downloading it. Reviews online were ecstatic—although every once in a while, a lone voice would pipe up, worrying about the over-the-top gore. In the first five months alone, people downloaded more than 1.3 million copies of the free version, more than five times the number who'd ever purchased even the most successful *Ultima*.^[21]

Doom did more than just push the limits of graphics technology. Through its ability to let people network computers together and play against each other, *Doom* became one of the first widespread commercial realizations of an online collective virtual reality. The dream of a networked cyberworld had infused notions of online behavior for years, driven by visions spun by a handful of science-fiction authors, San Francisco Bay Area futurists and journalists, and ambitious programmers. *Doom* seemed to many to be a long step forward toward this idea.^[22]

Doom brought parts of this imagined digital environment into existence in a way that stepped well beyond most other commercial games to date. Carmack had again been forced to take many shortcuts to match his technical vision with the constraints of the day's home-computer technology, but he had created a recognizably 3D world that people could wander through. The online component meant people could inhabit the same virtual space at the same time, though unlike the persistent worlds that would come later, each little game world popped into existence only as long as at least two players were there. This was a long way even from a text MUD's ability to create a stable world that people could visit, leave, and return to at a later date; yet the technology, the graphics, and the world's immersive sense of motion and solidity brought the idea of virtual realities one step closer.

Todd Gehrke, a young programmer working at the time in Redmond, Washington, later told of walking in on the early attempts of a pair of Microsoft network administrators to set up a private *Doom* network, a few months after the game had been released. The two were simply running around the world, testing out what it was like to spend time in the game's environment. They weren't hunting each other yet. They were exploring. Gehrke, who would shortly become a *Doom* player of regional stature, was thrilled. "I still remember the hair on the back of my neck standing up, and getting goose bumps, knowing I was witnessing the future of computer gaming," he said. "I felt like I was witnessing the first flight of Wilbur and Orville Wright."

Richard's Origin Systems team was also floored, but more by the market's response than by the game. They'd gotten a peek at the demo earlier in the year and hadn't been impressed with either the story or the game-play. "We figured nobody outside of tech geeks would ever want to play this game, and certainly nobody would want to link their computers together and shoot each other," recalled Warren Spector. Richard, who was hard at work trying to integrate his company with Electronic Arts, hadn't taken the time to check out the game when id had come looking for a publisher. However, he quickly recognized the power of the online feature after its release.

"There is no doubt that what they did changed the industry," Richard said later. "It wasn't what we were doing, but it certainly showed us what was possible."

It changed reality for the people at id, too. The game sold incredibly well. Their shareware release strategy attracted hundreds of thousands of people to the game. Over the course of the next few years, they sold millions of copies of the title, while its sequel, *Doom II*, was downloaded tens of millions of times. Money poured in. They hired a public relations firm to help them sell the game and propagate an image of themselves as creators, and almost overnight helped change the image of what computer games were supposed to be. "The industry needed a rock star, and didn't have one yet," Wilbur said later. "We were all geeks. Before, it had been like the nerds were winning, but nobody knew that. You could talk to your parents about what you did for living, and if you told them, 'I write games,' the response would typically be, 'Well, you're a loser!'"

Romero thrived in the spotlight. Always the most outspoken of the

group, he let his hair grow nearly to his waist and started dressing more flamboyantly. The other founders were more private people, although that didn't prevent Carmack from buying the red Ferrari that finally convinced his mother that game-making might be a reasonable career.

They never said the words in public, but internally they did: They *were* rock stars now. Everyone was writing about them and fawning over their games. *Forbes* magazine even wrote that id's profit margins made Microsoft look like "a second-rate cement company." The group posted that article on their office wall.

The spotlight also brought the little company to the attention of legislators and family advocates who were in the midst of a wave of criticism of violent video games. *Doom* was lumped in with *Mortal Kombat* and other ultra-violent games as a damaging influence on children. The id developers didn't pay much heed. "I've always ignored that whole side of things," Carmack said later. "People never want to be responsible for themselves and are always looking for a scapegoat. If you raise yourself up there, you'll be attacked."

Much more interesting in their minds was the sudden rise of player communities around their games. The multiplayer feature was proving attractive to people who could figure out how to network computers together. Much of this was happening inside companies, as tech-support staffers took over their corporate networks to play the games. Tech-savvy home players slowly figured out how to do the same thing, although the equipment and knowledge needed to do this would be beyond most home-computer users until Microsoft built simplified networking technology into its Windows 95 operating system.

Other businesses sprang up specifically to support this multiplayer phenomenon. Companies were formed specifically to cater to online *Doom* players, making it relatively simple to dial in to the digital version of playing fields where gamers could find other players. People began holding local area network (LAN) parties, holding shooting rallies where everyone would bring their own computers, link them together with cables, and play against each other for days at a time.

Romero and some of the other developers loved spending time online, going to bulletin boards and chat rooms to see what people were saying, and pitching in with their own thoughts from time to time. Romero's

missives in particular were well-known for their wild enthusiasm. Carmack, by contrast, had little interest in actually interacting with the communities he'd helped spark.

"I've never really been a big community kind of person. I've always been more of the hermit hacker sort of person," Carmack said later. "I remember thinking about getting an amateur radio license when I was a kid, because I was interested in the technical side of things, making radios and things like that. But the whole basic point was about talking to random people you didn't know, and I just fundamentally didn't get it. It's sort of like that with a lot of these things with computers too. I recognize these are fairly basic human things that most people get, but I'm not there."

Nevertheless, Carmack and id kept feeding the community what it wanted, and the community grew and gave back. One player, a Novell network engineer named John Cash, sent in critical improvements to *Doom's* initial networking function—the original turned out to swamp networks with unwanted data traffic—and ultimately came to work for id. New levels in which to fight and even whole new games sprang up on online bulletin boards, thanks to Carmack's release of design code. The company hired Tim Willits, a Minnesota college student who'd written a few of these mods, to work on a contract basis, and he eventually became a lead designer. *Doom II* was released with some improvements in the underlying technology, and went on to become the company's best-selling game. They collaborated with another developer, Raven Software, to make *Heretic* and *Hexen*, magic-themed games based on *Doom's* underlying graphics technology. But the team already had its eyes on its next game.

If *Doom* ushered in the age of networked gaming, the company's next game solidified it as the future.

Sixteen *Gamequake*

Doom had taught the id developers several things. Multiplayer was important. Network play was important. The visceral, bone-chilling nature of a dark first-person view of the world remained vital. By late 1994, id's next big advance was coming into focus. It was going to be based on a character named Quake, again taken from one of the id programmers' long-running, epic games of *Dungeons & Dragons*. The story line was a bit hazy, however. Initially they envisioned a kind of role-playing game. The Thor-like character, Quake, would have a magic hammer that gained power as the game went on and as the player gained experience.

The developers were extraordinarily public about their plans. In one early interview published in the 1994 *Doom II: The Official Strategy Guide*, Romero could barely contain his excitement. He conceded that they didn't really have a story yet, more of "kind of a feel for the thing," but that didn't matter. The world was going to be amazing:

We're going to make you feel like you're in a real world. There will be bugs and birds flying around. You'll be looking around, going, "This is great! Hey, I wonder what's over there?" In Quake, you'll really have to kill things. You won't just press the trigger and hit it, you'll have to really beat the living shit out of the thing until it's dead. So you'll have this huge hammer and you'll pound it into blood paste on the floor, and you're going to have to take awhile, too. You're going to have to work on it. You won't just have this arrow point-and-click kind of thing. ^[23]

The concept for the game world, as Romero indicated, was initially far more ambitious than it turned out. In one interview, designer American McGee said the team wanted it to be a “graphical MUD,” a comment that seemed to promise a sprawling, stable multiplayer world. The design team started working on a world that drew on the aesthetic of ancient Aztec temples, but soon switched to medieval castles, leaving behind much of the work Romero had already talked about. They pressed forward for months, modifying it until Carmack and others started worrying that *Doom* aficionados would take one look at the low-tech fantasy weapons they were creating and go immediately back to their grenade launchers and machine guns. At least one of the lead designers threw up his hands, complaining that he was out of ideas for the medieval theme. Late in the year, they met, argued, and decided to move to the dark futuristic world that would ultimately be home to *Quake*.

Because the artists complained that they’d already put a year of work into the other idea and couldn’t start from scratch, the company decided to keep much of the old look as well. As a result, dimensional rifts wound up transporting players back into medieval worlds, taking advantage of levels that had already been designed. As a story and setting it was somewhat flimsy, but Carmack had never believed that story and narrative were critical parts of games. Better to make games into activities that, like basketball or football, needed no backstory to be fun.

Ultimately, they made the multiplayer version first—or in the parlance of their own gaming community, the deathmatch version. The single-player game could come later; it was important to make sure the world itself was consistent and powerful. This was the way that Richard too had worked throughout much of his career, developing the world first and going back to impose an actual story on his games. For a game that the team envisioned would place more emphasis on exploring and killing than on storytelling, this strategy seemed best.

This deathmatch feature proved a dangerous distraction by the time it was even rudimentarily finished, however. Id’s office in Mesquite at the time was like many other startups of the 1990s, located in a rundown building with no walls between working spaces, a fair amount of dust, and folding chairs scattered around. The open office and constant energy drove everyone to move quickly. The development team huddled around networked computers and

ran the game though its paces with their own deathmatch bouts, screaming and shouting at each other as their digital counterparts were successively pulverized by machine guns, rocket launchers, and lightning guns. There was little exploration happening, but plenty of killing. Romero and another developer, Shawn Green, were particularly avid players, stretching games out to fifty or sixty kills before stopping. Carmack finally put a “frag” (kill) limit on the deathmatches, in part to keep the team at work. It didn’t help. The testing team would finish a bloody game, and a call would go across the room: “Does anyone think this game is finished testing?” A collective “NO!” would ring out across the room.

Throughout this process, information flowed freely to the *Doom* fan community about the new game. In February 1996, the company posted a very early version of the game online, with only a few of the final features enabled. It quickly spread across the Net, and *Quake* deathmatch servers run by players began to spring up, demonstrating huge advances on *Doom* network play. A few enterprising programmers figured out how to dig into the code and unlock features that the company had intended to leave dormant, including the monsters themselves. A full beta release hit the Net in June, catalyzing the community further, and the game was finally released in August.

Despite being far less different in concept from *Doom* than originally promised, *Quake* soared to the top of sales charts. Some reviewers quibbled that the company should have spent more time on developing an original story. Some complained about the game play. Most waxed eloquent about the technical innovations, from the graphical quality of the world and monsters to the Internet play that was already taking off.

Players loved it. Since shortly after the release of *Doom*, id staffers had been talking privately about “clans of warriors” that might coalesce and play against each other online. Players themselves had come to use the term too. In the days before *Quake*’s full details had been released, speculation had run wild about what could be done with the multiplayer worlds described at different stages of the process. In long-running online discussions, some came up with wild scenarios of all-out team warfare, with huge armies or clans fighting each other the way they would in later massively multiplayer worlds like *Lineage* or *Dark Age of Camelot*.

This concept of clans already had a history in gaming circles, with

a few MUDs having implemented clan systems in the late 1980s and early 1990s. In that context, clans were teams of players who agreed to work together, and were usually focused on killing other players—the idea was not terribly dissimilar from the older concept of guilds. A popular series of games called *MechWarrior* had also featured clan systems as part of the story.

Even before *Quake* was released, players began gathering into this kind of group. A few people complained in online forums about adopting the clan terminology, saying it made sense in the context of *MechWarrior's* story but had no relevance whatever in the *Quake* world. They were ignored. New clans popped up daily with names like Reservoir Dogs, Clan Vengeance, or Violent Movement Clan. Some, like an all-star group of *Doom* veterans called the International House of Spork, were a little more whimsical, although no less deadly for the humor. Internet news sites dedicated to the game and community listed them, and for a short period of time, until concerns about legal liability over copyright and other issues intervened, *Quake* clan logos and news items were featured on id's own Web site.

Carmack had continued the process of encouraging people to create mods, and again the community went wild. The tools he'd released were more powerful than those for *Doom*, and mod-makers reacted accordingly. He also licensed the underlying technology to other commercial companies that made their own hit games on the basis of id's software engines. Much later, he even released the full source code free of charge, and the game found its way into academic research labs and digital animation studios, with nongamers using the software to create their own 3D work.

Internally, the rough development process had taken its toll. Romero felt that technology had taken precedence over the kind of creative game design he wanted to do. Carmack and others felt that Romero was no longer pulling his fair weight. "Romero was going on IRC (Internet Relay Chat) when he should have been working, from my point of view," Carmack said in one interview at the time. ^[24] The split had been building for a long time; shortly after the *Quake* beta version was released, Romero announced with a terse online message that he was leaving the company to start a "new game company with different goals." ^[25]

For years the rancor on both sides showed up in headlines and interviews, and the aftereffects of bruised egos would ripple through

the gaming community for at least another half-decade. From a gaming perspective, the split would matter far less. The work Romero and Carmack had done together had already had a catalyzing effect on game communities, and those communities were now largely self-sustaining.

Romero went on to found a high-profile company called Ion Storm, centered more specifically on design and narrative in its games. The quiet Carmack continued to build his reputation as a gaming technology genius, releasing more versions of *Quake*, *Doom*, and *Wolfenstein* that continued to soar ahead of most rivals' efforts with each new iteration. But five years after the release of *Quake*, Carmack was getting visibly bored, even if his games were still technologically unmatched market hits. "I'm not a gamer anymore," he said in early 2003, as the company was finishing *Doom 3*. He'd turned much of his attention to a new project by this time, an attempt to build a manned low-orbit spacecraft. "This lets me go back to the stage where every day I'm learning something new," he said. "I remember that from my early days of the computer industry, but it hasn't been like that in years."

Nevertheless, *Doom* and *Quake* had irrevocably changed computer gaming. The communities of networked gamers they'd helped spawn had gained enough momentum and power to affect the development of games themselves, and these communities stayed active whether or not a new title was due. The networked age of gamers had begun in earnest.

PART III

*Connecting
Communities*

Seventeen *Frag Together*

On a mid-August Thursday in 1996, a carload of young, straggly-looking men pulled up at a Best Western in Garland, Texas, a Dallas suburb. A group that looked like it hadn't spent much time in the local sun emerged into the motel's parking lot, dressed in T-shirts and shorts, joking happily with each other. They made their way to the main office, anticipation etched clearly into their features. While a bit ragtag, they didn't appear particularly rowdy. If anything, they looked a little on the geeky side. At worst, an anxious hotel manager might have thought they'd leave a mess of soda cans and pizza boxes behind.

Even so, there was something odd about them, and about the stream of others that pulled up in their wake. They were doubling or tripling up on rooms, though that wasn't unusual for young people without much money. Stranger were the big computer boxes they were carting in. These guys had the whole setup, with boxy machines and bulky monitors and lots of cords—definitely more than were needed just to plug in a computer. The manager of the hotel stared, confused. She knew they were coming; she had agreed weeks ago to let them use a small ballroom. They'd explained to her what would be happening (more or less), but it was immediately clear she hadn't entirely understood. There had been talk of a convention. She understood that. It was the computer-games part that was still vague.

While other cars pulled up outside, Jerry Wolski was inside the hotel's small ballroom, helping set up computers in rows on folding tables, and starting the tricky job of setting up network connections. The tall, thin twenty-two-year-old was a local, a freelance graphics designer from Dallas who'd started organizing this party a few months before with Kevin

Searle and Jim Elson. As the group finished the setup, *Quake* games began, and players' eyes focused intently on the 3D worlds spinning across their screens. Wolski watched with a smile, excited. This was good, he thought. It was working out.

A few of the other attendees were talking together animatedly, and called him over. "Hey," one of them said. "We're thinking we should challenge the id guys to a deathmatch."

"Let's send them an invitation. Tell them we'll kick their ass. That ought to get them down here," someone else said.

They could find the company's office easily enough. "Yeah," Wolski said. "We can drive it down there personally."

The group looked around for a piece of paper big enough for what they wanted to do, and found a marking pen to write with. They scribbled a message, and fourteen of the people there signed it, a good-natured declaration of war against id Software. Wolski, Elson, and a few others jumped in the car and headed for id's offices. They found Suite 666 and walked in the door. Their hearts were pounding—these were their heroes, after all, and this was the place where some of the best computer games in the world had been created. They walked to the front desk and held the paper out sheepishly. The tone of the invitation couldn't have been more at odds with the meek looks on their faces as they looked around the offices with awe.

The note was short, getting right to its point: "The ops of #quake cordially invite the guys at id to a MAN BEATING."

The event that Wolski and his partners had organized was the very first QuakeCon, with its genesis online in a virtual community built around id's new game. The title wasn't even out in the stores yet, but *Doom* and *Wolfenstein* fans had started testing it as soon as the company released its pre-beta versions onto the Net, and they'd been playing it avidly ever since.

Many had met on an Internet Relay Chat (IRC) channel called #quake, one of the hardest of the hard-core communities of network gamers. IRC, a sprawling ad-hoc network of networks, was still the haunt of fairly sophisticated computer users, often used to discuss the most arcane of

technical subjects, but it allowed anybody anywhere to set up a chat room on any subject. By this time, maybe forty people around the world were regulars in #quake, visiting to look for deathmatch games or simply staying to chat about the forthcoming *Quake*, other games, computers, networking, or anything else that crossed anybody's mind. It hadn't taken long before someone suggested meeting in person. They could call the event #quakecon, bring their computers, and turn it into a party. Wolski, Searle, and Elson lived in Dallas, near the Mesquite home of id, and they suggested hosting it there.

For Wolski, putting the event together had been one of the biggest thrills of his life. He'd grown up in a small town in Poland, and had come to the United States just five years before. Where turn-of-the-century immigrants had used the daily newspapers to learn about the language and culture, the community of gamers he'd found had been his main means of assimilating in his new country. He'd lived in Los Angeles for a few years, and when he moved to Dallas he found a core of gamers there that had sprung up around id. He spent almost every weekend gaming with groups at somebody's house or in rented hotel spaces, or just hanging out talking about games. Sometimes he worried about how much he played, but that did little to slow him down. "Ever since I was a kid, I've been very fascinated with video games, sometimes to the point of obsession," he said later. "QuakeCon and its organization was really a dream come true for me."

Their trip to Suite 666 cemented the success. The id developers, including Carmack, agreed to come to the hotel. Just minutes after they left, a breathless message appeared on Redwood's Quake Page, one of the first Web sites to provide daily news on the game and its community of players:

*I just got off the telephone with Tim Willits of id (you were expecting some other company maybe?) a few minutes ago. He wanted me to let EVERYBODY know (because "I like your page the best" *grin*) that on Friday the 16th(tomorrow) at 7:00p.m. Central time, JOHN CARMACK and the gang (Tim Willits, Bear, Adrian Carmack, and possibly others), will be attending #Quakecon talking about Quakeworld, Quake II, and the future of gaming at id Software!!*

When Wolski heard of the post, his stomach turned. Word spread quickly through virtual gaming communities, and he knew they didn't have enough room in the hotel for everyone who accessed Redwood's site. Too many people and this could turn out to be a disaster; but there was little he could do about it now. All that was left was to sit back and hope that everything worked out.

Players continued to gather Thursday and throughout the day Friday. Some of the most voluble people online turned out to be quiet, almost painfully shy people in person. It didn't matter. They were among friends here. Many had come from Dallas or nearby cities and states, but players gathered from both coasts as well. Six people had even driven all the way from Canada. No matter what their origins, they had at least one thing in common: Each had a deep desire to play *Quake* with their newfound online friends.

The group, all men, spent much of the time in the hotel ballroom, connecting their computers and running around *Quake*'s dark virtual halls, shooting at each other. It was a different experience playing the games in the same room with your opponents. Many of the attendees had played together online, but live, you could feel the impact of your actions. You could hear people swear in frustration when you killed them. You could shout across the room at your opponent. By the time Friday evening rolled around, close to forty computers were in the room, and nearly sixty people were playing, more than Wolski and the others had planned for. The strain of all those machines was proving too much for the hotel's overworked circuit breakers, and banks of computers—sometimes even the whole room—would periodically go dark. "Fuck!" someone would scream. "I had you!" would come from another dark corner, and Wolski or someone else would have to go talk to an increasingly grumpy hotel staff about resetting the power.

Then came the id-ites. Carmack in his red Ferrari. Romero in his Humvee. The company's new CEO, Todd Hollenshead, was there, Willits was there, and reigning deathmatch champ and designer American McGee was there. They were mobbed by players and spent time signing mouse pads and CDs. People took photos in front of the Ferrari and the Humvee. Some of the players retired into the ballroom, where they played Romero, McGee, and a few others. McGee won more often than he lost. A group of worshipful technology-minded players gathered around Carmack out in the parking

lot, and the ordinarily taciturn programmer wound up answering questions for a full two hours about game design, id's plans for *Quake II*, graphics hardware, and even about Romero's departure from id.

The crew had brought along gear that could be given away as prizes at the event: two *Quake* CDs autographed by everyone at the company, a handful of other games, and T-shirts. Elson, maybe the most practical one in the bunch, quietly mentioned to Carmack and Hollenshead that the event had actually been pricey to put on. Running that many computers in one place was turning out to be expensive, and they hadn't budgeted for it. Carmack wrote them a check to cover some of the costs.

On Saturday came the double-elimination *Quake* tournament. A Dallas stalwart took top prize. On Sunday was a *Doom II* tournament. Wolski won this. But people were playing straight through, no matter what else was happening. The energy level was high enough that nobody slept much for two and a half days. When their fingers or eyes got tired, they'd wander around the hotel and talk, remembering stories from the IRC chat rooms, or make repeated trips to the local diner. They sat in the vinyl booths, nerves buzzing, drinking bottomless cups of coffee until the caffeine had rejuvenated their will to frag. Wolski and the rest of the tired men finally stumbled back into their ordinary lives Monday morning, images of dark underground hallways and coffee cups burned into their memories.

Inside the little hotel ballroom, it was easy to understand the nature of the community of gamers. All of these people had been playing games for years, although most of them had never met in person. Most had been avid *Doom* players, and at its core, *Quake* wasn't all that different. Both games were set in post-apocalyptic-looking worlds dripping with sci-fi horror atmosphere, and in both, the point of the game was to stay alive as long as you possibly could while mowing your way through digital adversaries. And even long before *Doom*, communities of players had gathered around games on online services such as CompuServe or GENie, or on university servers.

Still, *Quake* was already changing things. The games were on the Internet now, and it was much easier for anyone with a dial-up modem to jump online and find a game. Once people found a match, or a server where

they could find a good game, they tended to come back—the same way a newcomer to a city neighborhood might find his way back to the same Saturday-afternoon game of pickup basketball week after week. Putting the games on the Net meant that game-playing communities were expanding, and that geographical barriers were breaking down. Wolski's group, drawn from around the United States and Canada, was evidence enough of that.

That tired weekend in the hotel ballroom grew over the next few years into one of the biggest events in the gaming world, as Wolski, Searle, and ultimately thousands of others began making the trip to the Dallas suburb every summer. Half pilgrimage to id's home, half convention designed to let people meet the people they'd been blasting into smithereens every night on their computer, it became over time a barometer for the health of the id gaming community.

These were unabashedly action games, with little of the role-playing or storytelling that were centerpieces of Richard Garriott's *Ultima* worlds. They were called twitch games for a reason: People with the fastest reflexes, who could process information more quickly and turn it into the right combination of digital motion and trigger-finger actions, were the most successful at avoiding the bloody fate of the slow. To be slow was generally to be dead, unless you were a master strategist or simply an incredible shot.

For all of that seemingly vigilante-encouraging content, by the time Wolski and the others arrived at the hot parking lot just outside of Garland, the bloody games they played had created some of the strongest and most populous gaming communities around. People were drawn to the games initially for the adrenaline rush and the action of the single-player games. These got the heart pounding, they kept players' attention rigidly focused on the matter at hand, and they were downright *scary* thanks to the mood-altering soundtracks, lightening-quick action, and terrifying creatures populating the games. As soon as players tried playing other people, the whole scene shifted. It wasn't for everybody; certainly, many people tried the deathmatches and found them intimidating or simply no fun. But for many more, it was an intoxicatingly different experience.

Single-player games, while gripping, had missed a vital element of competition. Deathmatches turned out to be more than a little like regular offline sports. The point was to beat the opponent. In the game it happened to be by fragging—or killing opponents—as many times as possible, but as

the games' defenders noted, even football was a form of ritualized warfare. Even chess itself was a violent game at its metaphorical heart. Realistically, the worst injury *Quake* players would suffer would be a sore hand from gripping the mouse too tightly.

Human opponents were more fun to play than the computer's artificial intelligence, particularly when you could sit in the same room. Screaming at somebody just before you pulled the trigger, sending your opponent into the afterlife—well, that was a big part of the fun. Many people discovered networked gaming at their workplaces, staying long after closing time to play with their co-workers. Sometimes they stayed to chat with other players online. Most of the games and the online services that rose to support them included a text chat function, which tended to start with lines like “EAT LEAD SUCKAH!” but often moved on to actual conversations about the game and game-play. Before too long, players realized they'd crossed some line to become genuine acquaintances or even close friends, often without ever meeting face-to-face.

To the outside world, this often proved inexplicable. Those standing outside the game community saw people, often young males, staring blankly into a computer screen with the express and singular intent of killing one other as often and as bloodily as possible. Critics from parents' groups to legislators would charge repeatedly in years to come that the activity could be nothing but damaging to players' psyches. But it turned out that the arena was a fantastic place to make what often turned into deep and lasting friendships, or at least in which to develop a sense of camaraderie and leadership often foreign to otherwise intensely computer-focused kids.

It proved not to be a paradox at all. They came for the competition and the killing, and they stayed for the community. In Wolski's case, the group of people he met playing *Doom* and *Quake* stayed connected, moving to other games over time, including slower-paced online role-playing worlds inspired in some measure by Richard's work.

“It's very interesting to see how life goes on. People get married, get new jobs, and their lives change, yet one thing remains the same: our common attraction to video games, both online and offline,” Wolski said, speaking more than five years after his first event. People he met through the games had helped him start his own Web design company, and he now helped organize much larger events. “It's really interesting to me, because I must

admit that when I was younger, I was sometimes afraid that my obsessions with video games would maybe affect my professional life negatively, yet it is quite the opposite.”

Eighteen *The First Superstar*

While Wolski and his #quake crew were to make a lasting impression on their particular branch of the gamer community, most of QuakeCon's attendees had been drawn deeply into online gaming circles after *Doom*'s release. The atmosphere of these first-person shooters was very different from that in Richard Garriott's *Ultima* games, encouraging players' competitive natures rather than posing ethical questions, and the shape of communities reflected this fact. As Wolski and others learned to link their computers together to play live games against each other, tens of thousands of people found their way online to play *Doom* through services created specifically for the purpose.

Out of that milieu, the first superstars of competitive play emerged.

The biggest of those early stars was a boy named Dennis "Thresh" Fong. A gaming virtuoso, he put a face on the community at a time when a curious world was trying to figure out just what made these gamers tick.

A slender, soft-spoken man with glasses and close-cropped hair, Fong in the early 2000s had the air of a young military officer. Although his mother was American, he had been born in Hong Kong and spent his first ten years moving around China with his father, a Hewlett-Packard executive. They eventually settled in the Silicon Valley suburb of Los Altos, where he slipped into the life of a typical American teenager after years in multicultural schools.

Fong was initially more interested in sports than in computers. He was the family jock, competing in national tennis competitions and starting a hockey club at school. That didn't leave much time for computers, although the house was filled with them—a byproduct of his father's employment. His

brothers—one older, one younger—were more interested in the technology.

When he was fifteen, a text-based MUD his brothers were playing finally piqued his interest. He started playing with them, casually at first, and then as competitively as he'd ever played his other sports. Unlike *Dungeons & Dragons* players who reveled in the communal storytelling aspects of their events, Fong found himself taking pleasure in the competitive hunt that made up the backbone of some of these new games. A few months into his MUD adventures, he found his younger brother playing a graphical game that involved wandering around dark rooms, shooting another shadowy figure, and being shot at in turn. It looked like even more fun. "Let me try," he said, and his brother let him slip in front of the keyboard.

"I didn't know I was playing another person," Fong said later. "Then I realized it was reacting too quickly and too intelligently to be the computer. I was tripping out. I hadn't played anything like it."

The game was *Doom*, and the trio started playing together, connecting their computers so their digital marines would appear in the same labyrinthine hallways. They'd created a virtual "The Most Dangerous Game," and pushed each other constantly. Eventually, they began to look for other players, gravitating to DWANGO, a new dial-up service aimed particularly at *Doom* players. The company was run by a Houston entrepreneur named Robert Huntley who had taken the old text-based bulletin board systems a step forward, configuring servers in a handful of regions around the United States so players could call up, see who was on their local server, chat with other people online, and then challenge each other to duels. The brothers played on the San Jose server, the one closest to their home in Los Altos. The eldest, Lyle, was the best of the three; indeed, before long he was viewed as one of the better players in the country.

Fong himself wasn't preternaturally skilled at this game. He was good, but not in the way Lyle was good. There were reasons, of course—his brother played more often, and had a better computer. For a competitive athlete, though, those reasons smacked of excuses. The same drive that had pushed him in tennis and hockey was at work here. *Doom* didn't take over his life; he still played tennis and other sports at school, and he didn't let *Doom* get in the way of hanging out with friends, but he was determined to improve.

The trick turned out to be in the equipment. Most people used the

keyboard to control character actions, and the mouse to change the direction of view, but Fong had started out using just the keyboard for all his controls. His brother Lyle was a trackball player, spinning the ball like he was playing *Centipede* instead of using a traditional mouse. That made Lyle faster. At first Fong resisted his brother's attempts to persuade him to change. When his brother went away to China on a summer exchange program, Fong decided to try out the trackball. He was almost instantly better, and was soon beating people he'd never been able to beat before. When Lyle returned, he found himself overmatched. He struggled to catch up, even trying the same trackball-keyboard setup, but in vain; Fong was too far ahead, and was soon all but unbeatable.

While their competitive home environment certainly sharpened their skills, playing against the same opponents every day was little better than playing against the computer. They began to anticipate each others' moves, which at times made it feel as if the games had pre-determined ends. Eventually they wanted to connect with and challenge other people outside the DWANGO server environment. Fortunately, they had a friend who hosted LAN parties, called Fragfests, where people were invited to bring their computers, network them together, and play *Doom*. These events grew until dozens of people were attending, in a way reminiscent of Richard's early *Dungeons & Dragons* groups. All that fragging online and in person had earned Fong a reputation on the San Jose DWANGO servers, where people referred to him by his game name: Thresh (a compression of "Threshold," as in "of pain").

By late 1994 Lyle was attending the University of California, Berkeley, and had switched to DWANGO's Oakland servers. This separation gave the brothers an idea. They liked playing through the DWANGO service and had made some close friends that way. But DWANGO had flaws: It was relatively expensive, charging two dollars an hour, which added up over weeks and months of play. Moreover, people in different cities had to make expensive long-distance calls in order to play an opponent on a different server.

Not satisfied with those options, the Fong brothers decided to launch their own gaming space built around the concepts they felt made for the best online matches. A local wireless phone company was running a promotion that gave customers unlimited night and weekend calling for no extra charge. They figured out a way to create a call-forwarding service

allowing people to call a cell phone number with their computers and be immediately forwarded to a modem. That was all they needed to set up a cheap DWANGO alternative. They signed up with a DWANGO rival called H2H as a franchisee, rented a small office in Sunnyvale for a bank of modems, then bought a single cell phone plan to forward people's modem connections automatically to the gaming service.

People streamed in, drawn by Fong's growing reputation. Many of the core players on the Bay Area DWANGO servers were already their friends and routinely played with the brothers in other venues. The brothers' company made good money, and ultimately undermined DWANGO's business in the San Francisco Bay Area. But Fong was getting bored with gaming. He was good enough now that the game wasn't difficult even against the best people in his region. He was a thoughtful player, having learned from tennis and other sports to study the game's physics and other players' styles so as to anticipate and counterattack at precisely the right moment.

Todd Gehrke, a Microsoft programmer and top-notch *Doom* player on the Seattle DWANGO servers, later told of seeing Thresh in action. Gehrke was dialing in to the Bay Area from the north and played with a higher ping rate due to distance, which meant he was playing with a potentially substantial disadvantage.^[26] In this case, Thresh compensated for the difference in their ping rates by playing with a simple pistol as his weapon, while Gehrke played with the full range of vastly more lethal *Doom* weapons at his disposal. It didn't matter. Thresh won handily.

As gaming moved online and farther into the mainstream, executives from other high-tech sectors sought to use the advances Carmack and others had made to boost their own profiles. Perhaps the most prominent company to reach out to the young communities Thresh and his brothers had adopted was Microsoft, which in 1995 was desperately trying to convince developers that its DirectX multimedia technology, a part of its new Windows 95 operating system, could be used to make good games.

At the time, the company didn't have a great reputation for multimedia applications—those were still the domain of Apple Computer, although that company was losing ground fast—and most PC game companies still wrote

directly for DOS instead of for the Windows operating system. In hopes of breaking through this skepticism, a talented Microsoft programmer named Alex St. John went to id's John Carmack and asked if id Software could make a version of *Doom* running on DirectX.

Carmack agreed and gave St. John the *Doom* source code, and a team of programmers was hired by Microsoft to work on a version called *WinDoom*. With that in hand, Microsoft was able to convince other developers that its technology was strong and stable enough to support resource-intensive games. Other programmers started coming on board.

In large part to show off the new Windows 95 operating system's ability to play games, Microsoft decided to host a huge Halloween party that year for its game developers. In conjunction with this, it arranged with DWANGO to sponsor a national *Doom* tournament, where people on each of the company's regional servers would vie for a spot in a final-round tournament on the Microsoft campus, at the party. Deathmatch '95 would be the first time that the best *Doom* players around the United States would be able to meet and play face-to-face.

Gehrke signed up and almost immediately lost in an early qualifying round. But the tournament was on his own employer's campus, so he wasn't about to miss any of it. Fong, of course, was one of the finalists.

Microsoft went all out for the party, spending close to \$1 million on props (including a giant volcano), food, and other entertainment. The company dedicated one of its parking garages to the event, turning it into a giant haunted house. Early DirectX game developers were invited to create their own sections, and scores of journalists came for tours. Id showed up with a band called GWAR that was famous for dressing up in freakishly cartoonish horror costumes and spitting fake blood on its audiences. The band brought along its own props: an eight-foot-tall vagina with a few dozen little phallic sculptures, and a giant penis-shaped monster. Microsoft's public relations staffers were horrified, but the id attendees loved it.

Even Microsoft's CEO, Bill Gates, got into the Halloween mood. The company created a video that projected him into a *Doom* background, where he ran around for a few minutes blasting demons with a shotgun. Afterward, he stepped onto a stage to address the crowd. While he was talking, a live demon—a Microsoft employee dressed up for the event—jumped into the room and started running towards him. Gates pointed the shotgun and

fired, snapping, “Don’t interrupt me while I’m speaking.” Above him, a giant Microsoft logo popped onto the screen, with the company’s Internet slogan, “Where do you want to go today?,” twisted just a little to read “Who do you want to execute today?”^[27]

For the gamers in attendance, this was public relations fluff, even if it was cool to see Gates pay homage to their world. Most didn’t see much of the show anyway—the Deathmatch competitors were cloistered in a little lounge for most of the day, and allowed out to see the trade show and party only under supervision. Worse, the matches were punctuated by equipment complaints despite efforts to set up an even playing field. Some competitors didn’t like the Microsoft keyboards, the Windows 95 computers didn’t support the mice that some players had brought along with them, and the games were played through a DWANGO server instead of by linking the computers together, as some players thought should happen.

None of it mattered in the end. The final match happened late at night, when janitors were already vacuuming the auditorium. Fong won easily. “It was here that I realized that, while I was good, there were people that were insanely good,” said Gehrke, who’d stuck around to watch. “Obviously, they were aliens.”

Already famous inside DWANGO circles, the eighteen-year-old Fong exploded into national notoriety after the Microsoft tournament. He had won a \$10,000 computer (for the first time giving him a better computer than either of his brothers), as well as a lifetime supply of id games. Reporters started calling and showing up at his house. A profile of him ran on the front page of the *Wall Street Journal*, treating him as emblematic of the new, confusing world of online gaming. He started getting well-paying sponsorship offers from technology companies.

Still, he went on with his ordinary school life. Many of his friends at school, the ones who didn’t play games themselves, didn’t even know he was a budding superstar. He wasn’t the type to brag. He just didn’t think it mattered that much.

In 1996, id released *Quake*. Fong wasn’t excited about it at first. He didn’t want to learn a new game. He’d spent enough time getting used to *Doom*, and

the prospect of starting at the bottom again and crawling his way through the ranks was distasteful. It was early in the history of tournament play, but his instincts were right—few players would ultimately make their mark in multiple game worlds.

He held out for months. His friends switched over and told him it was a better game. The ability to play over the Internet instead of using dedicated dial-up servers was a powerful new feature, and one that opened up the scope of competition; in theory, he would be able to match guns with people around the world. In practice, high lag times meant that games against people too far away would always be less than satisfying, but at least the potential was there. The issue that he and Lyle had faced—of playing on separate servers—wouldn't be a problem anymore.

Eventually, Fong gave in. He got a copy of *Quake*, and as he'd done with *Doom II*, he began deconstructing the game, familiarizing himself with the new weapons and looking for shortcuts that he could exploit. When he was confident of his skills, he launched himself into the Internet *Quake* servers, this time adopting a different name. He didn't want the baggage of his previous handle to follow him as he learned this new game.

As a means of anonymity, it didn't last. Other players recognized his style, realizing that this "Legacy" was actually Thresh. He reclaimed his name and joined a clan of former *Doom* players called IHOS, or International House of Spork. ("Don't ask," he would say later when asked about the name's origin.) As word got out, he found himself in the familiar position of being the old gun that everyone wanted to take down. "You basically fight and crawl your way up by beating well-known people. Then after you establish your reputation, you have to take on all comers."

While the size of the DWANGO population had limited the number of challenges during his *Doom* playing days, he was now getting up to a thousand emails a day from other trash-talking kids convinced they could knock the mighty Thresh off his pedestal. He had to play some of them to shut them up, but couldn't play all of them. Luckily, clanmates and former opponents (many of whom became close friends) often stepped in to respond to newcomers' taunts, challenging them to prove themselves at lower levels first. The community had hierarchies for a reason; it was an insult to everyone for unproven newcomers to think they could start at the top.

As money and media attention poured into the Internet sector in the

mid-1990s, Fong's community found itself pushed farther into the spotlight. Like Microsoft, computer hardware companies saw gamers as natural allies, or even advertisements. The best first-person shooter (FPS) players often had cutting-edge equipment, as slow computers made for disadvantages no matter how fast you were on the trigger. Like sports companies sponsoring athletes, Silicon Valley companies turned to competitive gamers to make the case for their products' ever-increasing speed and power.

The Red Annihilation frag-off, held at the 1997 Atlanta Electronic Entertainment Expo (E3), provided the most public evidence yet of just how avidly corporate America hoped to reach this tech-savvy demographic.

Like Deathmatch '95, Red Annihilation was meant to bring players from around the country into one room. With Internet lag times still rendering direct play mostly impractical, gamers on the two U.S. coasts had developed rivalries and distinctive personalities, even explicitly identifying with some of the ritualized rivalry between West Coast and East Coast rap artists of the time. The tournament would let champions from each side face each other at last, and put trash-talkers' time and money where their mouths were. Anticipation levels ran predictably high. Id got involved, with Carmack even promising to donate his Ferrari as a prize for the winner. Even more than prize money, this was a symbol of radical success.

Fong and his older brother were representatives for the West Coast. Lyle made it to the top sixteen, but ultimately washed out. Fong cut a swath through all comers. He wasn't nervous. It wasn't in his character; even when his tennis team had gone to nationals, he had stayed cool. He didn't trash-talk, either. The East Coasters thought he was arrogant because he didn't talk very much, but he found he didn't need to. Other western players bragged on his behalf.

The game stage was set up as an eight-sided group of tables, with players facing toward the center and little cubicle walls ensuring contestants couldn't see each other's screens. The E3 crowd was kept behind the gamers, but could circle the stage and watch the players' screens. Before the final match, Fong met his opponent, Entropy, a kid about his own age, and they discussed which map should host their final game. Entropy seemed nervous. He had a reputation for being practically unbeatable on one particular map, and the luck of the draw had let him play on that level almost all the way through the tournament (only the final match was left up to the players'

choice). But he'd also seen Thresh eviscerate one of his opponents on the same map, and didn't want to take the risk that Thresh knew the lay of the land even better than he did. After a few minutes of cagey negotiation, they finally settled on a map that neither had played many times. They sat down on opposite sides of the octagonal stage to play, Carmack's cherry-red Ferrari glittering on display directly behind Thresh's chair.

For all the anticipation, the match proved anticlimactic. Fong lived up to his supporters' braggadocio, quickly taking control of the level's key strategic areas. "At that point, you have to make mistakes to lose," he later recalled. "I didn't generally make mistakes." By the time the game started its countdown to the final seconds, he was ahead 13 kills to -1—Entropy was shaken enough by the beating that he had accidentally blown himself up with his own weapon.

Something about the countdown caught Fong's attention. For the first time, he noticed the reflection of the Ferrari behind him in his own computer monitor. And for the first time in the entire tournament, he got nervous. Not at the prospect of losing, as that was at this point an impossibility. Rather, it was the certainty of winning, of being for all practical purposes the best in the world at this particular pastime, that momentarily shook him.

There was a red Ferrari behind him—John Carmack's Ferrari—and now it was *his*.

The awards ceremony was the first time the twenty-year-old had met the boyish Carmack. They chatted for a few minutes after the presentation of the keys.

"How are you going to get the car back to California?" Carmack asked Fong.

It was a good question. He didn't even know how to drive a stick shift. "I think I'm going to ship it," he told the developer.

Carmack thought about that. "I'll be right back," he said, and disappeared. He came back a little while later and held out a thick stack of bills. "That ought to cover it," he told Fong.

That hadn't been part of the deal. Fong counted it a few minutes later. It was \$5,000, far more than he needed to cover the costs of the shipping. He took his friends and brothers to a local steakhouse that night, paying for it with Carmack's generous contribution, and had more than enough left over to pay the shipping bills.

The tournament marked another big change in Fong's life, as well as in the public's perception of gaming. For years afterward, when journalists wrote about the nascent "professional" gaming world, they routinely cited the story of Fong winning Carmack's Ferrari. The win helped convince Fong's parents that what he was doing was worth pursuing. "They had been a little concerned," he said. "But I remember the day they became okay with it was the day I brought home a Ferrari."

Fong would go on to win dozens of other tournaments. Once he hit his stride, few people beat him in individual games, and he never failed to place first in a set of tournament matches. His star power bled over to the industry at large. In 1998, he and a group of lesser-known but still stellar players converged on Candlestick Park, then home to the San Francisco Giants baseball team, for the launch of the Professional Gamers League (PGL). The privately owned organization wanted to do for computer gaming what Major League Baseball had done for that sport. Atari founder and video gaming legend Nolan Bushnell took the reigns as commissioner of the new league, and attending journalists were given trading cards featuring Thresh and other league superstars.

Fong and his brothers were already taking their gaming in a different direction. *Quake's* 1996 release had essentially made their H2H dial-up gaming business obsolete. Since anyone with a modem and an Internet service provider (ISP) could find a *Quake* game online, dedicated services were no longer necessary.

The brothers thought they saw a new opportunity in the dot-com craze for community. After all, there was undeniably a gamers' community by this time, fragmented as it was by game, region, style of play, clan and guild, and any number of other differences. What was needed was a single home for all these people, a portal *by* gamers, *for* gamers. They called the new company Gamers Extreme and registered the domain name Gamers.com, and with that bit of nomenclatural luck and Fong's reputation, the new business was launched.

Fong kept playing for the next few years, but as new games gained dominance, he left the tournament circuit to focus on building the site.

The business flourished, surviving even when many better-funded Web businesses fell victim to the Internet crash. As the years passed, other names succeeded his as the World's Best Gamer, and younger players entered the scene knowing nothing of his reputation for excellence. But for the people who saw his rise—Gehrke, Entropy, and thousands of others—Thresh's name would remain a part of gaming history.

Nineteen *The Women Who Fragged*

In mid-1996, college student Vangie Beal found herself in an Internet café in Victoria, British Columbia, watching a group of her friends playing a game called *Doom*.

It was a guy thing. That's what some said, at least. Guns, demons, blood. Brutally fast action. Some of the men there were fanatic about it, dragging their computers to each other's houses and linking them together, just so they could dial up the local bulletin board all at once and play each other in the same room.

Obsessive, maybe. But a gender divide? She and her other women friends were skeptical.

Beal was hardly a stranger to either gaming or computers. A transplant to Victoria, she'd grown up in a tiny Nova Scotian town of barely 250 people, where entertainment had come in the form of arcade games at the local tourist campgrounds or Atari games at home. She'd picked up the computer bug on her own, teaching herself her own way around her middle school's Apples, and after moving across the country had started hanging out on local bulletin board systems, talking with the regulars and, increasingly, meeting them offline. Nowhere along the way had she paid any heed to the idea that computers and technology were male domains.

So why here? The women she'd met online and at the Net café agreed. They gave *Doom* a try. Learned how to shoot, strafe, and run. Soon she was mowing her way through little digital figures with rockets and shotguns, and—more to the surprise of other people than to her—she found it a blast.

At that point there weren't many women players like Beal, or at least their presence wasn't readily apparent in the world of *Doom*. At Microsoft's

Deathmatch '95, female faces had been few and far between in the crowd, and even more scarce in front of the clicking keyboards.

This was true for other video games, too. Since the late 1970s, developers had known they were making games largely for teenage boys, and it was almost a happy accident when some significant demographic slice of women found something to like in a game. *Centipede* and *Ms. Pac-Man* had that appeal. Younger girls liked some of Nintendo's *Mario* games, but women certainly weren't flocking to *Doom* deathmatches. By 1994, a "girl games" movement had led a few game companies to try to appeal to younger girls with themes such as dating, shopping, and fashion. Titles with built-in appeal, such as the Barbie brand name, sold well, but most of the others didn't. Critics accused the companies of reinforcing sexist stereotypes, while proponents said they were simply doing their best to expand a market with egregiously lopsided gender dynamics.^[28]

Shortly after Beal and her friends started playing *Doom*, the first versions of *Quake* were released. This proved even more fun. The group would line up at computers next to each other at the Internet café, log on to the same servers, and proceed to shoot each other silly or team up against outsiders, screaming at each other across the room. Yet even in this apparently violently meritocratic society, where the only thing that really mattered was the accuracy of your rocket launcher, something was shifting.

The men Beal knew, many of whom had been playing *Doom* for years and were already good at *Quake*, were joining or starting clans that almost never included women. To be sure, Beal and the other women players had felt bits of this exclusion online before. Few women were playing, and the chatter on servers was often sexist, homophobic, or downright abusive. Now they found doors definitively closed. "It was like, 'When you get better, you can join our clans,'" Beal said later. "But we *were* getting better."

Instead of lobbying the young men to change their collective mind, the women decided to do them one better. And thus PMS—the Psycho Men Slayers—was born, the first all-female clan to hit the *Quake* server circuit.

The response in the *Quake* community was mixed. Guys weren't always happy about playing women, particularly when the PMS-ers won. "There was verbal harassment and abuse. But to us it was funny," Beal said. "A very sensitive female might have taken it harder." It helped that they were a clan and that their own local friends were on their side. When the

harassment from some trash-talking player got to be too much, the PMS-ers would gang up on him. They had numbers on their side and the kind of confidence that came from flying together in the face of expectations. They weren't top-ranking players, but they were good.

It didn't take long for the rest of the world to see what they were doing. Other female players were beginning to make waves too, and the phenomenon of women carving out a decidedly separate spot in the community, with all the hard-edged, frag-driven determination of their male counterparts, fired imaginations. *Wired* magazine sent a photographer to Victoria late in the year, and the four PMS-ers were featured in a subsequent issue of the publication. Almost immediately, email began coming in from other *Quake* players, writing that they were astonished to see other women players, that they had imagined themselves to be the only ones. A few joined the clan, and before too many more months passed, PMS had gone international.

Even better, other all-female clans started up. Women's tournaments began occurring, and women started garnering more of a presence at the marquis QuakeCon tournament. One of the top women players, Stevie "Killcreek" Case, famously even beat John Romero in deathmatch play. When the PGL started up in 1998, several women's faces were on the player cards handed out to reporters and fans.

Yet as women's online presence grew, the harassment didn't go away. Women players routinely cited problems online that men didn't face. Cloddish pick-up lines were routine. Players were jokingly asked to star in pornographic movies, or assumed to be lesbians. Pornographic photographs with faces altered to look like prominent players were passed around servers. Even the Web sites that posted news and gossip about the gaming community tended to be very male-centric. For the casual observer, it was as if there were no women playing the game at all. That worried Beal, particularly given the response that her clan had elicited from women gamers. "Everything I've done since I was a teenager has been male dominated," she said later. "I have tough skin, and it didn't offend me. But I thought that other girls might look at these sites and say, 'That's stupid, that's not something I'd be interested in.'"

She realized women needed to do more than just form game clans and participate in tournaments. In hopes of carving out a space for women gamers, she launched GameGirlz.com, designing the site as a place where

women gamers could read their own stories, publish their own thoughts, and be exposed to the fact that plenty of other women in the world liked the same things they did. It wouldn't be dogmatic, and it wouldn't be particularly political, but it would provide a place where a more diverse community of gamers could grow. Launched in 1997, it was still going strong more than a half-decade later, long outlasting some of the most popular gaming sites online.

It might even have helped address the broader problems of exclusion, at least a little. By the mid-2000s, there was reason to think that the atmosphere was improving, both for women and other minority groups.

"Racial and sexual slurs are pretty prevalent online," said Caryn "Hellchick" Law in a 2003 interview. Law, a *Quake* player and columnist for the Planet Quake Web site, had been a longtime critic of the community's blindness to sexism and racism online. "But I do see a more general movement to eliminate the use of racial and sexual slurs among gamers. I'm not sure if that's because maybe the community is all growing up a bit together and realizing that we don't want that kind of behavior in our community, or if it's because of minorities being a bit more vocal and saying, 'Dude, I'm black and it ticks me off when you throw around those words like that.'"

Certainly, Beal and the PMS clan discovered something in their gaming years that was often overlooked. On its surface, *Quake* was about running and shooting anything that moved, seemingly channeling the simplest of teenage-boy power fantasies. In reality, it had become a social experience. It was a game happening in the context of a community that rewarded social participation. To be sure, it wasn't for everybody, no matter what gender. The quick responses needed, the simple goals mixed with complicated manipulation of the mouse and keyboard, and the content of the game if taken at face value added up to considerable hurdles for anybody not already hooked by something in the game's play. But Beal had tapped into a notion certainly shared by Garriott and his fellow *Dungeons & Dragons* players: that games, even those ostensibly focused on carnage and killing, were fundamentally about the people playing them.

"I can have a blast sitting in my room with thirty women from around Canada and the U.S. on the same server. We'll just talk, and someone will complain about her husband, or talk about her kid's new tooth," Beal said. "It's still social whether you have friends in the room with you or you have people with you out on a network somewhere."

Twenty *Feels Like Home*

Mike Duarte and Kevin LaMar sat in Mike's blue 1974 VW Beetle on their way to school, talking about games. It was mid-2002, and they were both students at De Anza College, a Silicon Valley-area community college.

“You know what would be cool?” Duarte asked.

“What?”

“It would be cool if we could get a big LAN party going. Bigger than the ones at the churches.”

Eleven years after Carmack and Romero and the others had founded id Software, nearly a decade after *Doom*'s first release online, their work had radically changed the face of digital entertainment. Where Richard Garriott and the id developers had come out of communities steeped in *Dungeons & Dragons*, a new generation had grown up that was more comfortable with these fast-paced, complex digital game environments. Its members had been online at least since reaching adolescence. These new gamers still saw the value in playing face-to-face, in gatherings very much like Garriott's *D&D* nights. They just wanted to bring their computers with them.

Duarte and LaMar were at the leading edge of this cohort. Their friendship reached back to eighth grade, when they had discovered a mutual love for computer games. Over the years, they'd put together small parties, hosting gaming nights that had progressively outgrown the spaces they'd found for them. Gamers were no longer hard to find, and communities

were getting increasingly diverse. Indeed, by early in 2003, more than 145 million people in the United States, 43 percent of whom were women, would report playing some kind of video or computer game at least occasionally. In computer gaming circles, the most frequent players were older than thirty-five, and nearly two-thirds were older than eighteen.^[29]

Still, there was a certain mysteriousness about these digital communities. Few people in the mainstream media, in censorious political circles, or often-skeptical parents' groups took the time to understand how different games attracted certain types of players, and fewer still sought to parse out the types of friendships and communities that developed. Gamers were still too often painted as a monolithic culture of strange boys staring blank-eyed at screens as they tried to blow things up. What was difficult to understand for those outside the communities was this idea that a vibrant social life could be embedded within the culture of online games. For those on the inside, like Duarte and LaMar, it seemed almost too obvious to be worth comment.

By this point in 2002, more people in the gaming community knew Duarte by his game name, Exar, than by his given name. He didn't look much like a killer: Tall and a little heavy, he had a habit of blinking deeply when he talked, almost as if wincing at his own words. He visibly composed himself when speaking to people who were older. You could almost hear his mother, sometime in the past, admonishing him to be respectful.

Like many kids in Silicon Valley, Duarte had grown up around computers. His father was the pastor at a tiny Foursquare Church in downtown Sunnyvale, a suburban community in the heart of the high-tech region. His mother was a secretary at the local grade school, and when he was younger, he had often stayed after school to do his homework while waiting for her to get off work.

In 1989 he discovered that one of his classmates had a pair of computers networked at home, and the gaming possibilities to be found there proved irresistibly seductive. Duarte had played other computer games before, but being able to play against friends over the networked systems was an entirely different—and wholly thrilling—experience. It wasn't long before his after-school homework sessions were replaced by almost daily gaming sessions. Duarte and his friend ran through a variety of games over the next few years, but were most drawn by *Master of Orion*, a strategy game

aimed at colonizing planets, and *Duke Nukem*, the sex-heavy, gory shooter.

While he enjoyed twitch games, *Doom* wasn't a favorite. Duarte had gone to his uncle's house with his father one afternoon so the men could work on a car together. During one of their work breaks, his uncle walked him over to his computer—the technical interest ranged across the family—and pulled out a copy of *Doom*. Later that night the boy had had nightmares that he blamed on the game's dark, intense setting.

Fortunately, he had more than enough choice when it came to finding games he *did* enjoy. In 1995, when Westwood Studios released *Command & Conquer*, Duarte got hooked. Based very loosely on the *Dune* novels and video games, this was a real-time strategy game that required players to control armies fighting for control of territory and a valuable spice-like commodity (called Tiberium) on a futuristic playing field that was itself perpetually in motion. Duarte and his friends squared off against one another regularly, moving armies while attempting to outmaneuver each other. It was intense competition—bragging rights were at stake—and the boys loved it.

No matter how hard he tried, though, Duarte was in a hole. He didn't have his own computer, and that meant he couldn't practice. He pestered his father mercilessly. The genesis of his desire might have been a game, but he told his dad he could use the computer for programming and doing schoolwork. His father finally relented, but there was a condition: Duarte would have to build the machine himself.

Duarte's father was a rarity, maybe unique to Silicon Valley: A pastor by vocation, he had taken a second job as technical administrator for the local county Department of Education because his church was too small to pay him a living wage. He could see that computer-related fields were already exploding in the early 1990s. If his son was going to be playing games on computers, he might as well learn how they worked and gain some valuable skills. He bought his son a wholly disassembled computer. The boy studied the components and instructions. His father helped out in a hands-off way, answering questions and pointing him to resources in books, but pressing the boy to learn the process himself. Here again was the familiar story: As with Garriott, Carmack, Vangie Beal, and millions of others, the route into computers and gaming ran not through formal schooling but instead through a self-directed course of tinkering.

His machine built, school projects and any actual programming took a back seat to the games themselves. Duarte moved on from *Command & Conquer* to *Star Wars: Jedi Knight*, a 1997 shooting game based on the *Star Wars* movies. The real draw to this game was its online capability, which let him expand his gaming circle to a vast degree. He formed his own clan inside the *Jedi Knight* game community, a group called the Sith Knights, and named himself “Exar” after a character in a *Star Wars* book.

“Playing on random servers itself wasn’t all that interesting, but being able to play with other players that you talked with online every day was a real eye-opener,” he said later. “I had friends from quite literally all over the world. It was an awe-inspiring change in my perspective on things. I came to the realization that the world really wasn’t so big, if a bunch of kids could come together from all around the world and play a game together.”

Merit mattered here more than hierarchy. Even though Duarte was just fourteen years old, he found himself leading his digital clan. Had he been a freshman on his high-school basketball team or the star quarterback, he’d have been a local celebrity. Instead his leadership achievements were lost on the general public. For Duarte that hardly mattered. There weren’t many social situations in which he would have been able to meet people that much older than himself, much less be respected enough to be a leader. That was reward enough.

The more Duarte played the games, the more time he spent thinking about how he could link several computers together so that all his friends could play at the same time. By the time he hit eighth grade, he and LaMar had started meeting at each others’ houses after school, connecting their own and others’ computers together using whatever bits and pieces of equipment they could dig up. They’d spend hours trying to troubleshoot small networks while players’ computers were crashing, electrical circuits in the house were blowing, and people were yelling and laughing. His mother worried a little. He was spending too much time indoors in front of computers, and not enough time outside with friends, she told him repeatedly.

Yet even as Duarte’s parents worried that his hobby was too socially isolating, his interest had shifted to more community-minded games. Solo games had grown stale. “They’re just missing something,” he said. “You can develop the computer’s artificial intelligence and make it act human, but there isn’t that same satisfaction. It’s like you can be a marathon runner and

run by yourself, but it doesn't give you the thrill or excitement of being in a five-thousand-man marathon, seeing other people running with you and against you."

Ultimately the pair needed a gaming space bigger than LaMar's house. Duarte asked his father if they could use the church. It was a big space, and had removable pews where they could put in tables instead. His father, who was by that time teaching computer programming at a local alternative high school in addition to his church duties, thought it was a good idea. Every month, his father would help bring over ten or fifteen computers from his school's computer lab, and tell kids in his computer classes what was going on. Many of them were from troubled backgrounds; the games his son loved so much offered a way to help them learn the value of computers. Duarte brought his friends, and they'd spend Friday night shooting each other, taunting each other over the tops of the monitors. Sometimes they went until midnight and called it quits. Other nights the group played all night.

Just as Richard's *D&D* games had taken over his parents' house two decades before, Duarte's LAN parties soon outgrew the tiny church. The building simply couldn't hold all the people eager for a little Friday-night digital mayhem. With nowhere else to go, Duarte and LaMar stopped the big parties. They hosted gatherings every now and then in LaMar's garage, where they'd take the car out to make room for tables, computers, servers, and draped cords. It was a little like a garage-band practice—haphazard, messy, and fun—but after the church experience, they wanted more.

From the release of *Doom* onward, this LAN-party phenomenon ebbed and flowed with every generation of game and gamer. While it's true that most gamers wouldn't participate, this strand of do-it-yourself gamers would ultimately grow to encompass a sizable proportion of the most serious players, and a genuine diversity of aims. Even those who were more interested in chatting with friends than hacking together the latest hardware wanted to do so in person. It thus wasn't uncommon for LAN parties to have a cross-section of hard-core players, technophiles, and socializers, a diversity that largely existed beneath the radar of the mainstream media.

Most LANs started small, the way Duarte and LaMar's did, and stayed small. Players came to their friends' homes and strung network cables across card tables and makeshift command centers. At least in this era, they were often fragile setups—one player who drove two hours to get to one of Duarte's parties told of a gaming night where the power circuits at a friend's house shorted out every time the host's mother turned on her vacuum cleaner.

Occasionally, they grew far beyond what the initial hosts could handle. Not long after *Doom* was released, a twenty-five-year-old named Dennis Racine started hosting LAN parties in Silicon Valley. Dennis Fong, who Racine had met on the DWANGO gaming servers, was one of the early attendees. It didn't take long for the little gatherings to gain momentum, and pretty soon twenty or thirty people were showing up. They had to turn more away. Finally, Racine and a partner dubbed their event Fragfest, rented a local hotel conference room, and opened the doors to the public. By the time *Quake* was released, Racine and his partners were renting the Santa Clara Convention Center for the parties, and were attracting upward of 250 people.

QuakeCon itself grew like that. From the forty-plus people in its makeshift ballroom in 1996, that event had grown by 2002 to be one of the biggest LAN parties in the world. Hundreds of people lined up at Mesquite's convention center on the hot opening afternoon that year, most of them carrying heavy computers and monitors, while a three-story banner draped over the hotel above them trumpeted the impending arrival of id Software's next title: "*Doom 3: The Legacy of Evil Lives On.*" The new crowd was leavened with more women than had attended the early QuakeCon events, but the demographic still skewed toward somewhat geeky men in their late teens or early twenties. One—a thin, pale youngster who held himself in line with the awkward dignity of a nervous adolescent—wore a T-shirt that articulated the hope of many of the attendees: "Chicks dig scrawny pale guys."

QuakeCon's original hotel ballroom setting had evolved into a dimly lit convention center hall filled with nearly 1,300 computers lined up so closely that players barely had elbow room as they sat in front of their machines. Many of the computers in the BYOC (bring your own computer) LAN area were homemade, with eerie blue or green lights illuminating

translucent panels that served as windows into the interior of the machines. A few were virtuoso displays of technical creativity: One standout tinkerer who had built the innards of a computer into a green wheelbarrow with a clear plastic plate across its top had simply wheeled his entire contraption into the hall.

The event attracted teams from as far away as Russia. Their reasoning was simple: They wanted to play the best gamers and meet the people they'd chatted with online. Not everyone could afford a room at the main hotel. Those who couldn't simply crashed on one of the hotel's lobby chairs, or under the tables in the huge convention hall. But there was good reason to stay in the hall in any case. The BYOC area never shut down, and these gamers had come to play. Moreover, the tournament was giving out a prize of \$100,000, which would be split between the best teams playing id's new *Return to Castle Wolfenstein* game and the single-player competitions using *Quake III*.

At the close of the event, organizers talked of moving to a larger convention center in 2003, where they could support 1,700 people or more in the BYOC chambers. The big-money competitions were sexy, but it was this three-day free-for-all fragfest that most of the people came for.

The LAN-party phenomenon remained particularly compelling for its apparent superfluity in the age of the Internet. As soon as *Quake* came along, almost anyone with a dial-up modem could find a game on the Internet, often with friends or acquaintances. As high-speed Internet connections began spreading in the late 1990s and early 2000s, physically connecting computers to play became less and less necessary. Yet LAN gaming continued to grow. Well into the late 2000s, players routinely hopped in a car or on a plane, traveling across town or across the country for a game, lugging their PC hardware with them. Computer gaming might have been associated with sitting and staring alone at a computer screen, but it was very clear that its social component had become a critical part of player culture.

Back in Silicon Valley, Duarte and LaMar had no desire to recreate QuakeCon or even to create something on the scale of the original Fragfest. Not long after the conversation in LaMar's VW, they sat down with a few

other interested friends at the local burger joint, and their vision started to take shape.

A friend of Duarte's mother was CEO of a little San Jose company called Nuvation. He agreed to loan them the company's offices for a weekend. They cold-called dozens of companies they thought might sponsor the event. A few helped out: an energy drink company, a joystick company, a company that operated servers for game companies, as well as the people who ran a big LAN party in Modesto, a city about two hours away. With all that help, they got the equipment, the expertise, and the money they needed to hold a party for fifty people. They were ready to go. They decided to call it the Silicon Valley Frag Fest, build a Web site, and start spreading the word using other game sites.

The LAN party fell on a clear and cool Friday night, when most college kids Duarte and LaMar's age were partying somewhere other than a Silicon Valley business park. That thought didn't faze them. By the time the party kicked off, the pair had been at Nuvation's offices for hours, stringing cables and wires, testing circuit breakers, and setting up computers for people who arrived early. They had a pretty good sense of who was coming to the event: mostly locals from Silicon Valley, but a few from as far away as Sacramento and the state's agricultural centers. There would even be a celebrity visit from one of the programmers who had worked on *America's Army*, the shooter game the Army had recently commissioned and published to serve as a training and recruitment tool.

By 10:00 P.M. a few dozen young men in T-shirts (there were almost no women) were milling around the office drinking soda and coffee, occasionally sitting down to play a game on one of the computers that filled the three rooms, but more often just chatting. Few had met many of the others in person before this evening, although some of the nearly fifty attendees had arrived in small groups. Conversations generally fell into one of two categories: stories about crazy game sessions someone had played or seen, and show-and-tell with tricked-out computer hardware. One of the other organizers, an ebullient, heavysset man named Andy, was particularly proud of his machine, displaying it on a desk with one side open to the air. He'd built it in just two hours at another party like this one, he said. It didn't look much like an ordinary office computer; on its front were three separate sets of digital readouts, all connected to thermometers inside. If

any hot spots developed during play—a frequent occurrence with high-performance game machines—the readouts would tell him, and he could activate one of the various cooling fans inside.

Duarte was busy taking care of minor emergencies. Early in the evening, the host company's CEO had tripped two sets of burglar alarms in his own building, and two different security companies had to be pacified. Power issues were critical. The organizers had carefully calculated how much strain each circuit breaker could take, and had loaded each plug very close to the maximum. There wasn't much room for error, and every once in a while something unexpected happened: A computer's fan would kick in, for example, and that little extra power draw would be enough to trigger the circuit breaker, and an entire row of monitors would go instantly dark. The orange and yellow extension cords draped across the offices were suffering their own stresses. At one point in the evening, Duarte emerged with a disbelieving smile and a plug in his hand that smelled toxic; the power load had burnt the rubber around its metal prongs, and the plug was useless.

As the evening progressed and the inevitable network issues were solved, the gamers started playing in earnest. The people here came from different gaming circles: Some were playing *America's Army*, some were playing the popular *Warcraft* real-time strategy game; some played older but still popular games like *Quake III*. They were enthralled as they played; each stared into the glow of a separate monitor, constantly looking for the next kill, breaking out of hunting mode to fire off quick text messages to other people in the room (a lightning-fast movement, as the player quickly tapped a key that toggled from hunt mode to chat mode and then back again). Furious typing followed, the audible evidence of a disparaging note, usually sent to someone the player had just killed. The response was often verbal—"Asshole!"—one half of a conversation that players all understood. It took only seconds, from kill to chat to holler, before the whole room knew somebody had gotten fragged.

The night wasn't just about fragging. In the back room, a thin, intense boy was making digital maps for the rest of the group. He'd arrived early and paced his way around the office complex. The CEO had offered to give him blueprints of the building, but he'd refused. That would have been too easy. For hours he had sat at his computer, playing with the digital equivalent of Lincoln Logs, and over time a 3D model that was recognizably Nuvation's

office took shape. It was a mod he would unveil early in the morning hours, his own version of a game in which the rest of the players would be able to run around and shoot each other. He proudly showed off an early version of the map, running a character through its paces: The screen showed the perspective of someone sprinting up the building's front staircase, jumping through a window, and weaving in and out of rooms where cubicles were ordinarily set.

In the breaks between games, Duarte and LaMar took some time to talk about their own history of gaming and the process of setting up an event of this size. LaMar, known as "Killjoy" in *Quake III* circles, laughed at the prospect of telling people outside the gaming community that he was spending the weekend holed up in an office park. There was still a stigma attached to that. "I generally don't tell people that I'm here. It's not cool to let them know I'm getting together with fifty gamers," he said.

LaMar was thin, just under 5'6" tall. He was soft-spoken, with red splotches of embarrassment occasionally popping up on his neck as he spoke. When uncomfortable, he rolled his eyes a bit and tapped his foot as nervous punctuation. Yet when he started talking about the games themselves, he became animated, his motions free of the earlier tics. His stick-figure arms swung in front of him as though he wanted to lean in and touch the interviewer on the forehead, sync up and download his feelings and emotions directly, because there was no way to talk about games without sounding half-cocked and crazed. Why was he here despite the remaining stigma? Why was he spending his weekend with a bunch of increasingly smelly guys with perpetual caffeine highs?

He glanced at Duarte, who nodded, clearly agreeing with his LAN partner's instincts. This was an easy one.

"It feels like home," LaMar said.

Twenty-One *A Mod Life*

An hour north of San Jose, out in the foggy Richmond district of San Francisco, a different kind of LAN scene was unfolding. In a dark room next door to one of the city's best sushi restaurants, computer monitors were lined up on tables by the dozen. A café at the counter advertised tea with tapioca pearls, a popular drink among this neighborhood's Asian-American population. The arcade sounds of explosions and gunfire poured out the open door onto the busy street, where little groups of teenagers were standing in twos and threes. More kids sat at the computers inside, intent on the worlds unfolding on their screens.

Playing on virtually every screen in the room was a game that appeared to be vaguely military in nature. Unlike in *Quake* or *Doom*, the players were working in teams, and the action in the café made that clear—shouts and shorthand instructions occasionally broke through the gunfire as teammates barked orders at each other.

The game was called *Counter-Strike*, and maybe more than anything else in online gaming's short history, it had demonstrated the power that players themselves had come to exert over their own medium. Driven by the same instinct that had set John Carmack digging inside *Ultima* code to discover ways to recreate the game himself, players across the gaming spectrum were tearing apart games and rebuilding them to make new levels, add new characters or concepts, and sometimes—as in the case of *Counter-Strike*—create new titles with radically different gameplay.

In this case, the game developer was a Canadian student named Minh Le, who had used the freely available code of another popular game called *Half-Life*, which was based on graphics technology originally created

by Carmack for *Quake II*. The fact that Lee was still working in his parents' suburban basement didn't detract from the fact that he was one of the most successful mod makers ever, and part of a modding community that had become deeply integrated into the broader industry's basic development processes.

Indeed, at the close of 2002, *Counter-Strike* dominated gaming cafés in the United States and Europe the way *Doom* once dominated the early LAN parties. Professional gaming tournaments such as those held by the Cyberathlete Professional League, a successor to the Professional Gamers League, had adopted it. Teams from around the world had won hundreds of thousands of dollars every year playing it. In the three years since its release, *Counter-Strike* had become one of the most popular multiplayer games in the world. During peak times, ninety thousand players from around the world were trying to frag each other, making it far and away the most popular mod ever created. Each month, 1.7 million players put in a collective 2.4 billion minutes a month on the game. ^[30]

Mod making is as old as computer gaming. Within a few days of the unveiling of *Spacewar!* at MIT in 1961, other player-programmers had begun adding to the code, making versions with different features or multiplayer play, or even enough different features to render the result another game altogether. Don Woods' rewritten version of Willie Crowther's *Colossal Cave* was, in a way, a mod of the original game. For years, as games floated freely around the various networks, the line between players and programmers was a thin and often wholly illusory one. From Bill Budge's 1985 *Pinball Construction Set* to Accolade's 1990 *Jack Nicklaus Unlimited Golf & Course Design*, a few companies had even released their own tools for expanding the play fields that came with the original games.

Carmack's release of *Doom*'s level-editing tools and code in 1993 brought modding of commercial games to a new level, giving the developers' stamp of approval to what had in many cases been unauthorized versions or even violations of intellectual property law. Player-developers responded with a vast surge of creativity, posting new levels, new weapons, and new themes online. Players had the opportunity to create mash-ups of their

favorite movies and games. An *Alien*-themed *Doom* appeared, as did a James Bond-themed *Doom*, and finally even a *Doom* patterned after Richard's *Ultima* world.

That diversity caught the eyes of executives at the WizardWorks Group, an independent publisher. In 1995, they compiled ninety of the best games, many of them freely available online, and started selling the collection in stores. Within weeks, the mod collection rocketed up the sales charts, briefly surpassing *Doom*'s sales.^[31]

Quake, with even more developer tools available, helped accelerate this movement. As more people played the games, and as more people learned the computer skills necessary to manipulate the tools and work with their own 3D modeling programs, creative communities grew fast. Companies licensed Carmack's underlying game engine—the software that controlled everything from computer artificial intelligence to the technology that shaped the 3D graphics and in-game physics—to create their own games with different art and game-play styles. Several of these, including Valve's *Half-Life* and LucasArts' *Jedi Knight II*, were very successful titles in their own right. In perhaps the strangest reuse of id's technology, a small religious game company called Wisdom Tree licensed the *Wolfenstein 3D* game engine, kept most of the levels, but changed the art to make the walls look vaguely wooden instead of stone. They called the game *Super 3D Noah's Ark* and replaced the machine guns with a slingshot that players would use to shoot food at animals.

It was the masses of people doing this kind of work for free online that really piqued industry interest, however. The more mods people created using code from other games, the more that original commercial title would sell. Seeing the positive effect that the modding community had on id's sales and the lifecycle of interest in its titles, other companies started following that company's lead. Most shooter-game companies decided to support modding in some way. Some even held conferences to help teach community members about technology specific to their games. Creating a mod soon became seen as a fast way into the computer game industry, and *Quake* mods became a standard part of résumés. Tim Willits, a *Doom* modder, was hired at id, and other companies scooped up other talented mod makers as well.

The community did run into hurdles. Game players and programmers

tended to follow their own creative instincts rather than the letter of the law. Just as John Carmack and Tom Hall had borrowed Mario for their early version of *Commander Keen*, many budding game designers integrated pop-culture icons or characters from other games into their own creations, believing that if their games weren't commercial, there were no copyright problems. The owners of the copyrighted characters or original games weren't always so sanguine. In one locally famous instance of backlash, Twentieth Century Fox's lawyers sent angry letters to a team of programmers led by a Swedish student that was creating a game blending *Quake* technology with images and ideas from the movie *Alien*. Fox owned the intellectual property rights to the games and movies associated with the *Alien* franchise, and its lawyers told the team in no uncertain terms that it had no right to use their images in its own work. The project was stopped, and the term "to be foxed" entered gaming lingo, defined as having a mod project derailed by the complaint of an intellectual property rights holder.

Many of the mods built on popular game engines found avid fans inside the online players' communities. "Partial conversions," in which a programmer would change just a few aspects of the game—such as turning *Quake* into a game of capture the flag, or simply adding a few new weapons to the game—were particularly popular. Developers and publishers sought out the best programmers and tweaks, and even released some of the mods packaged along with their own games. This was the environment that Minh Le entered as he began his ascent in the modding world.

Le grew up near Vancouver, Canada, a fairly typical suburban child. He started playing with computers early, first with a Commodore VIC-20, and moving through several other computers in the Commodore series before finding his way to PCs. He took whatever computer classes he could find in school, but was always a game player at heart. While he hadn't cut his teeth on *D&D*, he'd counted Garriott's *Ultima VII* as one of his favorite titles.

Alongside computers, art and comic books were his passions. From the time he was young he could often be found sketching with a pencil or sculpting with modeling clay. He dug through comic books and watched animated cartoons and found himself fascinated by war stories and guns.

He and his brothers would run around the local park playing war games. As he got older, he was always the first in line to see any new war movie when it came out.

His passions finally merged when Carmack and company released the tools to modify *Quake*. Le took a look at the technical specs and realized he could start tweaking the game's code himself. He first tried his hand at making a simple gun. He worked for almost three months trying to create an M16 rifle to add to the game. The results were "horrid," he said later. The hands holding the gun were a weird silver color, and the gun was pitch black, hardly the mark of an elegant mod. He hadn't figured out the art of texturing a 3D model to give it more realism. It didn't matter, though; by now he was hooked.

"The satisfaction of creating a mod, even in its simplest form, was irresistible to me," he said later. "Ever since I started modding, I've been working on them at a feverish pace. I neglected a lot of other things, like school and a proper social life."

His next attempt would be a more ambitious reworking of the *Quake* game. He started working on replacements for all the weapons, making models of real guns. He was almost through with that when he realized it didn't make any sense to be shooting fantastic monsters with real-looking guns. He decided to rework the game's characters, too, and slowly replaced the monsters with soldiers and military-themed objects. He named the whole thing *Navy SEALs* and released it online. It wasn't a multiplayer game, but it attracted an avid fan base. Others added new levels and its growth continued. Le's obsessive work on the game had taken its toll on his schoolwork, however, and he wasn't making money from downloads of his work. He decided to take a year off from game-making to get his life back on track.

As a first-year student studying computer science at Simon Fraser University near Vancouver, he began toying with a sequel to *Navy SEALs* using the *Quake II* technology. He tentatively called it *Rolling Thunder* (no relation to the 1989 Nintendo game released by Tengen), and started making 3D computer models for the game. But his school workload soon got out of hand, and he was forced to stop, donating the models to another team. He worked occasionally on that project, making additional models before ultimately setting it aside.

Late in 1998, Valve Software's *Half-Life* hit the streets. Based on the *Quake II* game engine licensed from id, it led players through an adrenaline-packed and genuinely frightening story of a scientist trapped in a research facility overrun by dangerous monsters released from another dimension by an experiment gone wrong. Like Carmack, the Valve team who had made the game had a program of actively supporting the mod communities. Le took one look at the game and realized there was real potential there for something along the lines he'd already been working on. In its natural state, the game pitted the player against squadrons of Marines trying to close his mouth before he could reveal what he'd seen. Take the monsters out, focus just on military teams, and it would be another game altogether. His game would feature a counter-terrorism squad tasked with stopping a separate team of terrorists from planting a bomb. It was a simple concept, and it would rely on players to make it fun. He decided to call it *Counter-Strike*.

Le had already done a lot of research on the subject. He knew what kinds of characters and weapons he'd have to build. He didn't have the resources to make a full single-player game with a story line and artificial intelligence controlling the terrorists, so he decided to make it strictly a multiplayer game, like *Quake* deathmatches but with the rudimentary terrorist backstory providing guidance for players. The terrorist team leader would be tasked with planting a bomb, and teammates would do what they could to facilitate that operation, usually by shooting anyone who tried to interfere. The anti-terrorism team would have to work together to stop the terrorists.

He worked on the game for seven or eight months, mostly by himself. He did have some help from other programmers who created different levels to play and tested the game, but the core group had a clear idea where they were going from the beginning: slowing down *Half-Life*'s speed of play, changing the accuracy of guns in the original game to mirror the action of real-world weapons, and adding other realistic guns, uniforms, and scenery.

The process taught Le a lot about games and the criticisms typically made by gamers, he said later. The community support helped, but players often missed subtleties and tradeoffs inherent in the development process if they hadn't participated themselves. "Before I started making games, I never really understood what exactly it takes to make a game, and all the factors that need to be considered when implementing a particular feature,"

he said. “There were countless times where the *Counter-Strike* team would be lambasted for doing things a certain way, and when I read the flames on the forums, it just irked me so much because I knew that all of those flames could have been quelled if only people understood what goes on in making a game.”

Despite the message-board flames, the first release of the game in mid-1999 as a free download met with solid approval from other game players. The game was such a success, in fact, that Valve Software took notice. The company was primed to look for good mods. A pair of former Microsoft programmers, Mike Harrington and Gabe Newell, had started Valve a few years earlier. While they’d based *Half-Life*’s technology on id’s *Quake II* engine, they’d used a community-built *Quake* level-editing tool to help build their own game’s levels. They hired many of their own programmers from the modding community, and not long after *Half-Life*’s release, they created an annual *Half-Life* Mod Expo event that would spotlight independent programmers’ work. The company offered to release *Counter-Strike* commercially, and lent Le some programming help to fix the remaining bugs. The game hit retail shelves in November 2000, although anyone could still download it for free from the *Counter-Strike* Web site. By the end of 2002, it was among the most popular multiplayer games in the world, with the company claiming on its Web site that “more gamers are playing *Counter-Strike* than the sum total of all other games combined.”

As with *Doom*, *Quake*, and scores of other titles, Le and millions of people playing *Counter-Strike* saw its military theme and fast-paced, bloody action as essentially a team-building exercise. From pick-up games like those at the San Francisco Net café to the professional gaming leagues that would adopt the title, high on-screen body counts meant no more than did a football tackle (and, indeed, were far easier to recover from).

But the outside world was becoming increasingly uncomfortable with this apparently incessant focus on blood. When some came to believe that a real-world tragedy had been triggered by precisely this violence, the gaming community’s cheerful disregard for politics and outside opinion was forced finally to an end.

PART IV

A Darkness Falls

Twenty-Two *Columbine*

On a cold Tuesday morning in April 1999, two students stormed through Columbine High School in Littleton, Colorado, setting off homemade bombs and shooting students, teachers, and finally themselves. When the smoke cleared, fifteen were dead, and people across the United States were desperately asking how any of it could have been possible. For developers and players of games with violent content—id’s games, most certainly, but even Richard’s swords-and-sorcery-themed titles—the event would provoke the most significant collision to date between the industry’s fantasy worlds and real life.

Eric Harris and Dylan Klebold’s actions sent American society lurching into a period of bitter self-examination, with particular attention focused on the nexus of teenagers, violence, and the entertainment media. Columbine wasn’t the first school shooting of its kind. Harris and Klebold’s rampage capped a string of student shootings that had occurred with alarming frequency over the previous years. This was by far the most extreme, however, and the cable news outlets that broadcast the horrifying events to a rapt nation exacerbated its impact. Images of scared children streaming out of the school and police officers surrounding the area were beamed into America’s living rooms. In one particularly harrowing videotaped sequence, a young student climbed out a second-story window, desperately looking for escape. The vivid pictures of shocked suburbanites and traumatized Columbine students stayed on the nightly news and on the front pages of newspapers for weeks, while investigators, journalists, pundits, legislators, and parents pored over every detail of the two students’ lives, searching for clues to what could have triggered the attacks.

Much of the subsequent soul-searching was valuable, prompting discussion about the complex and often overlooked social, familial, and economic pressures faced by modern teens. Some of it was less rigorous, as people looking for solace turned to simple answers and scapegoats. Harris and Klebold hadn't been popular kids. They had been on the fringes of a group referred to in the press as the Trenchcoat Mafia, a group of students who had been picked on with some regularity by the school's athletes. The Trenchcoat Mafia was quickly associated—wrongly, local students later said ^[32]—with the music of Marilyn Manson and with a Goth subculture filled with people of all ages who dressed in black and were often fascinated with thanatological images. These influences, foreign to many despite their presence in virtually every high school across the country, became an easy target for frightened parents and teachers. In the weeks that followed Columbine, students reported being disciplined or criticized in their own schools for wearing trench coats or other badges of Goth fashion. ^[33]

As pundits speculated as to the perpetrators' motives, news leaked that Harris and Klebold had been avid *Doom* players. The Simon Wiesenthal Center, a group that tracked hate groups on the Internet and elsewhere, reported that it had a copy of Harris' Web site in its archives, and that it contained a modded version of *Doom* based on the layout of Columbine High School. Harris had set his game in God mode, which meant that player-characters couldn't be harmed while they traveled through bloody levels that came with operating instructions such as "KILL 'EM AAAAALLLL!!!!!" The revelation that the gunmen had rehearsed their rampage using a computer game provided the apparently easy answers people had hoped for: If violent, interactive computer games caused Harris and Klebold to commit this atrocity, then parents had an easy way to protect their children from future harm.

As that narrative took hold in certain segments of the media, a cacophony of voices began targeting young people who may have fallen outside the mainstream's idea of a typical student. Kids who immersed themselves in games of *Dungeons & Dragons*, who found solace in Goth music, and who played computer games were lumped together as potential enemies of public safety.

Relatively few figures emerged to defend these young kids, who now more than ever found themselves pushed to the margins of society. In

response, journalist Jon Katz opened up his column on the Slashdot Web site to students who felt alienated and harassed by school administrators, many of whom were cracking down on student conduct by implementing dress codes and, in some cases, restricting Internet access at school. “Suddenly,” Katz wrote in an essay titled “Voices from the Hellmouth,” “in this tyranny of the normal, to be different wasn’t just to feel unhappy, it was to be dangerous.”

Teenagers from around the country wrote in, expressing their anger and confusion at the hatred being directed at them. “Brandy,” identified as a New York City student, summed up much of the feeling within the game community:

I’m a Quake freak, I play it day and night. I’m really into it. I play Doom a lot too, though not so much anymore. I’m up till 3 a.m. every night. I really love it. But, after Colorado, things got horrible. People were actually talking to me like I could come in and kill them. It wasn’t like they were really afraid of me—they just seemed to think it was okay to hate me even more. ^[34]

On a broad level, the adult fear echoed earlier panics over youth violence and subcultures that had swept periodically through the United States in the latter half of the twentieth century. Like their greaser and gangbanger predecessors, Goths and gamers seemed to develop a subculture, in the heart of ordinary society, in which kids created their own rules uncontrolled by any adult authority. For gamers, this world was virtual, giving players like Harris the ability to explicitly mold their experiences to fit and reinforce disturbing fantasies. Worse, critics said, game designers, movie producers, and record labels were providing the raw materials for these fantasies, essentially subverting parental influence. Some large retailers, including Walmart, took note and stopped carrying *Doom* and *Quake*.

Id Software wasn’t entirely taken by surprise. The company’s games had been associated, fairly or not, with youth violence before. After fourteen-year-old Michael Carneal opened fire at a school in Paducah, Kentucky, in 1997, killing three students, parents of the victims sued id and several other publishers for releasing violent video games. Although those legal claims

would eventually be tossed aside by the court—just as claims that rock music encouraged teenagers to kill themselves had been dismissed over the years—the stigma had stuck.

While few voices blamed Columbine directly on computer games, gaming culture at large was nevertheless subjected to a wave of criticism and hostile attention. Critics glossed over the differences between complex massively multiplayer worlds like Richard Garriott's *Ultima Online*, fast-paced action games, and even the vastly more popular sports games. It rapidly became clear that legislators and pundits had little understanding of the variety of play or variety of players that had evolved over the previous decades. In ordinary times that ignorance would have made little difference. In the wake of such a tragedy, this broader societal attention carried the potential to change or even destroy game communities through legislation, market pressure, or other more subtle means of censorship.

The shootings sparked some soul-searching inside the industry, too. Developers interviewed at the time often conceded they wouldn't let their young children play their own company's games, and said it was the parents' job to take responsibility for their own children's use of media. Gamers blasted Harris and Klebold on Internet bulletin boards and in private conversations, but most agreed that the games themselves bore no responsibility. Games were cartoons, graphic representations existing in a digital world that was only as real as the strength of players' imaginations. Cyberspace wasn't an actual place. It was just a construct, and if people like Harris and Klebold couldn't tell the difference between blasting digital opponents and turning guns on real-life classmates, they were clearly deeply disturbed by something beyond the games. Blaming games and condemning the entire culture was unfair.

"That argument was never taken seriously inside the community," said Dennis "Thresh" Fong later. "I've been to so many LANs, so many tournaments, and I've never seen a fight. How could I believe it? I've spent time with the hardest of the hard-core gamers there are, and I've never seen any sign of violence."

Yet nuanced answers to complex problems take time to understand, and neither the politicians nor the pundits stumping against video and computer games had the desire to find those answers. Instead of examining root causes of violence, such as poverty, education levels, or parental

involvement, many looked for quick explanations and easy solutions. Muddying the waters further, a host of intermediaries stepped into the public spotlight, seeking to explain the game medium and the culture that had grown around it. The airwaves soon filled with media critics, public interest groups, and pundits from the right and left. Game developers and game players fired back, dismissing the cultural critics' dearth of real familiarity with the sprawling virtual game worlds that made up the industry. A whole spectrum of interpretations arose, often resulting in straw-man arguments, half-truths, and platitudes. Some of the loudest voices believed that games were in fact dangerous, and called for outright censorship of violent and explicit games. Dogmatic voices on the other side declined to give any credence whatever to the idea that violent games might have an effect on some of their players.

Lost in the din of anger and blame were the more thoughtful voices of those who argued that the effects of the games on players were complicated and not easily reducible to sound bites. Massachusetts Institute of Technology Comparative Media Studies co-director Henry Jenkins, drawn reluctantly into the public forum, argued in Congress and on TV that kids used the imagery in games as modern building blocks of age-old stories, reminding the world that even the bloodiest shoot-'em-up games were little different from the longtime backyard fantasies of adolescent boys. A thoughtful counterpoint was psychologist David Walsh, head of the nonprofit National Institute on Media and the Family, who contended that violent media contributed to a subtle—but real and potentially dangerous—coarsening of the culture.

Despite their disagreements, both Jenkins and Walsh argued that the actual impact of games and interactive media on violence hadn't been measured adequately yet. While they differed in their interpretation of what the relatively small body of existing studies actually revealed, they agreed that it was important to understand the subtleties of this new interactive medium before condemning it.

This wasn't the first time that game players and communities had been in the spotlight, but it was the first time that so much had been at stake. Young people had died in a very public manner, and the popular image of gamers had been badly tarnished. For developers and players, this was an unwelcome sign that their communities were maturing. They'd found their

way into the popular consciousness for all the wrong reasons, and now developers and players would face the same public scrutiny to which other art forms and underground entertainments had been subjected for years.

Twenty-Three *Porn and the Pinball Wizards*

Video and computer gamers had sent waves of concern rippling through a nervous culture before Columbine. Entertainment activities—pool halls, pinball parlors, rock 'n' roll, and even *Dungeons & Dragons*—had long been the focal point for underground youth subcultures, and like these predecessors, computer games had been periodically suspect in a wider culture that saw them as unfamiliar. In the medium's early years, computer and online gaming avoided public scrutiny in large part thanks to its relative obscurity. The communities that had formed had done so on computer networks that were still years away from breaking into the mainstream popular culture. Arcade and home video games, which caught the public eye much earlier, were easier targets for criticism. Simpler and less community-driven than their online counterparts, video games triggered early concerns about possible ill effects on children as much for the arcade environment that grew up around them as for the games' content.

These worries began in the mid-1970s—just a few years after Atari's release of *Pong*, the simplistic Ping-Pong-like game that kicked off the arcade-game revolution—when a little San Francisco Bay Area video game company called Exidy released *Death Race*. Aside from the lurid skeleton-headed racers depicted on the side of its cabinet, the 1976 arcade fixture didn't have realistic graphics. It was a driving game in which players used a big plastic steering wheel and foot pedals to guide little blobs of light around the screen. The game's designer, Howell Ivy, had originally created it with a smash-up-derby theme, but contract issues and hopes of making a splash on the market had persuaded Exidy to modify it. In the new version, players drove their cars around the screen trying to run down little stick figures;

success was indicated by the replacement of the figure with a cross-shaped grave marker.

The designers knew they were pushing the boundaries of what was acceptable in the market, but it was a call from a Seattle reporter that showed they might have stepped further across the line than they had anticipated. The figures were undead “gremlins,” not people, Exidy CEO Pete Kauffman explained to critics. That didn’t matter. The game quickly triggered national attention, garnering write-ups in the *National Enquirer* and other, more serious newspapers. It even prompted a 1985 segment on TV’s *60 Minutes* probing the psychology of video game players.

Paralleling these fears over violent games, a national discussion about the potential harmful impact of *Dungeons & Dragons* was underway, fueled in part by speculation that Michigan State University student James Dallas Egbert III had disappeared after going into the university’s steam tunnels to play *D&D* in August 1979. The school’s newspaper initially played up the *D&D* connection, and the popular press followed. Eventually Egbert was found in New Orleans, where he’d fled after unsuccessfully attempting suicide at Michigan State. In 1981, Rona Jaffe wrote *Mazes and Monsters*, a book ostensibly about the Egbert case, which was adapted into a 1982 made-for-television movie starring Tom Hanks.

However, the exact details of Egbert’s disappearance, which ultimately had nothing to do with *D&D*, wouldn’t be revealed until 1984—four years after the young college student committed suicide—when the private investigator hired by Egbert’s parents wrote *The Dungeon Master*.^[35] Nevertheless, the event and the media attention following the disappearance and the suicide helped spark the creation of concerned-parent groups across the United States.

By the mid-1980s, the parents’ movement was also calling for the regulation of video arcades on the local level, in much the same way that localities from New York City on down had once banned pinball machines. With individual arcade machines now ubiquitous everywhere from movie theaters to corner stores, parents worried that kids would skip school and be exposed to bad influences while playing. A Long Island mother and Parent-Teacher Association (PTA) president named Ronnie Lamm rose to national prominence as a spokeswoman for the anti-video game cause. Her activism started with petition drives, speeches to community groups, letters

to state politicians, and even calls to the local fire department to ask them to check whether crowded local arcades were violating any fire-safety laws. Her own community of Brookhaven ultimately imposed a moratorium on new permits for arcades. ^[36] Other towns went further, making it illegal to place video game machines near schools, or barring video games from being used during school hours altogether.

While parents' groups fought to stop the spread of arcades, many eyes turned to a legal case originating in Mesquite, Texas—coincidentally, the same Dallas suburb that would ultimately become the home of id Software. In 1976, in part fearing connections with organized crime, the Mesquite city council had targeted arcade builder Aladdin's Castle with a variety of regulations, including one that would have blocked children under seventeen years of age from playing the games. The Fifth Circuit in New Orleans ruled that playing games was protected by the First Amendment. In 1982, the Supreme Court declined to rule on the constitutional issues, effectively granting those under seventeen the right to play arcade games.

This wave of concern wasn't wholly focused on arcade environments. Critics including Lamm bolstered their arguments with the opinions of psychologists who criticized these games for being simplistic, aggressive, and potentially damaging to children. At this point, little medical research had been conducted to study the effects of interactive games, but prominent doctors were nevertheless ready with opinions. In 1982, even Surgeon General C. Everett Koop weighed in with an opinion, saying, "There is nothing constructive in the games. . . . Everything is eliminate, kill, destroy." That opinion was widely quoted in later public debates, even though Koop clarified his remarks the following day, noting that his off-the-cuff opinion was "not based on any accumulated scientific evidence." ^[37]

Science and facts, though, make for boring punditry. Some critics found it easy to identify provocative elements of games even if these seemed to be drawn from the realm of the absurd. Creative readings of *Ms. Pac-Man* and *Donkey Kong*, for instance, found rape metaphors hidden in the games' subtext.

That isn't to say that some video games didn't cross well over the sometimes hard-to-define line of poor taste. A game explicitly celebrating sexual violence was created by Mystique, a company that designed a series of games with sexual content for Atari's home video game system. Released

in late 1982, *Custer's Revenge* featured a tumescent, pixilated General Custer fighting his way past a hail of arrows to a woman tied to a pole at the other end of the screen. Success meant that a player had guided Custer successfully through the arrows and raped the smiling Native American woman. Groups that included Women Against Pornography, the National Organization for Women, and the American Indian Community House picketed a preview of the game at the New York Hilton. A second game by the same company called *Beat 'Em and Eat 'Em* featured similarly obscene content.

Yet those blatantly disturbing games often received a harsh and immediate rebuke from the industry. In the case of *Mystique*, Atari sued the distributor's parent company for tarnishing the game system's image by associating it with pornography.^[38] A collapse of the console business in the mid-1980s temporarily drew attention away from industry, but this respite was no more than temporary. By the late 1980s, Nintendo's home game system had wholly revitalized the game market, and sales were stronger than ever.

Grounded in the cartoonish world of the *Super Mario Bros.* titles, Nintendo catered primarily to teens and younger children, even as arcade games were becoming ever more violent. Sega, Nintendo's chief rival in this new generation of consoles, looked to this arcade content as a way to set itself apart.

When the arcade mega-hit *Mortal Kombat* was released in 1992, the ultra-bloody fighting game found a huge audience. The game pitted two martial arts heroes against one another, featuring "finishing moves" that took the action definitively beyond the territory explored by similar games. Once an opponent was beaten, players had options such as setting an enemy on fire, punching his head off with a single uppercut, or ripping her heart out of her chest. Nintendo and Sega each wanted the game for their home systems, but didn't agree on how to handle the violence. Nintendo took out the bloodiest parts of the game. Sega didn't, and went on to sell far more copies than its more cautious rival.

In late 1993, Senators Joe Lieberman and Herb Kohl called a congressional hearing on violence in video games. While some in the industry muttered that the hearing had been spurred in part by complaints from Nintendo, angry at seeing rival Sega gain ground with the sale of its more violent games, the lawmakers' attention was in fact focused across the

industry. In the hope of defusing some of the criticism, a large group of leading game companies, including Sega and Nintendo, announced early on the first day of the hearing that they had agreed to create a rating system for their games.

This peace didn't last long. In the hearing, a Nintendo representative attacked Sega for its release of violent games and said his own company had tried to mitigate the industry's worst excesses. In response, the Sega representative pulled out a bazooka-style gun accessory used by some Nintendo games and wondered aloud whether it was an appropriate means of teaching nonviolence to children.

Nevertheless, this move toward self-regulation pacified the industry's critics for several years, and the political and media spotlight was shifting elsewhere just as *Doom* and *Quake* were released in the computer world, kicking off a whole new genre of bloody games. The console world was no less bloodthirsty, and as computer graphics grew exponentially better and sound quality improved, the gore got gorier. Industry spokespeople countered criticism by arguing that violent games, which were rated "Mature" under the new system, constituted only a small percentage of the titles released, were not intended for children, and were outsold in any case by competing titles, such as sports games. For the most part, members of the growing game communities ignored the background hum of the outside world's opinion. It had little relevance to their daily lives unless a rating prevented a young fan from getting a game.

Then came Columbine, and the outside world's view, skewed or not, took on a new importance.

Twenty-Four *A Virtual Space to Call One's Own*

Nearly two weeks after the Colorado shootings, MIT's Henry Jenkins got a telephone call from Washington, DC. A Senate committee was holding a hearing on media violence and children in just a few days, and they wanted him to testify. He thought hard about it, having never participated in political hearings before. He looked at the witness list; it looked stacked against what was probably the officially designated wrongheaded side. He expected to be painted with the broad brush of "game apologist," but believed that the chance to defend what he saw as a necessarily complex reading of modern culture, including even the video games that the Columbine killers had played, was worth taking a risk.

This role was increasingly familiar to him. A year earlier, as co-director of MIT's Comparative Media Studies program, Jenkins had published a book on gender and video games called *From Barbie to Mortal Kombat*, which had helped trigger some discussion in academic and industry circles on issues of gender in gaming culture. The wider media had focused on the elements of the book that dealt with violence in games, and almost overnight he had entered media culture as the professor who defended violent games. The complexities of his argument tended to get lost in most newspaper articles, but he kept trying. Now the Senate wanted him to play the same part on a larger stage.

Of course he was apprehensive. Jenkins was an academic, used to teasing complex conclusions out of ambiguous cultural material and discussing his theories with other serious thinkers. His work was painstaking and exhaustive, and oftentimes went through both scientific and public vetting processes as he wrestled with his research and data. Academia was

the antithesis of the posturing and simplification of a Washington, DC, hearing room. But after considering the risks and potential rewards, he agreed to attend.

Jenkins wasn't an avid computer game player himself, but in some senses did look the part. Balding slightly, and carrying a little extra paunch beneath a pair of suspenders, he had a modest shuffle to his walk, and the soft voice and gentle mannerisms of a therapist. Someone catching a glimpse of him across the MIT campus in Cambridge might easily have mistaken him for a grandfather gamer, though he was only forty-two at the time of the hearing.

Growing up largely before video games came into prominence, Jenkins spent his childhood playing board games like *Monopoly* and *Candy Land*—simple games that required at least one other person. He and his friends took the same games outside on a grander scale when they tired of sedentary play. Near his house in suburban Atlanta, there was a sandlot that they could transform into a giant game board. A tree house doubled as a pirate ship, as Tom Sawyer's raft, or as a hot-air balloon that could take them anywhere they wanted. The structure was versatile, malleable, and best of all, it was his. In his years studying video games, that concept of physical play space—and particularly the loss of physical space in which children could run, play, push, and fight—would assume an important role in his thoughts.

Jenkins was exposed to video games when young, but was never a dedicated player himself. His younger brother bought a *Pong* machine while they were still kids, and in the late 1970s, his future-wife's brother owned an Atari gaming system. He occasionally played the games with her brother, but ultimately real life called, Peter Pan grew up, and the games were abandoned in favor of term papers and academic study.

By the mid-1980s, Jenkins was a graduate student in film studies at the University of Wisconsin at Madison. He and his wife had a son, also named Henry, and when the boy turned five, he asked for a Nintendo Entertainment System game console. Having paid little attention to games' progress in the years since he'd played with his brother-in-law's Atari system, Jenkins assumed he'd be playing something similar, with blocky graphics, simple game screens, and digital bleeps and bleeps playing the twin roles of sound effects and background music. What he saw instead came as a

revelation. The machine was packaged with *Super Mario Bros.*, the latest title from Nintendo's wunderkind, Shigeru Miyamoto. The lush graphics and the musical score brought to life the world and its main character, Mario—the very same Mario from Miyamoto's earlier *Donkey Kong*. With *Super Mario Bros.*, Miyamoto had created a world to inhabit and explore. "I felt like Rip Van Winkle," Jenkins said. "I thought I had taken a catnap and slept through a revolution. I felt myself in the presence of a medium that had transformed itself overnight."

Just as interesting was the way his five-year-old son and his friends began interacting with the game. They played it obsessively, talking about it all the time. They brainstormed over the best ways to complete levels and swapped information on strategy, hidden treasures, and stunts. For the boys, it was very much a social experience, with groups gathering in front of the television set, cheering each other on, and swapping the controller around so that each kid's strengths and skills could be used to best advantage. A few kids in the neighborhood became temporary celebrities as they learned how to beat particularly difficult "bosses," the chief monsters that guarded the end of each level of play. These kids would do victory tours around the neighborhood, showing off their newfound skill and knowledge on other kids' machines.

The more he watched the kids in front of the TV, the more Jenkins thought he recognized what they were doing. This was similar to what he'd done in his own suburban backyard and out in the forest as a kid. They were exploring, bonding over the territory they conquered in their imagination. "I realized they weren't doing this for points. They were exploring space," Jenkins said. "My original insight was that it wasn't about saving Princess Toadstool. It wasn't about narrative." For Jenkins, that insight was enough to add games into the body of popular media works that he would spend his life studying. It would take time before many others agreed that it was a worthwhile subject for scholarly attention.

Just as he'd met skepticism from professors when he'd lobbied to have television issues added to the film studies curriculum, he discovered that many in the academic world weren't sure what to do with his work on games. Video games fell between niches. They weren't film, they weren't literature, and it wasn't immediately clear that they were even an expressive art form at all. But as the medium advanced, others joined Jenkins, and by the late

1990s, papers and books were streaming out; conferences on the issue were being held all over the world.

Those initial observations about his son's use of games remained a cornerstone of the way Jenkins understood computer and video games. To be sure, he recognized that many games made little attempt to tell stories or produce the emotional effect created by earlier, more narrative art forms such as films or novels. Yet if the industry was given a chance to mature, he argued, games with these characteristics would likely evolve. He took time away from academia to work with game companies, including Electronic Arts, training developers to build games with character, story, and plot development. In these lessons he made reference to classic literature and film as models, trying to help developers identify what made Homer's *Odyssey* so compelling and to encourage them to incorporate those lessons into designs for their game worlds.

Still, he said, these studies in narrative and character weren't necessarily the fundamental strength of games. Many game makers from Miyamoto onward had focused on creating environments or worlds to explore rather than on trying to tell complicated stories. Watch a game being played, and it quickly became clear that it was an exercise in dexterity and movement, not the physically passive experience of reading or watching a movie. A more appropriate metaphor than film for gaming might be dance, he argued. Certainly dance productions could tell stories, but the real expressive core of the art was the relationship between motion and space. A dancer moved, and the motion *was* the story. So too in a video game, the movement of the digital character through space and the act of exploring the virtual environment could be more important than the game's superficial content.

That interpretation helped explain why kids, and particularly boys, had long been drawn so strongly to games. He contrasted his own childhood environment—which had lawns and whole forests to explore and turn into fantasy lands—with his son's world of city apartments—which offered only a tiny stretch of green on which to play. Exploration of the environment had long been a critical part of growing up, particularly for boys, and video games had become that space for urban children without access to forests and fields.

That type of indoor exploration, in turn, had helped lead to the

moral panic over violence. From the beginning, he contended, games had to be hypermasculine in order for adolescent boys to feel comfortable staying inside and playing them. No boy wanted to be seen as a mama's boy, sitting inside when peers were roughhousing outside. As the boys played these macho games, their parents—and particularly mothers—were suddenly exposed to the content of adolescent fantasies that traditionally had been kept well outside parental view. “This means that mothers are for the first time seeing the content of boys’ fantasies as they grow up,” Jenkins said. “They are shocked by the scatological content and by the competition. But any boy growing up in America wouldn’t be shocked.”

Jenkins had spent much of his professional career arguing against the analyses of what he called the “media effects” establishment, by which he meant the body of doctors, psychologists, parent groups, and others who focused on a one-way line of influence between entertainment media and viewers, particularly children. In these critics’ minds, there was a fairly simple cause-and-effect relationship between a child and a game of *Quake*: The game affected the child in any of several different ways, such as contributing to violent behaviors or desensitizing him or her to real-world violence.

Once studied, the audience’s responses to media were much more complicated, Jenkins contended. Children and adults alike took the raw materials provided by the media and transformed them to fit their own purposes. Kids played superheroes or army as a way to exert control over the environment. Jenkins’ early studies were of groups such as Trekkies (dedicated *Star Trek* fans). Just as those people had turned the world of the Starship *Enterprise* into a screen on which to project their own fantasies and theatrical productions, he saw video game players using game worlds and characters as tools for their own creativity, either while playing or in later imagining different variations on the game, as his son had done. Even the most violent games could act as catharses or as near-therapeutic tools. Games like *Doom* and *Quake* provided a welcome release of frustration over societal constraints, giving children a playing field with different rules. “All play is about liberation from constraints and taking action in an environment with less consequences,” Jenkins said.

It’s easy to see how Jenkins might have been portrayed as an uncritical defender of bone-crunching, mind-numbingly violent games. In fact this

was far from true. Seeking a middle ground in the gaming-content debates, he encouraged companies set on making violence a part of their games to prompt people to think of the ramifications of their actions, in much the same way that Richard Garriott had tried to force his players to ask questions of themselves and to see their in-game actions in a broader light.

“The formulaic nature of violence I don’t like. It’s a crutch that game designers fall back on,” Jenkins said. He saw his work with companies as a potentially tempering influence: “My hope is that I may be more effective in doing some of the things that parents’ groups have been trying to do.”

Jenkins arrived in Washington for the post-Columbine hearings only to see his worst fears realized. The wall of the hearing room was hung with posters, mostly depicting blown-up advertisements for the bloodiest video games on the market. The room was full of reporters, legislative staffers, other witnesses, and supporters of the anti-game campaign. One section of the audience was filled with a group of women, mostly mothers, representing a group staunchly opposed to violence in children’s media. He was snubbed by some of his fellow witnesses. Leery of being labeled, he stayed away from the representatives of the entertainment media and the heads of the film and video game developers’ trade associations. He was on his own.

No specific bills or proposals were on the table. This was an informational hearing ostensibly aimed at shining a spotlight on the way violent images and stories were being sold to children. It was a means of putting informal pressure on the industry, but very clearly also a stage for politicians to grandstand for constituents and donors.

“We are in the strange intersection between freedom of expression and the damage that can be done when freedom is abused,” said Senator John Ashcroft, the conservative Missourian who would become U.S. Attorney General just a few years later, in one of fourteen opening statements by the assembled legislators. “And it’s a very difficult place to be.”

The senators and successive witnesses denounced films, music, and video games for wantonly giving way to, and ultimately encouraging, the most violent impulses of the human psyche. The bloodiest bits of games like *Mortal Kombat*, *Postal*, and *Resident Evil* were shown wholly out of context,

as were short clips of a handful of movies. Former education secretary and cultural critic William Bennett excoriated films that depicted gratuitous violence, contrasting the violence of Shakespeare's *Macbeth* or Hollywood's *Clear and Present Danger*, which he claimed was there to serve a purpose in the story, with the mere titillation of *Scream* or *The Basketball Diaries* (an autobiographical tale of drug addiction and recovery written by poet and rock musician Jim Carroll). Former military psychologist Dave Grossman told the legislators that violent video games were literally teaching kids to kill, using precisely the same techniques the military used with its soldiers. Criticizing the dark images of singer Marilyn Manson, one senator joked about whether the musician was actually a he or a she.

Jenkins was shaken by the discourse at the hearings. The anger and fear people felt after the Columbine shootings had reached the Senate, manifesting in ways that could only make children who played in virtual worlds or participated in Goth culture feel more alienated. This was “[p]recisely the kind of intolerant and taunting comments that these [Columbine] kids must have gotten in school because they dressed differently or acted oddly in comparison with their more conformist classmates,” Jenkins wrote later in an article published in *Harper's Magazine*.^[39]

Jenkins nervously took the stand late in the day, when most of the reporters had already departed. He pleaded with the senators to understand that young gamers weren't puppets manipulated by media images. Instead, they were constructing their own fantasies out of the raw materials available to them. Disturbed teens like the Columbine killers might create disturbing fantasies—but even the darkest images could wind up being used in positive ways by kids hungry for images that spoke to them, he said.

Don't rush to judgment on the basis of twenty-second clips of violent power fantasies, Jenkins pleaded. The real issues were complicated, just like kids' lives. “Listen to our children,” he told the senators. “Don't fear them.”

Twenty-Five *The Very Long Trial of Computer Games*

As congressional staffers lined up Jenkins' post-Columbine trip to Washington, the phone in David Walsh's Minnesota office was ringing almost without cease. Walsh was founder of the National Institute on Media and the Family, at that time a three-year-old nonprofit group known for its measured but unstinting criticism of violence accessible to children in media ranging from television to video games. It was bad enough that Harris and Klebold's rampage drew from action-movie imagery, but when they were discovered to be computer game fans, reporters around the world immediately turned to Walsh for an explanation.

Walsh didn't give the media its most sensational headlines. "A lot of people try to imply that video games were the cause, which is preposterous," he said later. "There is no one cause for a situation like that." But he took another half-step ahead, too, arguing in words that resonated in parents' groups and Washington, DC, corridors that society needed to consider whether interactions with violence in virtual spaces were in fact related to violence in the real world in some way. Even if the available science wasn't clear enough to show a direct causal relationship, correlations seemed to be emerging, he said.

"The impact of violence in the media is not violent behavior; the real impact is that it creates and nourishes a culture of disrespect," he argued. "For every kid that finds a weapon, how many are there putting each other down, calling each other names? That creates an environment where aggressive or violent behavior is more likely to occur."

Harris and Klebold weren't the first to be teased and harassed at school, but something in them responded to the environment with a horribly

extreme reaction. The shape of that was not wholly coincidental, Walsh said. “When it came time for them to act out their anger, where did they get their ideas? Ideas come from popular culture, and media defines popular culture.”

In the spectrum of media critics, Walsh was far from an extremist. In the months that followed the shooting, the pair’s actions were also linked to bullying, depression, and heavy-metal music. But a subset of cultural critics focused particularly on what they argued was a direct link between video games and violent behavior. Retired Marine psychologist Dave Grossman, who testified at the congressional hearings after Columbine and had studied the psychology of soldiers on the front lines of military conflicts, found that training simulating the action of killing essentially gave combat-related actions the status of muscle memory rather than of conscious decision. Simulations had helped increase the share of soldiers who actually fired their weapons in war. Games that taught players how to mow down on-screen enemies—particularly those arcade games in which the motion of pointing and firing a weapon was part of the experience—were literally teaching their players to kill, and therefore needed to be banned entirely from the retail market, Grossman contended. A resident of Jonesboro, Arkansas, where a 1998 school shooting helped set the stage for the media frenzy that followed Columbine, he had toured the country calling for programs of “education, litigation, and legislation” against violent video games.

Unlike Grossman, Walsh and his group didn’t advocate for censorship or legislation that would impose new restrictions on the video game industry. His reluctance to make sweeping statements had often left him in a position like the one in which Jenkins found himself: stuck between polar opposites in the game violence debate. He had even been quietly disinvited from congressional hearings when his reluctance to support specific bills was discovered by congressional staffers. Nevertheless, his group’s campaign of research and education had made him one of the most influential voices on Capitol Hill and in the medical establishment on the issue.

Walsh started his career as a high-school teacher, bouncing for a decade between schools in Massachusetts, Washington, and Minnesota. Along the way, he made the gradual transition to the role of school counselor and then to professional psychologist. In the late 1980s, he wrote a book called *Designer Kids*, which dealt with the effects of consumerism and competition on children. It sold reasonably well, and several years later

his publisher asked him to do a follow-up. This time, he chose to study the influence of media on children, focusing in part on the effects of violent media.

This second book wasn't explicitly about video or computer games. At that point, games such as *Doom*, *Mortal Kombat*, and *Duke Nukem* were just arriving on the cultural scene. Decades of research on the effects of television, movies, and other media had been undertaken, however, and *Selling Out America's Children* brought all those studies together. It struck a nerve, particularly with journalists. Bill Moyers featured Walsh on his television show, and other media outlets followed suit. The American Medical Association (AMA) even called Walsh for information when the organization was putting together a public information campaign on the impact of media violence.

Realizing the growing appetite for credible data, Walsh started to look for corporate sponsorship for a nonprofit organization focused on media issues. In mid-1995 he found funding, and the Institute was born. The group's underlying philosophy would be that the various media kids spent an increasing amount of their growing life watching and playing weren't intrinsically good or bad, but were powerful influences. He realized from talking to kids, educators, and parents, and even from watching his own three kids, that video and computer games were an increasingly important and influential part of that media tapestry.

"Whoever tells the stories defines the culture," he said. "This has been true for thousands of years. We've been telling each other stories forever. What's new is who the storytellers are. For the past fifty years, the dominant storytellers have become the electronic media—movies, television, video, and computer games. And their real impact is in shaping norms of behavior."

This was true across mediums, he said. "If we believe *Sesame Street* teaches four-year-olds something, we better believe that *Grand Theft Auto: Vice City*"—a game that rewarded carjacking, murder, and killing prostitutes, among other actions—"is teaching fourteen-year-olds something. The impact is gradual and subtle desensitization, and a shaping of attitudes and values."

Before the Columbine hearings, few groups in the nonprofit world were talking about video games, violence, and media effects. The medium was still relatively new, and games were evolving so fast that people who

hadn't grown up with them still found them difficult to understand. Walsh's group was one of the first to begin speaking about the issue. The message was heard on Capitol Hill, and when Senator Lieberman's office began looking for a nonprofit to partner with on the issue, his staffers called Walsh. Walsh agreed to work with them to study the effects of games, and together they hatched a first project. They'd create a report card on the video game industry, studying how many of the companies were following the post-1993 rating systems, and measuring how much violence was still finding its way into games.

Walsh didn't know what to expect when he released his first report. Because of his association with Lieberman, the unveiling was held in one of the legislative hearing rooms in the U.S. Capitol building. Walsh walked in to see representatives from virtually all the major TV networks and newspapers. He was stunned. The report was carried by the biggest news organizations in the United States, and the follow-up report cards his group released every year continued to receive considerable attention.

Seeking further data, Walsh's group established close ties to the medical and psychological establishment that had examined the effects of media violence using traditional social psychological techniques. Games had been studied relatively infrequently compared to television and film. Indeed, the medium was in such a constant state of flux, with game styles and platforms changing so rapidly, that critics argued that the studies that were performed tended to become outdated shortly after publication.

Walsh started with research performed with other media. A long line of researchers, the same ones Jenkins had dubbed "media effects" proponents, had found links between watching considerable amounts of violent television and increased levels of aggressiveness. Other researchers hypothesized that the interactivity of modern games created a learning environment different from that of media that were experienced more passively. It was not unreasonable to conclude that participating in the violent on-screen behavior contained in video games thus had some deleterious effect on kids. "Theoretically, if television violence impacts kids, it's reasonable to assume that video game violence has at least as great an impact or greater," Walsh said.

This particular assertion, as Walsh conceded, was analogy rather than a scientifically supported conclusion. However, a small but growing

number of studies had shown correlations between the playing of violent games and aggressive behavior, he noted. In other words, people who played violent games were more likely than non-players to demonstrate aggressive behavior.

Indeed, in recent years, the interactive nature of games had driven researchers to develop increasingly complex experimental approaches to studying potential media effects. In some, researchers had brought players into their labs, had them play various kinds of games, and measured their aggressiveness before and after playing. Other researchers had used outside reports, such as letting classmates rate one other's aggressiveness, and then correlating these ratings with the time each child had spent playing violent video games.

One of the most influential—and ultimately controversial—of these researchers was Craig Anderson, the chairman of Iowa State University's Department of Psychology, who had constructed a broad theory about the interaction between media and aggressive behavior, and had written a series of papers on how video and computer games fit into the model. Along with several other researchers, he had also conducted a set of studies that formed the backbone of research on the issue in the post-Columbine era.^[40]

One of his studies interviewed a group of group of 227 undergraduates and drew correlations between video game playing habits and factors such as behavior, grades, and general attitudes about the world. They found a small positive correlation between playing violent video games and aggressive behavior as reported by the students—things such as “hit or threatened to hit other students” or “attacked someone with the idea of seriously hurting or killing him/her.”

In his published version of the study, Anderson and his fellow researchers were careful to note that this correlation didn't necessarily imply causation. It may have been true, for example, that temperamentally aggressive people were more likely to be drawn to violent games, which would indicate that the games were not producing all the aggressive behavior.

Good science requires issues to be examined repeatedly, from multiple points of view; wanting more detail, Anderson designed a second study to examine the causal link further. Student test subjects were assigned to play either id Software's *Wolfenstein 3D*, a fast-paced, first-person shooting game, or *Myst*, a nonviolent, slow-paced game requiring little in the way of

manual dexterity. In a first session, students played one or the other game for fifteen minutes, and then responded to survey questions measuring levels of hostility, agreeing or disagreeing with questions such as “I feel angry” or “I feel mean.”

After a second fifteen-minute game-play session, they were presented with another task aimed at measuring cognitive effects (changes in thinking patterns). To this end, the computer flashed a series of words on the screen, and the students were required to read them out loud. Some of the words were deemed aggressive, such as *murder*. Others were various types of control words, associated with anxiety (*humiliated*), the desire for flight (*leave*), or no particular subject (*report*).

At a later session, the same students were brought back to play the same games. Afterward, they were put into a situation in which they believed they were competing in a game of reflexes against another, hidden, student; the winner would “punish” the other student with a sharp burst of sound. Increasing the volume or the length of the sound, each of which was left up to the student, was deemed a measure of aggressiveness.

When the researchers looked at the first set of data, measuring the students’ hostility levels, they found no significant difference between the groups of people who had played *Myst* and *Wolfenstein 3D*. They did find a difference in the groups’ aggressive thoughts. People who had played the fast-paced shooter games tended to read the “aggressive” words faster than those who had played the mellow *Myst*, while there was no significant difference for the nonaggressive words.

The study’s result suggested that violent video games might prime aggressive thought patterns without making people feel hostile or angry. This didn’t mean people would necessarily act upon those feelings, but the final test showed that people who had played the fast-paced, violent video game were slightly more likely to “punish” their fictional opponent with longer bursts of sound, an effect the researchers interpreted as aggressive behavior. In none of these cases was the difference large, but it was statistically significant, the researchers said. ^{[41][42]}

In subsequent years, Anderson’s claims were rejected by a significant body of research scientists who not only questioned the findings, but also questioned the research methodologies. Certainly, these other researchers have argued, violent games are correlated with increased and heightened

sensitivities in short durations after playing; however, this does not amount to evidence that a single factor, like playing a violent video game, was causally connected to committing actual violence.

Even the Supreme Court, in its 2011 decision against the state of California's attempt to curtail the sale of violent video games, ultimately said this conclusion had gone too far.

California relies primarily on the research of Dr. Craig Anderson and a few other research psychologists whose studies purport to show a connection between exposure to violent video games and harmful effects on children. These studies have been rejected by every court to consider them, and with good reason: They do not prove that violent video games cause minors to act aggressively (which would at least be a beginning). Instead, “[n]early all of the research is based on correlation, not evidence of causation, and most of the studies suffer from significant, admitted flaws in methodology.”^[43]

Somewhere between the media effects research and the post-Columbine three-ring circus of politics, the subtlety of the debate was lost. Anderson appeared with Walsh at a congressional hearing specifically on video games a year after the shootings. He defended his own research and others' against critics there, noting that no study was perfect but that the body of the literature on the effects of violent media taken as a whole was at least as conclusive as the body of literature on smoking and lung cancer. “About thirty years ago, when questioned about the propriety of calling Fidel Castro a communist, Richard Cardinal Cushing replied, ‘When I see a bird that walks like a duck and swims like a duck and quacks like a duck, I call that bird a duck,’” Anderson told senators at the hearing in 2000. “The TV and movie violence research community has correctly identified their duck.”^[44] Afterward, many in the research community questioned his claim of parallels with the level of certainty achieved by smoking research, but the argument resonated with politicians.

Walsh, along with Anderson, dismissed the idea that the games could actually serve as catharsis or stress relief. Much psychological research showed the opposite effect—when people practiced a kind of behavior, it intensified the behavior rather than lessening it, he said. An analogous example might be the scream therapy popular in the 1970s, in which people were encouraged to scream at the top of their lungs to release pent-up stress and anger. When researchers studied the effects of that therapy, they found that screamers tended to be angrier than non-screamers. That was a lesson that proponents of video game catharsis should take to heart, Walsh said. The science might not yet have proven a causal relationship between games and violence, Walsh argued, but if these games did prime players, they might trigger unintended responses in those predisposed to violent behaviors. “If you’ve got someone who is angry, you don’t want to make them more angry,” he said.

If Walsh’s own work wasn’t based on original scientific research, it nevertheless provided useful comparative data on an industry that was undeniably having increasing social and economic effects. In publishing his data, he found himself wading into polarizing territory: Every year, when his group released a survey or report card, he knew that angry, vitriolic gamers who discounted his media effects arguments would fill his email box. The irony wasn’t lost on him as he quoted a sample email received a day after the December 2002 report was released:

I’ve been playing video games all my life and NEVER ONCE has it affected me. Maybe you were affected cause you’ve got your head stuck up your ass. By the way, bash Vice City or any other game one more time and I’m gonna come down to your wacko office and shove that biased report card so far down your throat you’ll be crapping corrupt soccer moms until next Christmas.

Twenty-Six *Seduction of the Game Industry*

The debate between Jenkins, Walsh, and their more radical counterparts barely registered in the gaming communities. For developers, the post-Columbine reality was the possibility that legislation, social pressure, or legal changes could affect games and gamer culture. The issue reached its fever pitch in 2002 when a federal court ruled that games were not entitled to the free speech protections of the U.S. Constitution, sending a chill through the industry until the opinion was overturned on appeal. The next few years saw states pass numerous measures restricting how games could be sold or marketed to children and teenagers, although the Supreme Court would eventually rule in 2011 that there was no causal link between video games and violence, and that minors thus had the First Amendment right to purchase games without parental supervision.

As Jenkins had feared, much of this was the most theatrical kind of politics. Legislators saw they could win easy political points by bringing in game company executives, showing clips of the games' most violent elements, and then forcing the witnesses to defend their practices. Despite the legislature's inability to stop the distribution of violent games, the theater could have real consequences: Jenkins worried that games would be derailed at a critical point in their development, not unlike comic books in the mid-twentieth century. Then too, a culture worried about corruption of its children found something to fear and criticize in a new entertainment medium, and comic books had suffered for it.

In the early 1950s the comic book industry looked much like the computer game industry in the early part of the new millennium. Comic books had started out as an entertainment medium for children decades

earlier, but World War II had helped take the industry in a darker direction. Superheroes and shadowy detectives turned their attention to fighting the forces of Hitler, Mussolini, and international communism, and as a generation of children raised on comics grew up and went to fight overseas, they took comic books with them. War themes became common, and the art grew more violent. When the war was over, many companies kept publishing titles for adults featuring war or gory horror themes.

Meanwhile, fan communities were rising up around the comic books, in much the same way that contemporary fan communities gathered around TV's *X-Files* or Garriott's *Ultima* series. The comic book publishers helped support many of these. Author Robert Warshaw later wrote of his own son's membership in a club called the National EC Fan-Addict Club, which cost twenty-five cents to join and entitled its members to such perks as a membership certificate, an ID card, various paraphernalia bearing the Fan-Addict logo, and a newsletter that included gossip, articles, and interviews with authors and artists.

Not everyone was enamored with this growing pop culture phenomenon. A crusader against the comics rose to speak for broader parental concerns. Psychiatrist Fredrik Wertham believed that the bloody titles were a dangerous influence on children. Working as a consultant to ambitious senator Estes Kefauver, he helped spur high-profile hearings in 1954, spotlighting the excesses of the comic book industry. Just a few months before the hearings, he published a book outlining his thoughts on the issue, titled *Seduction of the Innocent*.

At those hearings, the psychiatrist testified that his own research, which was done without any financial support from either side, showed that comic books were certainly a contributor to juvenile delinquency. He went further than most other critics, focusing even on relatively tame *Superman* comic books along with the over-the-top horror and crime comics. It made "no difference whether the locale is western, or Superman or space ship or horror, if a girl is raped she is raped whether it is in a space ship or on the prairie," he told legislators.

Wertham's arguments badly conflated correlation and causation, but his conclusions' flaws were overshadowed by the comic book industry's almost laughable inability to defend itself (a failure echoed years later by game and film executives in similar straits). Taking the witness stand, EC Comics

publisher William Gaines defended many of his bloody horror comics as having important moral lessons about intolerance and racism, even if told in ways that might make some people in America uncomfortable. He said he drew the line at publishing anything that fell outside the bounds of good taste.

Kefauver turned on him, and in an exchange that was widely publicized in the media, held up a comic cover that showed a homicidal man holding a bloody axe and the severed head of his wife. Trapped in his own words, Gaines avowed that the cover was in good taste, and that *bad* taste would have been if the head had been held at a different angle, and showed blood dripping out of the severed neck. It wasn't an argument that went over well, any more than did a video game advertisement shown on the Senate floor in 1999 describing the game to be "As easy as killing babies with axes."

Gaines' argument was so ill-conceived his company was driven out of business just a few years later. He became a cautionary tale within the industry for those who were called to Congress.

Also testifying at that mid-century hearing were sets of psychiatrists on both sides of the issue. Those who defended comic books, saying that they found the graphic violence "more silly than shocking" were attacked and ultimately discredited in the newspapers as paid consultants for the comic book industry. It was true, although at least one witness's remuneration for serving as an advisor to a comic company had reached no more than the princely sum of \$150. ^[45]

Jenkins, who worked for several video game companies, found himself wary of similar treatment following the Columbine hearings.

In the case of comic books, no legislation was proposed or passed, but the intense public criticism ultimately helped push the medium into a kind of publishing ghetto until the artistic resurgence of the mid-1990s [46]. By that time, enough artists were creating complex, psychologically sophisticated stories that graphic novels, as they had come to be called, had begun climbing back to respectability. However, the years as culturally despised child's things may not have been inevitable. In Japan, where no Wertham or Kefauver ever emerged to question the medium's legitimacy so

successfully, graphic novels had long been among the best-selling books in the country for adults and children alike.

To be sure, the financial power of the game industry argued against this kind of ghettoization. After a period of relative quiet following the Columbine shootings, the violence in video games debate re-emerged in late 2002 as critics drew parallels between violent video games and the weeks-long sniper attack in the Washington, DC, area. The success of the violent *Grand Theft Auto III* and its sequel, *Grand Theft Auto: Vice City*, was bitterly condemned by critics, including Walsh. His group launched a petition drive against the second game, spotlighting its developers' decision to reward players for having sex with and then killing prostitutes.

"My own take is that the industry had better be careful," Walsh said. "If developers push the envelope too far, then they make it tempting for politicians to jump on an absolutely no-lose issue."

What neither Jenkins nor Walsh could see at the time was that it wasn't the developers who would control what happened next inside game worlds. This debate over violent video games and minors was and remains unlikely to be settled in the court of public opinion anytime soon, as it has always been just a skirmish in a decades-long cultural war that extends far beyond gaming.

When random acts of violence like Columbine happen, the public wants—needs—an answer to the questions of why and how—an answer that appears to bring logic to the illogicality of terrible events. At times, games have appeared to offer just such an answer. They have made an easy target, because for many years they sat outside the typical experience of many adults, and could be criticized without introducing more contentious issues such as child-rearing practices or gun control. In moments of panic, genuinely reasoned arguments are often drowned out.

At least in the United States, the only protection game companies have—and it's the most important protection that a medium with any artistic ambition can have—is the First Amendment. But, as with other mediums, this has proven a powerful shield indeed. The U.S. Supreme Court has repeatedly argued that games not only have the privilege of First Amendment protection, but that minors too must be accorded the right to play those games. Though criticism surges every few years, this protection has given the game industry a broad and sheltered space in which to mature.

PART V

*This Is
Not a Game*

Twenty-Seven “We Were Not in Control”

Rewind a bit now to the early 1990s, back to the point when id Software’s *Doom* and *Quake* were first beginning to sweep across the gaming landscape. Freed from immediate financial worries, Richard Garriott was unhappily watching his work eclipsed by these new styles of games and gaming. *Ultima* and Origin Systems were still drawing fans, but Richard had been inside the Electronic Arts corporate machine for several years, and felt that he was spinning his wheels.

Nowhere was this more in evidence than in the office of EA CEO Larry Probst’s office, where Richard now sat listening to the older man explain why online worlds weren’t a good investment.

This conversation, in late 1994, was the third time Richard had been there making the same pitch. Feeling blocked at every turn, he was getting ready to call it quits not only with the proposal to put *Ultima*’s Britannia online, but with EA as a whole. He’d been down this road before, with California Pacific and then with Sierra On-Line. The more he’d tried to fit into the corporate game development world, the less satisfied he’d felt.

That Probst didn’t immediately believe in the idea was hardly surprising. Richard was pitching a relatively new, commercially unproven concept that would link tens of thousands of gamers together in a virtual world with its own economy, ecology, and political system. It promised to be a massive undertaking, never before attempted on the scale Richard and his team had conceived.

To be sure, they’d tried hacking together networked, multiplayer versions of their games before, in their New England offices and elsewhere. But the technology simply hadn’t been ready. Now, the emergence of the

Internet as a commercial medium was changing that. In just a few short years, virtually everyone would have access to online communities in some form, Richard believed. Although *Ultima* had always been a single-player game, its roots were in the face-to-face multiplayer experience of *Dungeons & Dragons*. The idea of creating a communal world was a natural next step.

Indeed, the more he'd thought about it, the more Richard had become convinced this was the logical next step for mainstream gaming as a whole. People had been playing networked games almost since the first computers were unleashed on university campuses in the sixties. Persistent virtual worlds like Bartle's *MUD* were now commonplace, if still largely text-based. Why shouldn't Britannia too be a place that gamers could explore together, where they could meet actual people instead of the stilted computer-generated characters that populated single-player games? The world of Lord British had always lacked this social aspect, and that had always rankled Richard.

Unfortunately, the logic wasn't as obvious to Probst. EA was a company rapidly building a marketing empire based on uncomplicated mega-hit titles, and consequently had little appetite for risk. Twice before, he'd shot down Richard's idea, always with a different justification—too expensive, too untested, or too weird. Yet, for whatever reason, the third pitch finally convinced the CEO to take a chance on Richard's idea.

"How much would you need?" he asked.

Richard and his team had kicked around estimates, but the truth was he had no solid idea. Nobody had ever done a project like this before, at least not the way he was imagining it. By this point in time, a sophisticated single-player game might cost millions of dollars to create once the talents of all the programmers, artists, and designers had been brought to bear. Development teams were dozens strong now. The days of building a hit game solo with an Apple II were long past. "A quarter million dollars," Richard suggested. "We could build a prototype for a quarter million."

Probst said the magic words. "Okay. See what you can do. But you can't screw up the next real *Ultima* for it."

Even as Probst gave the project a tentative green light, few outside the Origin Systems group believed online games of this scale would be part of gaming's immediate future. Some of the team's members too had their doubts. There was good reason for the skepticism. The world Richard was

imagining was considerably different from what Carmack, Romero, and other multiplayer game developers were doing with their online play. Id's games and the other shooters that had kicked off the online-play craze were networked together in virtual spaces, but these were worlds in only the simplest sense of the word. A *Doom* playing field existed only so long as there were people playing in it. Each multiplayer game effectively spawned a different little bubble-universe that would disappear when the players were done.

Ultima Online was conceived as a persistent world like Bartle's *MUD*, present whether players were there or not, but this time created as a fully graphical experience. To sustain this universe, Electronic Arts would have to maintain a massive computer server farm that kept the world operating around the clock. Those computers would have to support hundreds, thousands, or even tens of thousands of players acting in the same world at the same time. From the player's perspective, too, much would have to change. No more simply flipping a switch to pick up a game where it had been left off. Here, every gaming session would involve rejoining a world that had gone on without the player, and trying to figure out what had changed in the interim.

This wouldn't be the first persistent graphical world. But the scale and ambition of Richard's project would in the years to come set a benchmark by which later massively multiplayer online (MMO) games would be measured. The game would feature some predesigned adventures for players, but one of the most exciting aspects would be that *Ultima Online* would allow players—and indeed, encourage them—to create their own stories using the world as a backdrop. Players would have the ability to recreate *D&D*-like adventures in Britannia, bringing the idea of the dungeon master into a graphically rich virtual world.

As a result, the game would be radically different than previous versions of *Ultima*. Richard's storytelling prowess would no longer be the backbone of the game. It would lack the kind of focused, linear story that had grounded the previous titles. As a result, it would in the end be an experiment both in player psychology and in expanding the boundaries of what a game could be.

Game makers had toyed with giving players an increasing existential independence for years. The all-text *MUDs* that Richard Bartle created in Britain in the late 1970s and early 1980s had provided a first look at what persistent online worlds could be, allowing players to wander and act with a high level of freedom. That strain of development had been picked up by game makers around the world throughout the 1980s, and by the early 1990s, thousands of different text *MUD*-style games had emerged. Many had retained Bartle's swords-and-sorcery theme, but there were plenty devoted to other themes—from science fiction worlds to flat-out sexual simulations—all allowing dozens, hundreds, or even thousands of people to interact.

A few well-funded designers had even tried to create graphically rich online experiences. Lucasfilm Games, a division of George Lucas's LucasArts Entertainment, created a cartoon-like online game world called *Habitat* beginning as far back as 1985. Released in 1987 as a trial project on Quantum Link, the online service that later evolved into America Online, the game let players chat, spend money, go on treasure hunts, and run businesses.

As the *MUDs* had before, *Habitat* demonstrated that game psychology was as tricky to navigate as the technology itself. Developers Chip Morningstar and Randy Farmer found that managing an online world with real people as citizens was far more difficult than they had imagined, so much so that they wrote a series of case studies in the 1990s describing their experience, hoping to guide other developers around the landmines they'd faced. Players would consistently cheat or game the system (a trait that persists in game worlds to this day, spawning an entire business sector, called "punkbusting," focused on stopping cheaters), exploiting bugs or inconsistencies to their own advantage. An early economic system in *Habitat* was nearly shattered when players learned how to take advantage of varying in-game vending-machine and pawn-shop prices to buy items, pawn them at a higher price, and become rich in just a few hours of play. In another episode, a game staffer playing the character of Death was unexpectedly killed, and his special kill-in-one-shot gun fell into the hands of a player, a potential catastrophe that was wholly unplanned for by developers.

"Again and again we found that activities based on often unconscious assumptions about player behavior had completely unexpected outcomes (when they were not simply outright failures)," Farmer and Morningstar

wrote in their 1991 paper about the project. “It was clear that we were not in control. The more people we involved in something, the less in control we were. We could influence things, we could set up interesting situations, we could provide opportunities for things to happen, but we could not dictate the outcome.”^[47]

The *Habitat* game world went on to mild success in various incarnations. By 1990, about fifteen thousand people had subscribed to a new version of the game called *Club Caribe*.^[48] The game was successful enough that Fujitsu took over the project and extended it on an online service in Japan. Eventually, the resources it took to maintain the game led to the world’s end, which was exactly the problem Probst was concerned about even as he approved work on Richard’s new game.

Writers and academics too were discovering virtual communities by the early 1990s, in large part because of the success of MUDs, online services such as CompuServe, and bulletin board systems (BBS). The events taking place inside these virtual spaces were being dissected and studied by an increasingly large population as they took on both positive and negative features of the real world, often with twists unique to the online realm. In 1993, author Howard Rheingold published *The Virtual Community*, the first popular book about these communities, as a follow-up to an earlier book on virtual reality technologies. That same year, a virtual-reality rape inside the *LambdaMOO* world, a text-based MUD-like system dedicated to social interaction rather than adventuring, was written up in the *Village Voice* newspaper, providing a window into the mysterious online culture for another popular audience.^[49]

With the World Wide Web exploding into the national consciousness in 1995, the technological pieces for the massively multiplayer online (MMO) game era were falling into place. Nor was Richard the only developer leading the charge. Dr. Cat, the former Origin programmer, launched his own graphic MUD called *DragonSpire* in early 1995. Sierra’s Ken Williams began beta testing *The Realm*, a cartoony medieval-themed online multiplayer game. A small development house called Archetype Interactive started work on a graphic multiplayer MUD called *Meridian 59*, which was launched by game giant 3DO in 1996 with a few minor tweaks to accommodate the burgeoning popularity of the Web.

The new model would ultimately transform the game industry,

changing the way development houses created and sold their products, and changing fans' relationships with the games. Millions of players around the world would eventually pay monthly access fees for these titles, attracted as much by the community of people they played with as by the games' actual content. The game creator's traditional role as a god figure who determined the course of the story and the history of a world would diminish and in some cases vanish altogether. To an extent previously seen only in the underground text MUDs, these would be the worlds of the players' revolution.

Twenty-Eight *A God Deposed*

Although Larry Probst gave Richard the go-ahead to develop *Ultima Online*, he made it clear that he viewed the game as a personal project rather than a serious element of EA's corporate strategy. Whatever the potential of these graphical MUDs might be, single-player games were still the primary economic driver at EA. Complicating matters, Richard also wanted to do justice to the ninth and final *Ultima*, the end of his trilogy of trilogies. The poor market performance of *Ultima VIII*, which Richard attributed to corporate pressure forcing the release of a buggy, unfinished game, meant Electronic Arts' dedication to releasing another single-player *Ultima* had waned. Conscious of this danger, Richard felt a paternal desire to finish his long-running series on a high note.

The pressure to now create two games put Richard in a difficult position. He didn't have the resources to hire the industry's top graphics programmers for *Ultima Online*, and he wasn't allowed to raid his own *Ultima IX* team. Instead, Richard and Starr Long, one of his top lieutenants, turned to the MUD community to find programmers who knew how to create online worlds. This development circle was made up almost entirely of hobbyists, students, and companies that never expected to make the kind of money that Origin had. These programmers were smart, they came cheap, and they understood how online gaming worked. Richard hired some of the best for *Ultima Online*, including the project's lead designer, Raph Koster.

If the new programmers had any delusions of grandeur regarding their staff positions at Electronic Arts, those were quickly dispelled. The team's office quarters showed clearly where they stood on the corporate totem pole. The Origin Systems offices off the Capital of Texas Highway in

Austin were being renovated throughout much of *UO*'s development. The three-story complex was in disarray as builders knocked out the entire inside of sections of the campus, rebuilding them to accommodate a THX sound studio, server farms, and office space. As a result, the ragtag *Ultima Online* team was constantly shuffled in and out of half-finished rooms. In the middle of development, the team found itself set up in a hallway with walls literally falling around them.

Ensnconced in *Ultima IX* development, Richard turned much of the *UO* team's operations over to Starr Long. He gave them the graphics code from *Ultima VI*, technology that may have been outdated for single-player games but certainly sufficed for the online experiments, and let them go to work. Within a few months, they'd created a prototype that allowed four players to chat and kill each other. It was small and much simpler than their goal of a world that would support tens of thousands of players, but it was a start.

Since *UO* was largely an afterthought within EA, the team turned to its community—or what they hoped would be its community—to get feedback on the project even during early development in 1996. The company posted a message on its Web site and sent news through online newsgroups that it would conduct a “pre-alpha” test. This was a fairly radical step within the industry: While beta tests had long been used to flesh out early versions of games, using players as guinea pigs to search out bugs and give feedback to developers, the pre-alpha test meant a handful of lucky players would get an extraordinarily early look under the hood of *Ultima Online*, literally playing the game as it was being made. News of the tests spread quickly through an online fan club known as the *Ultima* Dragons and other aficionado communities. Three thousand people, roughly twice the number of people playing most large text-based MUDs, were accepted into the trial. “Well done, my friend,” read the email successful applicants received. “By applying to test the pre-alpha version of *Ultima Online*, you not only get to experience an exciting new world, but also help us make the world more stable and enjoyable for all.” Only 250 people would be allowed online at any one time in this initial stage, and the game would be limited to a single virtual city, but the world would expand dramatically later on, the company promised.

The test got off to a clunky start in March of 1996. “At that time

they were still just working out how they wanted the world to function,” remembered Robert Gregg, a student and *Ultima* Dragon club member who joined the pre-alpha test. “Needless to say, there were a lot of basic programming issues to work out, and at first, things didn’t work so well. I logged on to the system for the first time, and here’s what I saw: fifteen people standing naked on top of a table, frozen solid, all saying ‘Why can’t I move?’ over and over again. It was so funny I just about busted a gut laughing.”

By summer, the *UO* team was close to launching a larger, beta test when a much more serious problem appeared. Most of the game’s seed money had been spent in creating the first iteration of *Ultima Online*, which meant the team couldn’t ship and manufacture enough beta-testing CDs to players. Richard believed if he went back to Probst to request more money, he’d only feed the CEO’s fears about the cost of game. Instead Garriott decided to roll the dice. He posted an advertisement on the Origin Systems Web site, asking players who wanted to be involved in the beta to send a two-dollar check to the company to cover shipping and production of the CD. The developers expected a reasonable response, but kept their expectations low. Asking people to pay to be part of a beta test wasn’t just an imposition; it was a clear sign of desperation.

The response was surprising, and a gratifying sign that the fan base he’d developed with the *Ultima* series remained vibrant. Presented with the prospect of experiencing an online Britannia populated by other real, thinking humans, players eagerly sent in their checks. Within two weeks, Long’s team was knee-deep in money. By October the company had received more than thirty-two thousand checks, and by the end of the beta-testing period, more than fifty thousand had requested CDs. “We were stunned. Fifty thousand people signed up and started sending us cash,” Richard said. “Our total projection was that twenty or twenty-five thousand would ever be playing the game, and all of a sudden we had fifty thousand people paying money for testing. That was a huge turning point.”

The response shocked Probst as well. Everyone began to understand just how powerful and profitable a persistent world built around a sustainable community might be. If fifty thousand people agreed to pay to play an unfinished version of the game, who knew how many would pay the monthly subscription fee over time? *Ultima Online* might after all be an incredible, wholly unexpected success. Probst immediately ordered resources shifted

to the project and approached Richard with an ultimatum: Work either on *Ultima IX* or *Ultima Online*, but not both. The choice tore at Richard. He wanted to finish his trilogy of trilogies—as much for himself as for the loyal fan base that had stuck with him over the last two decades—but the new challenges presented by *Ultima Online* were enticing.

In some measure to satisfy his internal storyteller, as well as to reward his loyal fans, Garriott chose *Ultima IX*, fearful that Probst would kill the final game if Richard left that project so early in its development. He turned responsibility for development of *UO* over to Starr Long, with Koster leading the design team. A lifelong gamer and former actor, Long slipped easily into his own game persona of Lord Blackthorn, a counterpoint to Richard's Lord British, taking on the role of intermediary with the player community. "Role-playing games by their very nature are a kind of theater," Long said later. "Understanding that they are both a form of entertainment, just with a different medium, was important for me."

Outside the company, anticipation built—and built, and built. Players were anxious to dive into this persistent world, to see *Dungeons & Dragons* come to life, and to find a new realm of friends and fellow adventurers. But time continued to pass without signs that the beta test was arriving. Players had been promised an *Ultima Online* beta in late fall or early winter of 1996. That deadline passed. Spring 1997 came and went as the Origin team feverishly tried to get the world ready. Garriott, sensing the pressure, pulled much of the development team from *Ultima IX* and reassigned its members to *Ultima Online*, leaving the single-player game with little more than a skeleton crew.

A full year after the beta test was announced, in June 1997, Origin finally began shipping CDs. In typical Garriott fashion, the opening wouldn't be conducted in private, where the team could assess its faults and flaws. Instead, the team and an initial group of two thousand people were allowed into the world for a test displayed live at the Electronic Entertainment Expo (E3) computer and console game show in Atlanta. E3 wasn't just any trade show. It was the largest, most important event for developers. It was the place where fortunes could be made—or lost—depending on the reaction of fans and the media. Now Richard's group descended to the showroom floor with a game so rough that Origin staffers were secretly playing the roles of non-player characters because the code wasn't yet finished.^[50] Fortunately for the

UO team, the excitement people felt while playing in the persistent world distracted from the game's initial faults in terms of playability. The reviews were mixed after E3, but the team had received no fatal critique. Long sent a letter to the anxious community, thanking them and telling them to wait another two to three weeks while issues raised by the test were fixed.

"On a personal note," Long added, trying to quell rumors of disarray in the development process, "I would like to take this opportunity to remind the loyal citizens of Britannia to pay no heed to idle rumor or malicious gossip, even that which purports to come from the very highest levels of society." The note only helped spur more rumors and speculation online.

The test had been less than stellar from a public relations standpoint, but it did provide a treasure trove of data allowing the team to fix the most glaring flaws. A few weeks after E3, in July 1997, *Ultima Online* went live with its big beta test. It had been a torturous wait, but from the designers' point of view, the time had been well spent, even if they were aware of massive debugging yet to be done. Despite its unfinished state, *Ultima Online* represented the most ambitious attempt yet to simulate aspects of the real world in an online game environment.

The playable space itself was huge, requiring considerable travel time to reach one side from the other. Players could take on all kinds of roles, from aggressive warrior to peaceful baker. The programmers had built in a market economy, in which the value of goods such as weapons and magical items would fluctuate based on supply and demand. They had even programmed an ecosystem replicating aspects of the real-world environment. Herbivores would gravitate toward plant life. Carnivores would follow them, eating the herbivores. If players killed too many herbivores, the ecosystem would respond, sending carnivores into human towns in search of food.

As carefully crafted as they were, these aspects of simulated reality in fact represented a considerable expansion of freedom for players. Game writers had for years been giving players increasing ability to customize play, providing level- or map-building tools or even, as Carmack had for *Quake*, allowing code to be modded into altogether new games. Yet designers and developers had, for the most part, retained control of *how* a game would be played. Single-player games mostly had a right way to win. Multiplayer titles like id's allowed considerable creativity, but within a constrained set of rules. *Ultima Online* would essentially allow players to invent their own games

within the game.

The *UO* designers wanted a complex simulation of the world precisely in order to give players this creative freedom. Richard spoke of creating a world in which players could use everything that existed. In other words, if a player came across a tree, she should have the option of cutting the tree down, burning it, climbing it, or sitting under it. In *Dungeons & Dragons*, a skilled dungeon master could accomplish this simply through improvisatory storytelling. In virtual spaces, teams of programmers, by contrast, had to anticipate every possible move that players might make.

This was and remains an impossibility. No matter how much planning had been done, Richard and his team had no real idea what would happen when *Ultima Online*'s doors swung open for the first time.

As it turned out, *UO*'s opening was marked by chaos. Unleashed and unencumbered by a strict set of rules, players almost immediately began tearing the world apart. Accustomed to games that required players to level up by engaging in combat, the players started killing everything they found. The ecosystem—plants, herbivores, carnivores, monsters, and anything else that moved—was decimated too quickly for any of the subtle balancing effects to show up at all. Thousands of programming hours was wiped clean at the hilts of the beta testers' swords.

As thousands of people streamed into Brittania, the world turned bloody. New players were dispensed with almost immediately after logging on, and should a relative amateur track down some valuable magic sword or expensive treasure, the unlucky character would almost certainly be murdered and robbed in the space of hours. Even Richard's supposedly invulnerable Lord British, neglecting to turn on his invulnerability mechanism, was killed as he addressed his subjects near the end of the beta test.

If Garriott hoped to create a thoughtful, ethically minded community of game players within his carefully crafted world, he failed. Rather than being a medieval pastoral, this world was distinctly reminiscent of *Doom*. Life in Brittania was nasty, brutish, and often short, at least during the first days of the beta test. In some ways this was to be expected. The dominant zeitgeist in role-playing games was that players went unpunished for all

their deeds, an issue Richard had tried to address years before by instilling a hidden ethical system into his games. In this new world, players had been given near free reign. There was no ethical system guiding player actions, and so players fell back on familiar behavior.

Over time, however, the world began to take on some semblance of order. Players themselves did their best to police their world in whatever creative ways were available to them, taking lessons from their days in text MUDs. One early character proved particularly troublesome, showing up at in-game weddings or picnics and killing anyone around. In response, a group of angry players decided to retaliate with their own form of virtual justice. They created a female character who befriended the killer and spent several weeks gathering information about him: his ICQ (instant-messenger chat) number, his name, his home address—even his sexual predilections. Once they'd garnered enough information, they launched a Web site with every piece of dirt they had and posted the link on every *Ultima Online* fan Web site they could find. The player was humiliated, and eventually left the game.

Much of that self-policing happened because players routinely created meeting places outside the game world. Many groups set up Web sites, chat rooms, or message boards where in-game friends could meet to discuss strategy, in-game problems, or sometimes just life. As *UO* teetered on the edge of anarchy, some of these groups acted as stabilizing forces, joining together to battle their more murderous peers. Many others simply established self-help societies, working to start businesses and buy buildings or land together.

In the single-player *Ultima* series, it had been Richard, the creator, who had established a rigid ethical system. Here, the players found themselves responsible for the health and growth of the world, in both the physical and moral sense. Because of that, the guiding principle for game play was untrammelled creativity, just as it had been during the early years of *Dungeons & Dragons*. The old-school gamers understood that even negative actions could be forgiven as long as they happened in character and within the parameters of the world. Even virtual murder wasn't always a bad thing if you were honestly playing the nature of your character.

One player, known as The Highwayman, became legendary for killing players with a stunning regularity. The roadside bandit would chat

up his victims—sometimes leaving the scene and returning in disguise—dropping periodic hints that he was actually The Highwayman and would soon be dispatching his victims. He gave wily travelers a chance to leave, to end the interaction before he took their life (and property). Few did, though, because the role he was playing was so interesting, and even fewer complained of his player-killing ways.

As players sought to navigate this chaotic and dangerous world, the design team was facing the problem Probst had accurately predicted: the cost of building and maintaining an always-on, virtual space that needed around-the-clock care. Players weren't just pushing the bounds of reason with constant bloodshed; their sheer numbers almost immediately pushed the infrastructure to its limits. It was as if Electronic Arts had created a city a quarter the size of Austin, and moved in a population of a hundred thousand overnight. That produced very serious issues—long lag times and server crashes among them—about which the citizens of Britannia bitterly complained.

“In the real Austin, there is a mechanism for change,” Richard said later. “If you don't like the potholes on your street, or you think the city is taking too long to fix them, your neighborhood group can lobby the city council. You can call the utility company if you think your bill is too high. There is a government infrastructure that reaches down to the individuals. In our world, there was no structure of any kind, but everyone still had their opinions. We were flooded with personal emails, phone calls, people coming to the buildings.”

The players' response to these problems proved to be a powerful endorsement of the game's sense of internal reality, despite its myriad flaws. Rather than leaving the world in disgust, many sought in-game solutions. Indeed, one of the most telling demonstrations of the game's community-driven nature occurred when a group of players angry about lag time (in this context, the time it took for servers to process individual characters' movements in a crowded room) decided to mount a protest.

On a Friday afternoon, several hundred gamers logged on and marched together to Lord British's castle, situated just outside of the main town. Aware of the protest, the design team gathered in their newly refurbished digs at Origin, opened the in-game castle gates, and sat back to watch the action unfold on their computer screens. The protestors poured

into the Great Hall, bringing game play to a near halt. With so many people in one area, it took several minutes of punching a command on the keyboard before a character would actually move. The players began disrobing. Within thirty minutes, hundreds of naked protestors stood in the room. The protest soon took on a party-like atmosphere, and the virtual drinking started. When characters had too much to drink in *Ultima Online*, they got drunk—just as you would in real life. Keyboard commands became scrambled, characters wobbled, and eventually they threw up. Soon hundreds of naked avatars, puking in slow motion, filled the room. Richard loved it.

“We were all watching and thinking it was a grand statement about the project,” he remembered later, laughing. “As unhappy as they were about the game, they voiced their unhappiness in the context of the game.”

While many of the game’s most ardent early players understood the attraction of role playing, the success of *UO* guaranteed that new players would often have different playing styles. This made for a more diverse society, but the corresponding drop in role-playing skills drove away some early *Ultima* players.

“It just didn’t have a strong *Ultima* feel to it,” said Rich De Francesco, a longtime *Ultima* fan who later managed the World of Ultima fan site. “It doesn’t take much to wrench you out of the role-playing frame of mind, especially when other real people are involved—people who may not have the same idea of what’s fun, or of role-playing. For example, I jump into the game, new to the world, and within one minute, I see folks bopping around saying things like, ‘Dats SO phat!’ or ‘Look at all the n00bs!’ It’s hard to suspend reality in an environment like that.”

Nevertheless, the launch of *Ultima Online* was a watershed moment, a turning point in the development and character of game worlds. It was a surprising in-game interaction that ultimately illustrated for Richard just how much independence the players had gained..

Walking through the streets of his world one evening, he heard a woman screaming. Feeling benevolent, Richard’s Lord British decided to go help her. When he asked her what happened, she said somebody had come running by her and stolen all her possessions, moving so quickly that the thief had barely been perceptible. Bemused, Richard explained that stealing was part of the game, but that he’d help the woman get her property back. The thief had programmed a series of automatic commands into his computer,

running and stealing with a single keyboard click that made him almost impossible to guard against, Richard surmised. He transported himself immediately to the thief's side, stuck him with a freeze spell, and told him not to steal from the woman anymore.

"Yes sir," came the reply from the thief, who returned the goods he had stolen.

Richard teleported back to the woman and returned her belongings. While he was wishing her well, a blur came by and took her things a second time. Stunned, Richard froze the thief again.

"Hey, I just told you not to do that," Richard said. "What are you doing?"

"Sorry, I won't do it again," the player said sheepishly, once again returning the woman's things.

"If you do that again, I'm going to ban you from the game."

"No problem."

Richard blinked back to where the woman was standing, once again returning her belongings.

"No problem. You won't have any more trouble with . . ."

Zip. A blur flashed across the screen, and again the woman's possessions were gone.

Damn it, Richard thought, leaping to the thief and freezing him. "I said I was going to ban you, and now I have to," he said. "What's wrong with you? I told you not to steal from that woman." He was furious, and ready to throw this player out of the game. He was Lord British, after all, and this guy was breaking the rules.

"Listen," the thief said, breaking character for the first time. "You created this world, and I'm a thief. I steal. That's what I do, and now you're going to ban me from the game for playing the role I'm supposed to play? I lied to you before because I'm a thief. The king caught me and told me not to steal. What am I going to do, tell you that as soon as you turn around, I'm going to steal again? No. I'm going to lie."

Richard was taken aback. The thief was right. *Ultima* wasn't his anymore, and it wasn't right for him to try to control its population. To a large extent, players in earlier games had been puppets playing roles programmed in by Richard as the designer. But those rules no longer applied. Here the players had free will; they had control over their own environment and

destiny. The puppets had cut their strings and taken over their world.
A deposed god, Richard let the thief go.

Twenty-Nine *Knights of the Guilded Realm*

Ultima Online became the fastest-selling computer game in Electronic Arts' history. Two months after its retail release in September 1997, it had sold more than sixty-five thousand copies, topping the computer role-playing game charts in the month of its release. This was an unambiguous success, particularly for a new category of game, though it remained modest by industry-wide standards. Blizzard's *Diablo*, for example, a simpler role-playing game that allowed groups of up to four people to play together online for free, had sold more than five hundred thousand copies just a few months after its own release in January 1997. By the time of *UO*'s release, more than a million people had signed on to Blizzard's free Battle.net service, largely to play *Diablo*—far more people than would ever populate *Ultima Online* at any given time.

The impact of the new game would reach far beyond its numbers, however, in much the same way that the impact of *Dungeons & Dragons* continued to resonate in so many game development studios even three decades after its release. If not the first of its kind, *Ultima Online* nevertheless created a standard against which MMO role-playing games would be compared for years. The game also changed the way people discussed in-game communities and dedicated game players. Feature articles on the game's social dynamics periodically found their way even into the biggest newspapers in the United States. An October 1997 *New York Times* article, offering a by-the-numbers comparison to *Quake*, offered a snapshot of how the game was operating differently than its predecessors.

	Game Released Online	Cost of Game	Number of Units Sold	Maximum Players in a Game	Average Number of Players in a Game	Average Time Spent Online	Players Who Are Male
<i>Ultima</i>	September 24, 1997	\$64.95	40,000	15,000 (across six servers)	5,000 (across six servers)	6 hours a day	96%
<i>Quake</i>	June 21, 1996	\$44.95	700,000	32	10	2 hours a day	98%

Even if *Ultima Online*'s initial player demographic wasn't terribly different than that of *Quake*, it was clear from the outset that players were creating a new type of online experience. Thousands of people were playing together in the same world, producing a kind of evolving communitarian experiment. Moreover, as time went on, the open-ended, social game increasingly attracted the kind of people who normally steered clear of complex PC games.

Christine Gilbreath was one of those early players. A programmer and former elementary school teacher, she had worked long years selling software in the mid-1980s, taking classes on many of the products that came through her store. She'd play the odd game of solitaire or blackjack that came packaged on her PC, but more ambitious gaming had never interested her.

When *Ultima Online* was released in 1997, other programmers in the health insurance office where she worked began talking about the game incessantly. Four of her friends said they needed another player who could cast healing spells so their team wouldn't be easy prey for bands of roving marauders. While Gilbreath had little interest in the *Dungeons & Dragons*-inspired world of Britannia itself, she joined the game as a cleric, hooked up with another friend who had just started the game, and set out to find her co-workers. At the very least, she would better understand what her friends were talking about if she spent some time wandering around the game.

Ultima Online wasn't set up to make it easy for people to find each other. It was a huge place, and players all began in the main city. Her friends had already been traveling for days, and were no longer close by. This introduced two game-specific problems: First, she'd been dropped in

the virtual equivalent of Kansas, and her friends were already in California. Second, the moment she stepped out of the safety of the city, marauders looking to take advantage of newbies (game lingo for new players) would kill her. This was hardly the social experience she wanted. Undaunted, she surmised that if she wanted to succeed, she needed to accumulate enough experience to defend herself.

To gain skills in *Ultima Online*, players needed to study and then practice to keep them sharp. Swordsmen needed to practice against other fighters. Silversmiths needed to go through an apprentice period. If players neglected that practice in favor of socializing, their characters risked becoming easy prey for killers who'd honed their assassination skills.

Unless, of course, they weren't alone. Another way of preparing oneself for *UO's* dangerous hunting grounds was to make friends, gaining safety in numbers. Gilbreath found her way to the port city's waterfront, which was teeming with mariners, merchants, fishermen, and plenty of other newbie players like herself. She joined the others fishing lazily by the water's edge (an activity conferring experience points), and began chatting with anyone who would talk with her.

Sitting on the docks talking, Gilbreath ultimately persuaded ten others to go traveling with her. After a week, they set out across the open lands to meet her co-workers, along the way picking up other stragglers who'd left the relative security of the city. By now an official guild called the Platinum Sphere, the group continued to grow even after they found her friends, and within a year its ranks had swelled to forty-six people.

The composition of this group shifted over time. Real-life issues sometimes forced players to cut back their role-playing, or the release of new games pulled players away. *EverQuest* launched, taking its toll on the group, and *Dark Age of Camelot* accounted for a few more. But the bonds forged within the group stuck despite their changing interests, and the Internet allowed them to maintain their relationships. To keep the relationships fresh, the leaders of the Platinum Sphere built a password-protected message board where members could keep up-to-date on everyone's latest adventures, both in real life and online. In the past, when a player left a regular *Dungeons & Dragons* game, or if somebody moved, people often lost touch with one other. Now, players' gaming communities were far less constrained by geographic distance or travel time.

Eventually Gilbreath stopped playing *Ultima Online*, but the guild message boards provided a connection that enabled the players to stay in touch. Years later she was still keeping up with her guild mates. “We’re all friends outside the game, and most of us talk about real-life stuff when we get together,” she said. “We have our own friendships that have formed because of the guild.”

Stories like Gilbreath’s grew more common as *UO* became a social as well as an adventuring environment. Players formed guilds around an increasing variety of interests: killing, socializing, fishing, and even acting. Unusually for a mass-market computer game, the diversity of social activity matched or even exceeded that found at *D&D* tables. Players were drawn to Britannia for a wide variety of reasons, but spent an average of six hours a day playing once there. They couldn’t help but make friends.

By late 1997, twenty-seven-year-old Heather Pierce had seen her husband work his way through years of PC games. In the interest of domestic harmony she’d watched him shoot his way through *Duke Nukem*, and scheme to take over the world playing the strategy game *Command & Conquer*. Then came *Ultima Online*. Assuming it was just another killing-focused game, she found herself unexpectedly absorbed as he built a character, chose its clothes and appearance, and selected a profession. By the time he started roaming around town trying to master the fine art of swordsmanship, she was transfixed, taking her own turns playing instead of just watching.

With no in-game money, and no way for their character to get food, they decided to take up fishing. Like Gilbreath before them, they wandered to the docks, encountering there another group of new players. For Pierce, this was far more engaging than the first-person shooters or strategy games she’d seen before. It was clear that the way to learn this game was by talking to other people figuring it out for themselves. They ended up chatting with people from around the United States while passing the time—several days, in fact—fishing and selling their bounty to local merchants.

“This was the first game that I thought was cool,” Pierce said later. “Here we were playing this character, and you were trying to help this little guy figure out how to be a swordsman. It was really challenging.”

It also caused mild strife in the household. The couple had made just a single character, and they both wanted to play. They started fighting over screen time. Eventually, Pierce bought herself a computer, her own phone line, and a copy of the game. She created her own character and once again trudged down to the dock to make money fishing. She made friends with another group of players, and this time decided to form a guild, The Anchor of Light. The group gathered every day to fish, chatting about what was going on in their personal lives while passing the time.

Once Pierce and her husband made enough money to start their own business, they moved from the docks to an in-game home they purchased just outside of town, where they could sell weapons to adventurers. Just as they'd done with the fishermen, Pierce found friends among the merchants, and before long she'd put together the Cove Merchants Guild. At its height, the guild had a hundred players at its monthly meetings. Eventually they would join with sixty other guilds to form the Great Lakes Regulators, creating a huge society inside the game.

Like in many other such groups, the Great Lakes Regulators players formed such strong bonds with one another that their meetings began to spill offline. In 1998, Merchants Guild players who lived in Austin started meeting every other month for lunch. While the lunches were originally meant for discussion of in-game activities, they eventually evolved into proper social occasions, with the group gathering four times a year for lunch or dinner. By 1999, people grew more ambitious, and rented a boat for an evening of revelry. Word of the outings spread through the *Ultima Online* message boards, and soon players from around the Southwest were showing up at the Austin events. More than a hundred players registered for the *Ultima Online* outing in 2000, when Austin played host to the Texas Renaissance Festival, the same event that Richard had experienced with the Society for Creative Anachronism nearly two decades before.

“Word spread through the message boards and the game itself, and before we knew it, there were people from all over the place registering and flying down,” Pierce said later. “At first, I was surprised by the types of people who showed up. I was always expecting this to be a bunch of weirdos who showed up; but you know, these folks that we play with are really pretty normal.”

In just a few short years, those guild members became more than

just in-game friends. When Pierce's marriage broke up, leaving her a single mother with two children, she found the game gave her a valuable community of support. Her best friend, Gwen, whom she'd met in the game, finally made the trip down to Austin in 2001. The two bonded as quickly in real life as they did in the game

"I hang out with other people who play," Pierce said. "The guy who I'm dating is an *Ultima Online* player. I'm not tied to the new people so much, but I'm bonded to the people who I used to play with. I met a lot of people who had common interests."

Baking, fishing, or setting up as a merchant thus all turned out to be viable game activities, even if more people were interested in adventuring. As the game went on, players began to use the virtual space for social activities that even Richard and his developers hadn't anticipated.

Joshua Rowan, a thirty-four-year-old gamer, had been an *Ultima* player for nearly two decades when he found *Ultima Online*. He'd played *Dungeons & Dragons* briefly in the early 1980s, but when *Ultima III* came out, he quickly ditched the tabletop gaming scene for the world of Britannia. When *Ultima Online* was announced, he was ecstatic, and with a group of friends put together a guild called the Golden Knights. They would play as law-abiding paladins, they decided, roaming the countryside in search of people in trouble to help.

"We joined on day two," Rowan said later. "I'd been really disappointed that I couldn't get into the beta test, but when the real game came along, I was so excited I could barely contain myself."

There were just five Golden Knights in the beginning, spending their playing hours looking for bad guys. It wasn't a difficult search. The game's early days were dominated by player-killing as people tried to accumulate experience points and build strong characters. Yet the constant fight against evildoers turned out to be less fun than the group had expected. In practice, they spent much of their time being overwhelmed by stronger players who took a distinct pleasure in eviscerating self-declared good guys. Taking a break, the group decided to retire to the local tavern to rethink their strategy. Drinking and chatting seemed like a better use of their time, so much so that they decided one night in 1998 to pool their money and buy the tavern outright.

"We really just wanted to have a place to hang out, because we were

all into the social aspect of the game,” Rowan remembered. “So the Golden Knights became the Golden Brew.”

It proved a successful plan. Safe within the city limits, they didn’t have to worry about fighting desperados. They could relax and chat with the steady stream of players making their way to the bar, just like real bartenders. Others followed their lead, and their numbers also began to grow. Many people wanted to kick back and relax instead of wandering into the dangerous hinterlands, and the Brew’s membership swelled to forty-eight in the space of months.

Like good hosts, they wanted to provide their patrons with something more to do than just sit around and chat. Brainstorming finally led to an idea: *Ultima* was a role-playing game, and many players seemed to like pretending to be someone else. Why shouldn’t they form an *Ultima* acting troupe? The idea met with cheers from the other Brew members, and just before Thanksgiving, they formed the Golden Brew Players, a theatrical troupe that would stage plays in the back of the tavern.

With Christmas just two months away, the troupe decided to put on Charles Dickens’s *A Christmas Carol*. The fifteen-person company split up their activities. Some worked on building sets and making costumes, others hunted down the script and pared it down to two hours, and others worked on promotions. They scheduled rehearsals and worked on their parts. On opening night, Christmas Eve, fifty gamers crowded the little bar to its maximum capacity, quietly took their seats, and watched the first-ever theatrical performance in *Ultima Online*. The play went off without a hitch. Richard, who’d heard about the play through the *Ultima* message boards now sprouting by the hundreds on the Internet, attended one of the early performances and was amazed at the players’ ingenuity.

“The biggest problem we had was timing the dialogue to make sure people weren’t talking over each other,” Rowan said later. “As you’d paste your dialogue into the box you used to communicate, it would pop up over your character’s head, in a little bubble. We had to make sure we weren’t talking over each other, and it’d usually take us about a month of rehearsals to get that down.”

Over the next two years, the company would stage a half-dozen other plays, packing the house for each performance and gaining quite a bit of notoriety throughout the online world. “All we ever wanted was a social

place to hang out,” Rowan said. “But it’s turned into more than that.”

The *UO* community was coalescing around the game, but back in the Origin Systems’ offices, Richard was struggling to finish *Ultima IX*. The success of *Ultima Online* and the surge of media attention had derailed that project almost completely. He’d spent a great deal of his time helping shape his newly launched virtual world. With dwindling resources and a skeleton development team, *Ultima IX* languished. Its code was completely outdated, and EA executives were hardly enthusiastic about restarting the project from scratch. When he finally pushed the game out the door in late 1999, he found that gamers preferred Britannia’s online home. Sales were disappointing, and *Ultima IX* failed to crack the top-ten list of best-selling games even in the few weeks after its release.

Worse, Richard’s relationship with Probst and Electronic Arts had deteriorated beyond repair. When the company decided to launch production of *Ultima Online 2*, a game Richard felt was entirely unnecessary given the first *Ultima Online*’s adaptability, he knew it was time to go. In March 2000, Richard gave notice. Once again he found himself a developer without a company.

This time he was leaving more behind. Much of the team he’d spent years with stayed at EA. His former employers would own the *Ultima* series and would continue to run *Ultima Online*, a world that was thriving even as its population dwindled. Other massively multiplayer games were fast appearing on the market, showing clearly that this new genre of world-making was gaining hold. By leaving his own series behind, Richard put himself on the outside of this trend.

Yet even in his absence, *Ultima Online* continued to show just how diverse the gaming community and gaming activities had become. EA’s developers regularly released new add-ons that featured new monsters, new adventures, new story lines, and new geographies to explore. But decidedly non-swashbuckling activities had become some of the world’s most popular attractions. The game, if that was still the right word, was no longer being driven solely by the designers. The players had been enfranchised and had shown their interests to be far more diverse than the conventional game

industry imagined.

While nobody was quite sure what that meant for game-play, most people were now convinced that players wanted to live and act in virtual spaces that *they* helped shape.

Thirty *Proliferating Worlds*

Nin the bard wanted something exotic for lunch. Something even the fabulous land of Norrath, with its owlbear steaks and toasted fearstalker toes, couldn't offer. After examining the food-court's alternatives, she decided on tacos.

Milling around the other tables were warriors and wizards, barbarians and gnomes, even a few scowling drakkin. Some were in full costume, wearing jerkins or beribboned corsets, swords or bows stashed under their tables as they ate. Nin, herself a wood elf, appeared by contrast somewhat mundane, lacking pointed ears or even the musical instrument that might have revealed her in-world calling. Yet over the course of a leisurely meal, she made it clear just how completely she identified with the more colorful members of the crowd flowing through the San Francisco mall. This was the *EverQuest* Fan Faire, the biggest real-world gathering for players of one of the most populous online worlds yet made, and this was where her friends were.

In everyday life, Nin was Bridget Goldstein, a slender, energetic, forty-five-year-old mom from Pasadena, and part owner of a bagel business she operated with her husband, a former stockbroker. Though she was a longtime game player, no game had ever appealed to her as deeply as *EverQuest* had. It was the people that made the difference, she said. Even *Myst*, her previous favorite, felt empty by comparison.

Articulate and extroverted—even downright flirty while in character—Goldstein was far from the popular media's conception of the typical hardcore gamer. She took this philosophically, saying outsiders would inevitably have difficulty grasping the appeal of these increasingly

rich online communities. An *EverQuest* player for three years, she had forged deep in-game friendships reinforced by offline meetings like this one. Those types of relationships could be hard to understand, she said, unless you spent substantial time in those virtual spaces. The strangest thing about it, was how ordinary this now seemed.

“My kids now take for granted that mommy has these friends that appear as magical things on the computer, but that I’ll fly to visit them, and they might show up at our house,” she said.

Welcome, was her subtext, to the new normal.

Released two years after *Ultima Online*, *EverQuest* was the first massively multiplayer game to break through solidly into public consciousness in the United States, in the process showing that *UO*’s success had been anything but a fluke. It would peak at about twice the maximum number of active subscribers reached by *UO*—about 550,000 as compared to 250,000 — and help kick off a gold rush of imitators. The game was simpler in concept than its immediate predecessor, and more focused on traditional adventure-gaming activities. What made it so addictive was a social structure that allowed—and, at times, forced—players to meet, work together, and build friendships. These communal structures created strong ties that often, as in Goldstein’s case, stretched outside the game. To leave *EverQuest* meant to leave friends, a fact that proved very successful in persuading players to continue paying subscription fees .

This link between the commercial and communal was no accident.

The genesis of the idea had come from a game developer at a Sony-owned game studio called 989 Studios. While the group primarily focused on games for the Sony PlayStation game console, one of the company’s developers, John Smedley, pitched the idea of doing an online version of a *Dungeons & Dragons*-like game for PC computers. A succession of senior executives rejected the proposal. Like Larry Probst at Electronic Arts, the executives were unconvinced that the emerging commercial Web in 1996 was ubiquitous enough to support a business. Moreover, the market for PC games was miniscule compared to the PlayStation’s potential. Smedley persisted, convinced that the smaller online-community-based games he’d

played were ultimately going to become a commercial force in the game industry. Eventually the Sony executives acquiesced. He was given a small budget and the task of building a new type of game.

With permission secured, Smedley turned over game development to Brad McQuaid and Steve Clover, two producers at his 989 Studios. They in turn brought in artist Bill Trost, who was given nearly full responsibility for developing the world. As with so many developers, Trost's vision was heavily influenced by his experience as a *D&D* dungeon master, which meant the world of Norrath would be populated by a mix of elves, dwarves, and humans, and would focus on exploration, teamwork, and socializing. Trost also followed a pattern that would be made familiar by *Ultima Online*, allowing characters to focus on nontraditional role-playing game skills such as fishing or pottery. However, the production crew believed that combat and collaborative exploration were the driving forces behind good games, so they created a structure that gently encouraged those actions.

"Our game was based upon player cooperation," Trost said later. "In order to be successful, you need other players. No one player can do everything in the game. The more friends you have, the more fun you will have."

In a maddeningly familiar story for those early game-world developers, Sony's executives weren't terribly excited about the game. Development costs rose to nearly \$5 million as the team of programmers and artists swelled to dozens of people. The small project turned into a massive undertaking, with development costs considerably higher than those for the average PlayStation game of the time. The team justified the time and cost to Sony's executives by arguing that they had to make the action and the community elements work together, a difficult task. In order to protect the game, Smedley ultimately decided to create a spin-off company, Verant Interactive, which would focus on developing MMOs and other online games.

The years of effort bore fruit quickly once the team starting letting people into the world, however.

"Once we got into public testing, our popularity actually hurt some of our productivity, as well as the productivity of some other development teams around the industry. No one was getting any work done because everyone was playing *EverQuest*," Trost said. "I remember specifically being in a meeting, four months after launch, where we were being cautioned we should not feel bad when our numbers started to decline. But they never did."

Indeed, the concerns of Sony executives faded when nearly twelve thousand people signed up the first day, and Norrath's population passed the fifty thousand mark after the first week. In just seven days, the game garnered as many paying players as *Ultima Online* had gathered for its public beta. In the succeeding weeks, players streamed into Norrath, and the flow wouldn't stop for years. While some critics had harsh words for the game play—which often consisting of waiting in a spot until a particular monster reappeared, then hacking it to death as a team—the bonding effect of the team play and the associated online social interaction largely trumped those weaknesses.

Goldstein was just one of the many casual gamers captured by this world. She'd started playing *Myst* and *SimCity* and a few other nontraditional games after her kids had grown old enough to give her a few hours of free time a day. Those games each created a world allowing her to escape the mundanity of everyday life, but they were lonely places, she found. Single-player worlds were missing something for her. When a game-store clerk recommended *EverQuest*, telling her, "Prepare to forget your kid's names," she was intrigued enough to give it a try. What she and many others found was entrancing.

As with *UO* before it, the game's communities spread across the Web and offline, giving players the chance to connect outside the game in forums and real-life guild meetings. Corporate game-community managers no longer tried to centralize these player networks, instead working with the largest guilds to provide players with important in-game information while relaying player concerns back to the developers. While this sprawling, increasingly decentralized landscape made it difficult for executives to gauge interest in their new worlds before a launch, *EverQuest's* success made it impossible for developers to dismiss the potential held by these virtual worlds.

The surge of media attention that followed *EverQuest's* surprising popularity proved a very mixed blessing, prompting a response reminiscent of the periodic waves of hysteria over violence in games. Alarmist headlines warned of *EverQuest* addiction, with stories of people slowly losing touch with their real lives surfacing as early as 2000. A Florida man's nine-month-old son died in 2000 while he played the game, and the local media picked up on prosecutors' claims that he had fatally injured the boy trying to keep him quiet while he played. A Wisconsin man obsessed with the game killed

himself in 2002, and his mother threatened to sue Sony.

This media-driven picture didn't correspond to what most players experienced in *Norrath*. Cindy Bowens, the Colorado player who created the Fan Faire as an outgrowth of a Web site called *Women of EverQuest*, conceded that some players did lose perspective on their regular lives. But they were a tiny exception. "Occasionally you'll meet someone who plays an ungodly amount of hours," she said. "But the average person plays about twenty hours a week. They don't watch TV. This has become their main form of entertainment."

That time commitment—comparable to what nongamers spent watching television^[51]—also helped explain why people outside the game world had such a difficult time explaining its draw. In order to understand the internal experience of community and mutual support, you had to dive beneath the surface and interact with people over the course of weeks. Anyone who simply dipped in and left would miss the most compelling parts of the game experience.

A part of numerous social networks developing both inside the game and around its margins, Bowens saw first-hand how often these replicated the relationships that might develop in a recreational sports league, church, or any other communal group. One guild collected money to buy a new computer for a guild member whose computer had died, and who couldn't otherwise afford another. Another group paid Fan Faire registration fees and travel costs for one of its members who was ill and had just gotten a divorce. One eighteen-year-old boy emailed Bowens to tell her his best friend had died of cancer a few weeks before a Fan Faire. He had almost canceled his trip, had decided to go at the last minute, and had met an older man who played the game on the same server and lived locally. The older player became a kind of mentor, helping the boy work through his grief, Bowens said.

"That's what this is all about, the human interaction," she said. "I think it's as valid as a face-to-face relationship."

EverQuest captured the feeling of *Dungeons & Dragons*-style community-centered play to an extent that many other games before and after failed to do. In the process, it became the most successful of a generation of massively

multiplayer games that followed in the wake of Richard's *Ultima Online*. But other games too drew hundreds of thousands of players, helping to expand the palette of virtual-world possibilities and introducing ever more people to the attractions of communal play.

Asheron's Call, published by Microsoft in 1999, broke from the traditional Tolkien-derived archetypes to create its own richly detailed backstory, but never grew far above the hundred-thousand-subscriber mark. In 2001, the player-vs.-player-focused *Dark Age of Camelot* and the science-fiction-themed *Anarchy Online* each made a splash. That same year, Electronic Arts shuttered development of *Ultima Online 2*, focusing instead on building out the existing *UO* community, just as Richard had urged before leaving the company. Raph Koster, Richard's lead designer for *UO*, jumped ship to lead Sony Online Entertainment's *Star Wars Galaxies* game in 2003.

While other developers worked to broaden the appeal of these massively multiplayer online (MMO) worlds, Richard himself was in a sense returning to his roots. After leaving Electronic Arts in 2000, he essentially recreated Origin Systems in a new office with his brother and a few other members of the original team, calling the new company Destination Games. Following a 2001 merger of this new company with NCSoft, the Korean publisher of the hugely popular *Lineage: The Bloodpledge*, which Richard agreed to translate for the American market, he began work on *Tabula Rasa*, his first non-*Ultima* game in years and one he believed would take the MMO genre to a new level.

For Richard, this was yet another career reboot, a now-familiar story. His career had taken a cyclical form: He'd created *Akalabeth* and the earliest *Ultima* titles, joined Sierra On-Line, and left. He'd created his second, more ambitious *Ultima* trilogy, joined Electronic Arts, and left. Now he had his sights set on the creation of *Tabula Rasa*, and had joined NCSoft to make it happen. At each junction, it seemed as though he needed to leave everything behind in order to relight his creative spark.

Watching the MMO gaming worlds unfold around him, he was certainly inspired in a back-to-basics way he hadn't felt for years. He'd helped shape single-player PC games, had helped pioneer the community-based worlds now taking off, and was confident now that he knew how to merge the strengths of both. Sitting in his book-strewn office in 2003, he eagerly showed off aspects of his new, unfinished game, including a sophisticated

rune-like language he was inventing for the world, tentative in-game images developed by the artists, and diagrams that depicted almost architecturally how story arcs starring individual players could be nested inside a larger world's developing history. The idea, he said, was to recover the solo game's promise to make every player an epic hero, while still retaining the community aspects of *Ultima Online*.

"Single-player games are great, and I love them," he said in a 2003 interview, as the game's development was still underway. "They have a great feature: Your life is very special. You are *the* hero and you get to save the *whole* world. You live a truly charmed existence, and around every corner, you are finding new things. You're blissfully unaware of your neighbor who is also playing the game."

The drawback, he said, was that you were alone. "Massively multiplayer online worlds solved that, but there was a problem. The activities you do aren't very heroic. You're hunting rats to get money to buy a sword to go fight a deer and then, when you have enough experience, you fight an orc. It's a treadmill."

In the end, his experience with NCSOFT would be as turbulent as that with Electronic Arts. *Tabula Rasa* development was upended after two years of work, following conflicts between the U.S. and Korean development teams. Twenty percent of the staff was cut, key developers quit, and seventy-five percent of the code was scrapped.^[52] The game ultimately released in 2007 was a stripped-down version of Richard's initial vision, and he left the company shortly after its appearance.

This misfire was hardly an exception in this high-stakes new genre, in which other high-profile games and developers struggled to find their footing. Even properties with as much presumable built-in appeal as *Star Wars Galaxies* and *Uru: Ages beyond Myst* had buggy launches or (in the latter case) were scrapped altogether.

But even the successful games were ultimately overshadowed by the radical achievements of a single game that drove the communal play of MMOs fully into the cultural mainstream.

When Scott Andrews walked into the *World of Warcraft* as a Tauren hunter—a huge, bull-like humanoid warrior—he found it a distinctly hostile place. In this new game, Taurens were part of a coalition of races called the Horde, who were

generally opposed by another coalition called the Alliance. On the server where he was playing, Alliance forces vastly outnumbered his natural allies. He was killed, often and bloodily.

But adversity breeds creativity. While not previously an MMO player, Andrews saw the potential in this game. He played strategically, long enough to get a feeling for the world and his character. His character and its allies were used essentially as target practice by largerear or stronger groups of Alliance forces, but he didn't get discouraged. He persuaded a group of friends to play with him, and together they formed a guild, growing stronger and smarter. "Everything was new and mysterious," he remembered later. "Everyone was super friendly and excited about the game. It was really easy to meet people."

One day, they decided they'd had enough of being the server's second-class citizens. Andrews and his guild rallied a huge group of Horde players, more than two hundred strong, and swept down on a small group of far more powerful Alliance players who had given them particular trouble. The high-level Alliance characters were shocked—they were used to winning battles, and these were clearly low-level players who had no business attacking their superiors. But the strategy worked.

"We drove them into the sea," Andrews remembered with pleasure. It was then, he said, having tapped diverse social networks to accomplish something that many thought impossible, that he saw this game would be a very difficult place to leave.

On the face of it, *World of Warcraft* (WoW) wasn't terribly different from *Ultima Online* or *EverQuest*. Humans, orcs, elves, dwarves, and other races fought monsters and each other, gained experience and skills and treasure, assembled guilds and went raiding in the virtual wilderness. Yet the difference—in players' smooth progression from newbie to mid-level warrior, in the quick immersion in meaningful game-world tasks, in quests that could be played alone or with others—was evident almost from the moment of launch. While breaking no radical new ground, this world worked seamlessly in a way its predecessors hadn't.

Like *Ultima Online*, WoW had a built-in fan base at launch, derived from an earlier series of single-player games that had taken place in roughly the same game world. Blizzard Entertainment had released the first of these, *Warcraft: Orcs & Humans*, in 1994, with hugely popular sequels following in 1995 and 2002. Unlike Richard's *Ultima* series, these were real-time strategy

(RTS) games, a genre that had long drawn an equally fanatic fan base. Rather than being solo adventures that set players on an epic journey, RTS games put players in charge of husbanding and deploying resources such as whole armies, supplies, and weapons, generally while fighting other armies. If the *D&D* experience enabled a player to be a hero, the RTS experience allowed her to be a situation-room general. RTS games like *Command & Conquer*, *Age of Empires*, and Blizzard's other hit title, *Starcraft*, had typically focused on large-scale stories or military conflicts rather than individual characters. *Warcraft* titles, by contrast, had always been richer in personality than many of their genre rivals, and were supported by a complex narrative arc that helped justify the inclusion of character-driven elements from role-playing games.

The team Blizzard assembled to develop *World of Warcraft* had substantial experience building and playing in virtual spaces. Rob Pardo, one of the lead designers, had played as a *D&D* dungeon master before becoming a professional game developer. When *EverQuest* came out, he rose to lead Legacy of Steel, one of the game's most prominent raiding guilds (guilds that brought high-achieving players together for advanced game content). He eventually made his way to Blizzard, became a co-lead designer on *Warcraft III*, and took on the same role on the *WoW* development team.

Looking for people who could bring a critical eye to the MMO genre, Pardo reached out to the new leader of his former *EverQuest* guild, Jeffrey "Tigole" Kaplan, who had made a name for himself online as an outspoken critic of *EverQuest's* shortcomings. Kaplan had spent a great deal of time and energy detailing elements of that game that didn't work well, and had offered countless suggestions for change. Pardo also convinced Tom Chilton, lead designer for the final *Ultima Online* expansion pack, and Alex Afrasiabi, another prominent *EverQuest* guild leader, to help round out the team.

The group spent considerable time analyzing other games on the market. One consistent flaw, they decided, was that previous titles had been designed in large part to appeal to experienced gamers, without enough early and relatively simple incentives to keep casual players interested. New players found it difficult to reach the most thrilling high-level content, often quitting out of frustration as a result. To address this, the *WoW* developers built in a system of small, successive quests that would lead players smoothly to high levels. Players would have to band together to fight the most powerful

monsters and opponents, but until that point, it was perfectly possible to play alone.

Their analysis proved shrewd. *World of Warcraft* garnered more than 240,000 subscribers within twenty-four hours of its December 2004 release, and reached 1.5 million by the following March. Three years later it was still growing, with more than 11.5 million subscribers. Even *EverQuest* had never done more than scratch the surface of the mainstream by comparison. The game became so ubiquitous that an Emmy-winning *South Park* episode focused entirely on *WoW*'s addictive nature and broad-based appeal. Even Toyota made a pickup truck commercial ostensibly taking place inside the game—surely a sign that the cultural ghettoization of gaming was breaking down at last.

Scott Andrews's progress inside the game was inexorable once his group of Horde players had proved its collective power. As leader of the guild he'd originally formed from friends, he found himself in a position of considerable responsibility. The guild grew quickly—perhaps too quickly, he said later—with more than two hundred people in the group at one point. But the sense of having close friends and allies always at hand with whom to go on epic quests, mount raids against adversaries requiring dozens of players to kill, or just hang out online was gratifying.

People in his group fell in to natural roles, both inside and outside the game. A woman in her fifties or sixties was the psychologist, managing tension inside the group. Another young man was the expert on game mechanics, helping guild members master the intricacies of play. Another was the inventory manager—a bit like James Bond's Q—keeping track of the guild's high-powered weaponry and magic items, and figuring out what would be needed for upcoming events.

Andrews himself was a leader and organizer. Earlier in his life he'd been a Boy Scout senior patrol leader, managing a troop of twenty-five kids, and he now found that experience to be invaluable. "Being guild leader is a lot of very demanding work," he said. "If I hadn't had that previous experience, I would have been overwhelmed."

Like members of other gaming groups before them, the guild started

meeting offline at people's houses up and down the East Coast. "It was a real bonding experience," Andrews said. "Between the in-game events we did and the parties, it really felt like more of a family than the typical guild."

To be sure, much of the media attention on the game focused on the more obvious elements—the battles, the cartoonish monsters, the near-addictive nature of play—rather than the kind of communal experience Andrews described. But *WoW's* explosion into mainstream culture also helped expand the body of researchers that took these game worlds seriously as a social phenomena. Some of those studying how communities and in-game social networks were formed and maintained argued that *WoW* and other such games were creating a valuable new social space in an America where suburbanization, television, and other media were "steadily displacing and degrading civic life."^[53]

Researchers noted that small guilds tended to be composed of friends or family members, and were often used as a means of keeping in touch with geographically distant individuals. "Since we can't golf, we *WoW*," a respondent to one survey told researchers.^[54] Larger guilds tended to form when these core members needed help to reach more difficult levels of the game, and often at this point became more formal, with rules and attendance policies. Researchers found that non-game-related social interaction was very common even inside the game, particularly among core group members.

However, research on the density of social interactions also found somewhat surprising results. While the vast majority of people surveyed cited *WoW's* community features as being among the game's main attractions, at least one study found that large numbers of people tended to play on a solo basis as long as possible, joining guilds only when it became necessary for practical reasons. The study called this "playing alone together," and speculated that players liked having other people around primarily to serve as a live audience for their games—like a pinball player thriving on a crowd of onlookers—rather than because they sought deep or lasting social interactions in this context.^[55]

To a large extent, these patterns of social interaction reflected the *WoW* designers' goals. Much more than in the case of *Ultima Online's* flexible world, for example, Pardo's group had created a kind of moving walkway that whisked players through the game's content with comparative ease. The team then continued to release new content—quests, zones to explore, high-level

adversaries, and narrative developments—on a regular basis. In one sense, it was, to-date, the most highly realized digital version of the collective *D&D*-like experience Richard had imagined so many years ago; and yet its very success at keeping players engaged also precluded some of the free-ranging player-driven creativity of previous worlds from *MUD* to *Ultima Online*. The game world became an ever-evolving march toward achievement, with creative socialization taking a somewhat lesser role. These elements certainly helped push the game to ever-greater heights, but they also constrained what the players *might* do. ^[56]

Of course, many players did invent their own activities, utilizing the capabilities created by Blizzard in initially unexpected ways. Many guilds sponsored events that helped their members bond with one another. “Running” events were common, with many people simply walking or running from one part of the world to another as a kind of digital flash mob, often stripped down to their digital skin. Some guilds held public storytelling events, where characters sat around digital campfires and told tales of in-game adventures. Weddings, long a popular event for role-players, found their way into *WoW* as well (although simulated in-game sex was possible only for those with very good imaginations, and Blizzard strictly policed chat servers for sexual harassment). But compared to *Ultima Online*, the range of player-initiated activities that fell outside regular game-play was comparatively narrow. It seemed that Blizzard’s rich and evolving story, constant updates, and well-designed incentive structure encouraged players to engage consistently with the official game rather than split off to create their own activities.

This may also have been an accident of history. At the same time *WoW* was gaining popularity, the most open-ended graphical worlds yet to reach the Internet were also gaining prominence, blurring the distinction between games and simple virtual worlds. Many ardent game players were attracted by this promise of absolute freedom rather than by the enticements of story and a clear achievement structure. They wanted their digital worlds to be as malleable—or, better, even more malleable—than the real world.

In at least a few corners of the Internet, they got their wish.

Thirty-One *Worlds Without Ends*

In late 2002, well into the industry feeding frenzy prompted by the successes of *Ultima Online* and *EverQuest*, one massively multiplayer online game in particular drew the attention of a mainstream pop-culture media that still treated magic and monsters with a certain degree of condescension.

Well before its official release, *The Sims Online* was being touted as a breakthrough—a game or virtual world that would be explicitly focused on activities more true to real life than were killing goblins or collecting gold pieces, and that might thus even transcend the category of play. In it, players would gather in small suburban-like neighborhoods, buy houses, work at jobs, and (chastely) romance their virtual neighbors. In a preview, *Time* magazine called it “a daring collective social experiment that could tell us some interesting things about who we are as a country.”

To those who had played Richard’s *Ultima Online* or any of the myriad of MUDs, MOOs, and other free-ranging social environments that had populated the Net for two decades or more, this description may have sounded more than a little breathless. But at least in theory, this new virtual dollhouse (as some dubbed it) did carry the potential to expand online multiplayer gaming to a vast new audience while putting the social innovations that had evolved in *UO* and elsewhere squarely front and center.

Much of this anticipation had to do with its designer, the forty-two-year-old Will Wright. Even in a game industry richly peopled by creative eccentrics, Wright was viewed as an iconoclast with a golden touch. The game that first brought him to the industry’s attention, *SimCity*, had been one of the most surprising breakout hits of the 1980s. His subsequent single-player title, *The Sims*, had risen to become the best-selling computer game of

all time after its release in 2000.

The Sims had been profoundly weird by traditional gaming standards, precisely in its focus on reenacting the lives of ordinary people. There were no dragons in the game, no undead monsters, no flaming swords, and certainly no Big Fucking Guns. Instead, players passed the time by eating, chatting with their friends, shopping, doing chores, or going out at night. Despite this lack of apparent thrills, it had become a smash hit, in the process transforming the industry's conception of its own consumer base.

Unexpected stories had flowed in almost immediately after its release: Male gamers had bought it, but their girlfriends and spouses were playing it and *loving* it. Even better, they were buying copies themselves and recommending it to friends. For a gaming industry that had always struggled to attract women, this was a revelation.

“Everyone has that first game that got them fired up, and that they remember playing nonstop. Well, for a lot of people, this was the first game they ever played, and they were extremely effective at spreading their excitement by word of mouth,” Wright said in a later interview. “It was like a lot of fuel had piled up, and then we threw a match on it.”

The Sims Online was meant to take its predecessor's money-minting mundanity online for the first time, letting people interact with each other as ordinary characters in an ordinary world. This is what would move MMOs from the realm of hard-core gamers and into the mainstream, Wright believed.

“You look at the games that are out there, and most of them are military titles, or sports, or fantasy, or science fiction,” he said, shortly before the game's release. “But that's not what fills 95 percent of the shelves at a bookstore, or what dominates primetime slots on television. There is so much more interesting possibility for interaction and drama reflected in ordinary reality.”

Even as late as 2002, this remained a controversial idea in the game business, at least taken as expansively as Wright intended. Of course, simulation games—more typically flight or driving simulators, pinball or board games, or construction games (especially Lego-themed) — occasionally reached the bestseller list. But for most of the industry's history, and certainly since *Ultima* and its peers had begun crystallizing genres in the late 1970s, developers had found it difficult to create hit titles that didn't

fall back on fighting, fantasy, sports, or science fiction themes.

Still, Wright was used to skepticism, both from inside and outside his own companies. In 1987, people had told him that a game that essentially put players in the role of a city planner had no chance of going mainstream. Turned down by big game firms, he and partner Jeff Braun had launched Maxis, an independent game development studio, and in 1989 released *SimCity*. The title was an unexpected critical and commercial success, validating Wright's early intuition that an open-ended game experience, without specific goals, would prove welcome to nontraditional game players.

Even within Maxis, Wright had met similar doubts after proposing the single-player *The Sims* in the mid 1990s. Company managers didn't see the point. Why would gamers want to play characters that fixed meals, bought clothes, went to work, and performed exactly the activities people ordinarily played games to escape? It was only after Maxis's sale to Electronic Arts in 1997 that Wright had found champions for the game, enabling its completion and unprecedented success.

As Wright and his team crafted *The Sims Online*, they were faced with a new twist on the ideas he'd worked with in his previous titles. Like those others, this new game would be open-ended, without winners and losers. But the others had had a kind of limited linearity: Cities could be built, developed, and destroyed. Sims families could get rich, buy houses and have career or romantic successes, and see their dreams collapse. Narrative, or something like it, emerged from the interaction of player choices and the games' underlying models.

The Sims Online would be something else entirely. The development of social interactions and networks would be both means and end, a primary goal to the extent there was any goal at all. But how to ensure the creation of these social frames from scratch? In games such as *Ultima Online* and *EverQuest*, the multiperson quests, guilds, and other fantasy elements gave players a gentle push into social experiences. *The Sims Online* would lack these narrative elements; thus, if the game were going to succeed, its appeal would have to come from the players themselves.

This problem wasn't without precedent. Open-ended text MUDs dedicated solely to social interaction, such as *LambdaMOO*,^[57] had thrived in the late 1980s and early 1990s. Of course, Richard's *Ultima Online* had long been home to social activities invented by the players that weren't

technically part of the core game. Left to their own devices, players had increasingly taken control of their in-game experiences, creating mods, building in-game social structures, resisting game changes they didn't like, and pushing worlds beyond what designers had originally imagined.

Even *The Sims* had given Wright a clue to how socialization within games might evolve, despite that game's single-player nature. After its release, communities dedicated to customizing their games had emerged online, arranging themselves in pyramid-like social or economic structures. In these, a small number of people created tools that others could use to create their own customized Sims. A greater number used these tools to create new "skins" for their characters. A still larger number of people made and operated the fan Web pages that the skins were distributed through, and far more people visited the Web pages to download the customized graphics.

The same kinds of hierarchies of engagement were likely to develop in the virtual world, Wright reasoned, with a comparatively small share of hard-core players inspiring and entertaining others. This core group of leaders—social entrepreneurs in a world where entertainment was one kind of currency—would serve as a magnet for other players if he could figure out how to gently nudge enough players to take positions of leadership within the community.

"I think we're really at the tip of the iceberg here," Wright said in an interview shortly after the game's release. "We have an opportunity to make fans co-designers and co-creators now."

In this particular case, however, the iceberg in sight was more reminiscent of the one struck by the *Titanic*. When *The Sims Online* was released, it failed to live up to its hype. Too many players and reviewers said it simply wasn't enough fun. Wright's hoped-for critical mass of spontaneous leaders failed to develop, and without this, casual players dropping in for a look too often found themselves uninspired.

From the first moments of play, gamers found themselves spending hours playing chess or sculpting garden gnomes in order to gain skills and money, which would in turn allow them to buy houses or other items. But these tasks weren't actually fun in themselves. Thus, players often set their characters working automatically while they left the computer, leaving a drone-like character in the world unable to respond to conversations or change their activity (a state known even in early text-based games as "away

from keyboard,” or just AFK). Too often, newcomers seeking the vibrant social experience Wright had imagined discovered only a world full of unresponsive zombies. Those who stuck around found themselves engaged in the “drudgery,” as one memorable review put it, of a city “in which nearly every house is a sweatshop.”^[58]

The world’s population peaked at just above a hundred thousand subscribers, but a bit more than a year later, the population had fallen by nearly half. By almost every measure *The Sims Online* was a deep disappointment. In hopes of saving it, the company ultimately relaunched and rebranded the world as *EA-Land* in early 2008, but shuttered it completely shortly thereafter.

The spectacular fall of *The Sims Online* surprised those outside the game industry. If any online game was going to make the leap into mainstream consciousness, this had seemed like the franchise to do it. Not long after the game’s release, Garriott said he thought he recognized the symptoms of a game pushed out of EA’s corporate doors before it was ready—a phenomenon he said had badly harmed the launch of his own *Ultima VIII* and *Ultima Online* titles. “*The Sims Online* should have been, could have been great,” he said. “My own uneducated assumption is that it received a little too much help.”

The effort to combine unscripted social interaction and hard-nosed economic incentives as play motivators had proven a difficult task. To be sure, Wright was correct about the online world’s readiness to take on the mantle of co-creator. He was right about the excitement that could be generated by a virtual world wholly without story. But *The Sims Online* didn’t turn out to be that world.

At the same time Wright was struggling to complete *The Sims Online*, a San Francisco start-up called Linden Lab was experimenting with a messy public beta test of a world it had just named *Second Life*. This online world was radically different than anything Garriott, Carmack, or even Wright had envisioned. Rather than a world of detailed environments or urban settings, it was in essence little more than an animated 3D sandbox, equipped with rudimentary landscapes and an easy-to-use tool set allowing people to create

virtually anything out of thin air. This, in the spectrum of player freedoms, was as open-ended as it got. Not just the events of the world, not just the character of social interactions, but even the shape of the environment itself would here be dependent on the whims of those with enough patience and creativity to share the task of world creation.

Second Life was the brainchild of Philip Rosedale, a technology entrepreneur who first made his name by selling a video conferencing startup to RealNetworks, had subsequently spent a few frustrating months inside a prominent venture capitalist firm, and had finally decided again to strike out on his own. Later, as described in *The Making of Second Life*, Wagner James Au's canonical history of the world, Rosedale would say he had been dreaming of an immersive, wholly open virtual world for years. While aspects of that freedom had already emerged in most successful game communities, the business of game-making had previously led developers to prioritize the growth of a paying audience rather than existential freedoms.

Rosedale, however, considered the natural endpoint of the previous decade's gaming advances to be a world in which people could literally construct their own reality. While not a game designer himself, he had been influenced by time playing *Ultima Underworld*, the first major 3D game on the commercial market. He'd also found inspiration reading Neal Stephenson's *Snow Crash*, the novel in which Stephenson introduced the virtual-reality environment called the Metaverse. Somewhere within that swirl of ideas, Rosedale believed, lay the key to the next evolution in virtual worlds.

It took some time for Rosedale and his team to turn this vision into something concrete and usable. Early in the development process, they focused on a hardware product, developing a prototype for a haptic virtual-reality interface that they imagined would enable full-body interaction with new digital worlds. Needing a world to go along with this, they created a landscape featuring realistic oceans and air-currents, snakes, and rock-eating birds, and even toyed with the idea of setting robot wars in a kind of digital Eden. Human-like avatars, which became the hallmark of the eventual product, were a comparatively late arrival on the scene.

By the time *The Sims Online* went live in late 2002, *Second Life*'s much lower-profile public beta test was a world in which players could create their own pieces of the landscape, build houses, walk, talk, and fly. It was simpler,

comparatively poorly funded, and in a radical state of flux, but *Second Life* offered something *The Sims Online* never did: a near-total creative freedom.

The Sims games had been dubbed “god games,” with players in charge of shaping their characters’ lives. *Second Life* took the god ideal a step further back, to the moments of the creation. Players—here called residents—were given the power to shape the fabric of the landscape, creating buildings, objects, vehicles, clothes, limbs, or virtually anything else imaginable from bits of unformed matter called “primitives.” This near-unlimited creative power was enhanced by a complete lack of traditional game motivators such as levels, skill-development tracks, or preset tasks. Residents shaped the world, and in the process shaped the stories that developed within it.

“I’m not building a game,” Rosedale told *Wired* magazine in early 2004. “I’m building a new country.”

Slowly, out of the public eye, a world whose appeal was almost entirely predicated on its residents’ social and creative powers took shape. In terms of social structure, it was much as Wright had described his hopes for *The Sims Online*. But without corporate restraints, things got much stranger, much more quickly. As MUD communities and even *Ultima Online* had shown, it was precisely this cultivation of the weird that allowed social bonds to cement themselves with real strength.

Early in the world’s evolution, group chat channels allowed the formation of tight, guild-like communities, the members of which pushed the boundaries of imagination, creating wonders such as the wild, dream-like Nexus Prime city, a collective work of art and architecture created by the Tyrell Corporation group (itself named after the shadowy entity responsible for the replicants in Ridley Scott’s movie *Blade Runner*). For many early residents, the community became a second home. Catherine Winters, a young tech-savvy woman who was living in a rent-free squat in Vancouver, British Columbia, for a short period during this early evolution, later remembered it as a literal life-saver. Outside, in real life, she was homeless and nearly hopeless; as Catherine Omega in-world, she was a crack creator, one of Tyrell’s sharpest coders.

“Imagine the emotional impact of being in this situation, where your

real experience is so much less vivid and so much shittier than your online experience,” she said. “I spent years living like that, where virtual space was so much more appealing. Who wouldn’t want to have superpowers? I still dream that I can fly.”

Yet for all this freedom, Rosedale’s disavowal of game-making led to puzzling questions. If not a game, then was *Second Life* no more than a fancy chat room? Many of the early residents felt they were living the answer simply through their community and creations. But as a venture-capital-funded, (ideally) profit-making company, Linden Lab needed to show a path for expansion and growth, which led to a call for greater clarity.

Over time, the company experimented with some mechanisms of control and hierarchy. One aborted attempt early in the world’s development allowed residents to rate one other in various categories such as appearance or building ability. The system was widely abused, and ultimately shut down, though the desire to improve informal reputations and acquire respect remained a strong driver for creative work.

The most common motivators inside games, whether single-player or online, had virtually always been either power (in the form of skills or experience) or money. By the time *Second Life* staked its place in this history of virtual-world economics, bleed between in-world gold-piece currencies and real-life money had become commonplace, as players—or increasingly, organized entrepreneurs—found ways to sell in-world items or high-level characters through forums such as eBay. Most game companies frowned on this kind of activity. Regarding in-game items as their own intellectual property, many companies tried to stop the practice altogether, in some cases shutting down Web auctions of items from *EverQuest* or other titles. Thus, convertibility between in-game and real-world currencies remained a chancy thing at best.

Linden took a very different tack. Just as Carmack gambled that opening up his *Doom* and *Quake* code would encourage players to modify and deepen their relationship with his games, Rosedale offered his residents full legal property rights to the items they created in hopes that true ownership would promote innovation. Creating the Linden dollar as a currency, Linden Lab set up or supported currency exchanges in which Linden dollars could be swapped for U.S. dollars. The effect was to create a genuine economy where the sale of in-game creations—clothes, houses,

even sexually explicit animations that could let avatars engage in virtual sex—could be used to support a resident’s real life.

For the most creative of the world’s residents, this was a godsend. Many developed small-business sidelines. Others parlayed their own scripting skills into consulting or the equivalent of in-world construction companies, building virtual headquarters for the real-world companies that started trickling into the world. For many others, the desire for cash led to an influx of something like *The Sims*’ population of AFK zombies. Initially, for example, Linden offered rewards to property owners who attracted high numbers of visitors. This encouraged the creation of dance clubs, sex clubs, and casinos. Over time, these and other property owners began paying visitors just for sticking around, competing for bodies. Residents complied by leaving their avatars unattended, present but empty of signs of life (here called “camping”).

As the practice spread, dance clubs and other areas filled with unresponsive avatars, planted by players looking to make a few bucks. Even after Linden cut off its incentives, property owners noted that new players tended to come to the most crowded spaces, so they continued to pay campers in order to attract foot traffic.

Thus, even before *Second Life* broke into the mainstream, the world’s economic focus began leading to an emergent cultural divide.

“Early on, they settled on the dollar as a unit of one’s ability to express oneself within the space,” Winters recalled. “I think that later, it became very much you were either there for the money or you were there spending money, and people not doing either were kind of this weird outlier.”

To some extent, the explosion of the game into the mainstream eye masked this incipient gulf. *Second Life* made the cover of *BusinessWeek* in early 2006, with a feature on a Germany-based resident who was making hundreds of thousands of real-world dollars by buying land from Linden, subdividing it, developing it with floating cities and sprawling mansions, and reselling it. A few months later she became the first person to have made \$1 million in real money through in-game activities. By late 2006, *Second Life*’s gross domestic product—the amount of annual economic activity going on inside the world—was estimated at \$64 million, based on the conversion of Linden dollars to U.S. dollars at going rates.

Drawn by the publicity, real-world businesses moved in en masse.

Nike, Coca-Cola, the NBA, Microsoft, and Mazda all established presences. Reuters and a number of other media companies opened news bureaus. Presidential candidate John Edwards opened an office, and the Department of Homeland Security financed in-game terrorist-attack simulations. Nor was it just, or even primarily, the corporate world that was interested. Educators were fascinated by the prospects of virtual classrooms and student interactions. Science-fiction fans dazzled by Stephenson’s Metaverse were convinced that this, at last, was something close to the real thing.

“Logging into *Second Life* was like mainlining a drug, everywhere you teleported, you might just bump into someone brilliant, thoughtful, someone as excited about the possibilities as you were,” blogged Chris Collins, a University of Cincinnati IT analyst, recalling those days. “Everywhere you looked were fascinating projects . . . that made even the most isolated innovator in some corner of the physical world feel like they had finally found the colleagues and collaborators of their dreams.”^[59]

By the middle of 2007, user numbers were skyrocketing. To be sure, the corporate-sponsored islands and mansions and in-game stores were very often empty, but that didn’t slow the land rush in the new world. This was the frontier, and nobody wanted to be left behind. Soon, cried the optimists, everyone would have a virtual presence, an avatar in the 3D, scrollable, malleable, and virtual world.

But even at the peak of the *Second Life* buzz, warning signals were sounding. The tension between the world’s unguided freedom and the incentives offered by the economy was coming to a head. The influx of new users created a swirling, ever-changing culture, where the assumption that a given resident would be a content creator no longer held. Many members of the oldest generation of residents—Winters among them—stopped hanging out or creating content for themselves, and parlayed their skills instead into building headquarters or doing social-world consulting for companies trying to figure out the new space. A large proportion of new users drawn by the publicity wandered in, explored, bought a new hairstyle or outfit, maybe made a little money dancing, and then vanished.

Linden Lab contributed to the drift. Technical problems, particularly lag time, were endemic as usage soared. Growth within the system and communication with residents had been somewhat chaotic, introducing more confusion than clarity. As media attention to *Second Life* intensified,

development became even more haphazard.

The company struggled to find a sustainable business model beyond selling in-game land parcels. In 2008, Rosedale stepped down as CEO, and the mainstream media began losing interest, turning to rising giants Twitter and Facebook as social networking's new future.

To be sure, the death-watch media narrative that rose to swallow *Second Life's* Next Big Thing status was as overwrought as the previous hype. Users continued to sign up by the millions, and if overall usage and average in-game hours declined over time, these metrics remained quite respectable.

But the post-boom-and-bust *Second Life* had become a different place. The radical optimism was gone. Linden and many of its *SL* residents had become focused on eking out as many dollars in as many ways as possible. While red-light districts and a few shops remained populated, visitors found much of the world increasingly deserted.

Winters logged in for the first time in years in early 2013. "What felt weird was that it was empty," she said. "It was like going to an abandoned playground in the woods. Whereas even in the early days, when not a lot of people logged in, it always felt full."

In the end, even if it wasn't a traditional game, *Second Life* proved sufficiently game-like to succumb to the same tensions that broke *The Sims Online*. People inevitably came to the world with expectations influenced by games, and looked for something to *do*. Some found pure creation enough, and some were diverted by social interaction, the freedom of having a new identity, or simply the promise of virtual sex. But the economy ultimately wound up filling the gap left by the absence of rules or story, leaving non-commercially minded residents less than satisfied.

Not quite a game, and not quite a success, *Second Life* represented one natural end point of the years in which games had progressively shed their game-like features. The most open high-traffic world yet created, it had demonstrated both freedom's ephemeral, community-driven beauty and its collapse into banality.

As such, the lessons drawn from its rise and fall were mixed. It had flown, it had been beautiful. But it had shown that a world with minimal rules, and without story or other traditional game structures, was difficult to maintain. Pure freedom, while certainly more like real life, was no longer a game.

Epilogue: The Adventure's End

On March 4, 2008, Gary Gygax passed away in Lake Geneva, the same Wisconsin city where the seeds of *Dungeons & Dragons* had been planted thirty-six years before. Just over a year later, in April 2009, *D&D*'s co-creator, Dave Arneson, succumbed to cancer in his home of St. Paul, Minnesota.

Though both were involved in game development and game communities through the end of their lives, it had been years since either had been central to the development of online or virtual worlds. Gygax in particular had been publically dismissive of hack-and-slash RPG computer games, which, he argued, had little to do with the infinitely variable character-, story-, and adventure-driven play he associated with role-playing. Nevertheless, in the course of the preceding decades, the activities of online game players, world builders, and social networkers had evolved into something very much like what Gygax, Arneson, and colleague Dave Megarry had experienced during the course of that long weekend in 1972: an improvisatory, endlessly creative, and—above all—deeply social pastime.

Games, in Gygax and Arneson's view, had never been meant to be played alone. It was an accident of technological history that so much of the fertile post-*D&D* game development had resulted in solitary experiences. By the late 2000s, technology and people's level of comfort with a networked existence had long since caught up with that original basement-room vision.

At the same time, an era in computer gaming was drawing to an end. Richard Garriott and John Carmack had turned their energies toward civilian, private-sector space exploration projects. After the lukewarm reception given his multiplayer *The Sims Online*, Will Wright's next project

had been a kind of logical Sims endpoint, a game called *Spore*, released in 2008, that allowed players to simulate the development of life itself, from single-cell organism to technologically super-advanced beings. Critically praised, the game posted disappointing sales, and Wright—much like Garriott—soon afterward left Electronic Arts.

In some sense, these gaming pioneers' original visions were coming to mass-market maturity without them. The 11-million-plus players of *World of Warcraft*, the rush of mainstream computer users and even staid corporations into the wide-open virtual world of *Second Life*, and the myriad high-profile shooter games and MMOs that followed the pioneers all brought the community elements of *Ultima*, MUDs, and *Quake* clans to vast new audiences.

But this maturity came with a price. Development costs for the biggest computer and video games today have ballooned, easily reaching the \$15 million to \$25 million mark for graphics-intensive home console games. It has become increasingly difficult for a single person to stamp his or her vision on a work that might require years and teams of several hundred people to create. The result has been a turn toward the safety of sequels as companies seek to build on pre-existing player bases.

This might have been inevitable. All creative movements lose energy, becoming dominated by tradition instead of innovation, while their underlying driving forces—in this case, the potent mixture of technology, storytelling, and the instinct for play—find new outlets. It is far from clear what this will mean for the future of community-driven game worlds.

Nevertheless, the lessons learned in the first era of computer gaming are already shaping the next. One of the most fundamental, as we have tried to illustrate in this book, is that the development of community is inevitable even in seemingly solitary pastimes. We are social creatures, and our games reflect this. Moreover, the way this community develops will in turn be dependent on its technological environment. The limitations of Richard Garriott's Apple II or Richard Bartle's text-only ARPANET connection helped shape early computer gaming experiences. Faster processors, 3D modeling, and broadband Net connections later turned what had once been solitary text or rudimentary graphics into full-fledged, well-populated 3D worlds as richly social as Gygax's tabletop.

The rise of smartphones and tablet computers has represented a first

wave of truly handheld mobile computing. This in turn is helping to drive a new shift, both in the way people form social networks and the way they use them to game. A first generation of simple social games hosted on Facebook and other sites enabled huge numbers to play backgammon or word games, or work together to build farms in social circles faintly reminiscent both of Wright's Sims worlds and *Ultima Online's* guild structures. Millions of these people were casual gamers, spending a few minutes playing while commuting or during a coffee break, thus changing social practices offline as well as on. The continued spread of mobile devices is today providing opportunities for creative, quick developers who often even work alone, just as the first wave of personal-computer programmers did.

It seems unlikely too that computer games can ever fall back to being regarded as the sole province of socially maladjusted teenage boys. They have been used as military training tools and as educational adjuncts from preschool to universities, have been held up as models for corporate organization, and have even been employed to seek solutions to collective problems as serious as climate change. If we are social animals, then harnessing the social instinct in new ways represents a powerful unexploited resource. Some of the figures with the most experience in creative game design thus see new forms of games as potential tools of economic or intellectual production, not simply as entertainment.

"Playing a game together actually builds up bonds and trust and cooperation," said game developer and Institute for the Future researcher Jane McGonigal, speaking at the 2010 TED conference. McGonigal has done pioneering work with the World Bank Institute and PBS in creating games such as *World without Oil* and *EVOKE*, directing game play toward the accomplishment of specific social ends. "We know that we are optimized, as human beings, to do hard meaningful work. And gamers are willing to work hard all the time, if they're given the right work."

Indeed, what even the most cutting-edge game developers today are doing is as old as folk tales being retold and re-improvised around a fire. The development of a story extends beyond the teller to become a collective experience, thus strengthening the ties of community. Even if there is no story *in* the game, players inevitably create the story *of* the game as they go. These several factors—communal activity, play, storytelling—seem to be basic human activities, inevitably emerging once our most basic needs have

been met. This serves as a reservoir of creative potential with each new wave of technological advancement.

“The id cannot distinguish between fantasy and reality,” Gygax said in an interview several years before his death. “For that reason, games tend to answer a lot of deep instinctive things. There are a number of deeply rooted reasons people play games, (and) they haven’t changed that much. I don’t think it will change at all, because I believe it’s hard-wired.”

Coda: Would You Like to Play Again?

Okay. The credits have rolled. Even the song titles and the logos for Panavision or Dolby Digital or whatever else have come and gone. Of course we have something more for those left in the building. Nobody in this industry stops before hinting at a sequel.

In 2013, Richard Garriott announced from the stage at Austin's South by Southwest Interactive conference that he was getting back into the world-building business. After four decades doing game design, Garriott's track record for creating popular worlds was undeniable. Yet just as undeniable was his apparent inability to work with some of the biggest game companies in the industry. Throughout the years, he'd had public breakups with Sierra Online, Electronic Arts, and, most recently, Korea's NCSOFT.

His most recent split between NCSOFT and Destination Games, the company he'd founded when he left Electronic Arts' Origin Systems, was the bloodiest yet. After the tumultuous development process and comparative flop of *Tabula Rasa*, he decided to take a break from development. In 2008 he used a large chunk of his gaming fortune to hitch a ride into outer space with the Russian space program, spending twelve days on the International Space Station before returning to Earth. In many ways the trip seemed to be a neatly packaged end to Richard's design and development career. He'd grown up near NASA with an astronaut father, in an environment that inspired his fascination with games. Four decades later, he'd become a cosmonaut because of those games.

As Richard sat in quarantine after returning from orbit, NCSOFT executives notified him that he no longer worked for their company. A fight erupted. Garriott claimed he had been fired, while NCSOFT said he'd left

voluntarily. At stake was a rather large chunk of money tied up in stock options. Garriott would eventually win two judgments—and \$32 million—from NCSOFT when litigation was finally settled in 2011, but even then, it was difficult to imagine a future for him back in the massively multiplayer game-development ecosphere.

Instead of trying to push his way back into the corporate game-design world, he decided to go directly to the players, much as he'd done during the original *Ultima Online* beta tests. He'd already watched as more than thirty-four thousand people using Kickstarter gave one of his former developers, Chris Roberts, \$2.1 million in less than two months for *Star Citizen*. In the next year, Roberts would raise a total of \$24 million using a basic crowdfunding plug-in for the game's WordPress Web site.

On March 8, 2013, Richard launched a Kickstarter project with the hopes of raising \$1 million to develop *Lord British's Shroud of the Avatar*, a game that was quite clearly the spiritual progeny of both *Ultima* and *Tabula Rasa*. As described by him in various blog posts and discussions, the game would adhere to a set of familiar rules: It would be a large and dynamic world, players would be able to craft their own stories or participate in directed adventures, everything in the world would be usable, and players would have the freedom to create a world they wanted.

"Since my original trilogy of trilogies is completed, we're building a brave new world to explore, new challenges to conquer, new ethical parables to test your virtues, and I as Lord British will be with you in the game. Together we will forge this new world," Richard said in the Kickstarter video introducing the project.

When fundraising ended on April 7, Richard had substantially exceeded his initial goal, raising \$1.9 million from more than twenty-two thousand backers. By summer's end, he'd begun assembling a familiar cast of characters, including former *Ultima Online* producer Starr Long.

Much about the project remains in doubt. But it is a striking beginning to an unlikely comeback story, and one that returns the future of massively multiplayer role-playing games, virtual worlds, and online communities to the hands that helped birth gaming's communal revolution.

What happens in this sequel, quite appropriately, will ultimately be up to the players themselves.

Endnotes

[1]

Edward K. Yasaki, "Computing at Stanford," *Datamation* (November 1963).

[2]

Stewart Brand, "Spacewar: Fanatic Life and Symbolic Death among the Computer Bums," *Rolling Stone* 123 (December 7, 1972).

[3]

Gregory Yob, "Hunt the Wumpus," *The Best of Creative Computing*, vol. 1, ed. David H. Ahl, (Morris Plains, NJ: Creative Computing Press, 1976), 248.

[4]

Rick Adams, "A History of 'Adventure,'" *Colossal Cave Adventure* Page, accessed November 27, 2013, http://www.rickadams.org/adventure/a_history.html.

[5]

Graham Nelson, *The Craft of the Adventure*, 2nd ed., 1995, <http://archive.org/details/TheCraftOfAdventure>.

[6]

Tim Anderson and Stu Galley, "The History of *Zork* -- First in a Series," *New York Times* 4, no. 1 (Winter 1985): 6-7, 11.

[7]

Hector Briceno, Wesley Chao, Andrew Glenn, Stanley Hu, Ashwin Krishnamurthy, and Bruce Tsuchida, "Down From the Top of Its Game: The Story of Infocom, Inc.," prepared for Structure of Engineering Revolutions (MIT 6.933J), December 13, 2000, <http://web.mit.edu/6.933/www/Fall2000/infocom/>.

[8]

Tim Anderson and Stu Galley, "The History of *Zork* -- First in a Series," *New York Times* 4, no. 1 (Winter 1985): 6-7, 11.

[9]

Tim Anderson, "The History of *Zork* -- Second in a Series," *New York Times* 4, no. 2 (Spring 1985): 3-5.

[10]

Stu Galley, "The History of *Zork* -- The Final (?) Chapter: MIT, MDL, ZIL, ZIP," *New York Times* 4, no. 3 (Summer 1985): 4-5.

[11]

Steven Levy, *Hackers: Heroes of the Computer Revolution* (Garden City, NY: Anchor Press/Doubleday, 1984).

[12]

"Super Invader Is Reader's Choice," *Softalk* 1, no. 8 (April 1981): 13, archived on Apple2history.org, <http://apple2history.org/appendix/aha/aha78/#to-aha78-n-1>.

[13]

John J. Anderson, "Dave Tells Ahl -- The History of *Creative Computing*," *Creative Computing* 10, no. 11 (November 1984): 66-77.

[14]

James Hague, *Halcyon Days: Interviews with Classic Computer and Video Game Programmers*, 1st ed. (City, State: Publisher, 1997).

[15]

Steven Levy, *Hackers: Heroes of the Computer Revolution* (Garden City, NY: Anchor Press/Doubleday, 1984).

[16]

The company and his interests proved lasting; in 2001, San was made an Officer of the British Empire for his long work in technology.

[17]

Over the years, as Richard's vision of gaming became more focused, so did his haunted houses. He often spent six months and hundreds of thousands of dollars planning elaborate pranks. After the development team moved back to Austin a few years later, and Richard moved into a huge castle in north Austin, his haunted houses took on legendary status. Like the townsfolk in *Willy Wonka & the Chocolate Factory*, Austin residents clamored to get invited to his manor for a trip in which, every year, increasingly sophisticated fright devices made people literally pee in their pants.

[18]

David Kirkpatrick, "Hot New PC Services," *Fortune* 126, no. 10 (November 2, 1992): 108.

[19]

Ken Siegmann, "New On-Line Network for Computer Games: System Subscribers Can Dial for a Duel," *San Francisco Chronicle*, March 23, 1992.

[20]

David Kirkpatrick, "Hot New PC Services," *Fortune* 126, no. 10 (November 2, 1992): 108.

[21]

Todd Copilevitz, "Software Firm Creates a Monster Hit via the 'Information Superhighway,'" *Dallas Morning News*, May 17, 1994.

[22]

Foremost in many peoples' minds were the ideas drawn from William Gibson's science-fiction works and Neal Stephenson's novel *Snow Crash*. Gibson had been the one to coin the word *cyberspace* in a short story called *Burning Chrome* in 1981, expanding on it with his 1984 novel *Neuromancer*, depicting a world where those who were trained (and outfitted with the right equipment) could plug themselves into networks of information and soar through them with the skills of an abstract surfer. Gibson later confessed that he'd never been online when his book was released; he'd written the book on a typewriter, in fact, not a computer, and his depictions of the digital universe were fantastic rather than drawing on any specific technology. Stephenson's 1992 book was written long after Gibson's ideas had begun filtering through popular culture, and long after MUDs and other online worlds had begun to feed people's dreams of living and interacting in online communities. *Snow Crash* envisioned the digital "Metaverse," where visitors could log into and roam through a 3D world represented by their own digital "avatars," or imaginative graphic representations of themselves.

[23]

Ed Dille, "Interview with John Romero," *Doom II: The Official Strategy Guide* (Roseville, CA: Prima Publishing; January 1, 1994).

[24]

DR Bone, "A Conversation with id Software's John Carmack," *Blues News*, January 8, 1997. <http://www.bluesnews.com/articles/carmackinterview.html>.

[25]

Stephen Heaslip, "John Romero .plan File," *Blue's News*, 1996, <http://www.bluesnews.com/archives/august96.html>.

[26]

Ping rate is the common measurement of the time it takes information to travel from one computer to another, or in this case from game servers and back. A high rate means a perceptible lag time between a player's own actions — moving the computer's mouse to fire or dodge, for example — and the moment that the effects show up in the game world. This is measured in milliseconds, but in a "twitch" game like *Doom*, an eye-blink's duration could easily mean the difference between victory and defeat.

[27]

Ken Hwang and Bob Colayco, "Interview with Alex St. John," *Firing Squad*, March 7, 2000, <http://firingsquad.gamers.com/features/alexstjohn/default.asp>.

[28]

Justine Cassell and Henry Jenkins, *From Barbie to Mortal Kombat: Gender and Computer Games* (Boston: MIT Press, 1998).

[29]

"Top Ten Industry Facts," Interactive Game Developers Association (2003).

[30]

Geoff Keighley, "Game Development a La Mod," *Business 2.0* (October 2002): 66-67.

[31]

David Kushner, "It's a Mod, Mod World," *IEEE Spectrum*, February 1, 2003, spectrum.ieee.org/consumer-electronics/gaming/its-a-mod-mod-world.

[32]

Mike Anton and Lisa Ryckman, "In Hindsight, Signs to Killing Obvious," *Denver Rocky Mountain News*, May 2, 1999, <http://denver.rockymountainnews.com/shooting/0502why10.shtml>.

[33]

Jon Katz, "Voices from the Hellmouth," *Slashdot*, April 26, 1999, <http://news.slashdot.org/story/99/04/25/1438249/voices-from-the-hellmouth>.

[34]

Jon Katz, "Voices from the Hellmouth," *Slashdot*, April 26, 1999, <http://news.slashdot.org/story/99/04/25/1438249/voices-from-the-hellmouth>.

[35]

William Dear, *The Dungeon Master: The Disappearance of James Dallas Egbert III*, (Boston: Houghton Mifflin, 1984).

[36]

Ellen Mitchell, "Video Game Room Targeted by Towns," *New York Times*, December 13, 1981.

[37]

E. Koop, public statement, November 10, 1982, <http://profiles.nlm.nih.gov/ps/access/QQBBCF.pdf>.

[38]

Tim Moriarty, "Uncensored Videogames: Are Adults Ruining It for the Rest of Us?" *Videogaming and Computer Gaming Illustrated* (October 1983).

[39]

Henry Jenkins, "Professor Jenkins Goes to Washington," *Harper's Magazine* (July 1999): 23.

[40]

Craig Anderson and Karen Dill, "Video Games and Aggressive Thoughts, Feelings, and Behavior in the Laboratory and in Life," *Journal of Personality and Social Behavior* 78, no. 4 (2000): 772-790.

[41]

Jennifer Hugest, "Study Links Violent Video Games to Violent Thought, Action," The Checkup, *Washington Post*, March 1, 2010, http://voices.washingtonpost.com/checkup/2010/03/study_shows_violent_video_game.html.

[42]

Benedict Carey, "Shooting in the Dark," *New York Times*, February 12, 2013.

[43]

Governor of California Et Al. v. Entertainment Merchants Association Et Al., 564 U.S. ____ (2011), Docket No. 08-1448: 12-13.

[44]

The Impact of Interactive Violence on Children: Hearing Before the Committee on Commerce, Science, and Transportation, 106th Cong. 32-35 (March 21, 2000) (prepared statement of Dr. Craig A. Anderson, Professor, Iowa State University, Department of Psychology).

[45]

Robert Warshow, "Paul, the Horror Comics, and Dr. Wertham," *The Immediate Experience: Movies, Comics, Theatre & Other Aspects of Popular Culture* (New York: Atheneum, 1975), 53-74.

[46]

Amy Kiste Nyberg, "The Senate Investigation," *Seal of Approval: The History of the Comics Code* (Jackson: University Press of Mississippi, 1998), 53-84.

[47]

Chip Morningstar and F. Randall Farmer, "The lessons of Lucasfilm habitat," *Cyberspace: First Steps*, ed. Michael Benedikt (Cambridge, Mass.: MIT Press, 1991), 273-302.

[48]

The game did provide the digital community with the term “avatar,” which would become the standard name for virtual representations of players in online worlds. The fact that Richard had used that same name as the hero of his *Ultima* tales was little more than a coincidence.

[49]

Julian Dibbel, “A Rape in Cyberspace,” *Village Voice*, December 23, 1993, www.villagevoice.com/2005-10-18/specials/a-rape-in-cyberspace/.

[50]

Frank Cifaldi, “Ultima Online Creators Remember the Good and Bad of Its Early Days,” *Gamasutra*, October 12, 2012. http://www.gamasutra.com/view/news/179261/Ultima_Online_creators_remember_the_good_and_bad_of_its_early_days.php.

[51]

“Television & Viewing Habits,” *Children and Families: Parenting Issues*, Accessed January 20, 2014, <http://www.fcs.okstate.edu/parenting/issues/tv.htm>.

[52]

Miguel Lopez, “Tabula Rasa: A Candid Look,” *Gamespy*, March 24, 2006, <http://pc.gamespy.com/pc/tabula-rasa/698217p1.html>.

[53]

Dmitri Williams, Nicolas Ducheneaut, Li Xiong, Yuanyuan Zhang, Nick Yee, and Eric Nickell. “From Tree Houses to Barracks: The Social Life of Guilds in World of Warcraft,” *Games and Culture* 1, no. 4 (2006), <http://gac.sagepub.com/content/1/4/338.abstract>.

[54]

Dmitri Williams, Nicolas Ducheneaut, Li Xiong, Yuanyuan Zhang, Nick Yee, and Eric Nickell. “From Tree Houses to Barracks: The Social Life of Guilds in World of Warcraft,” *Games and Culture* 1, no. 4 (2006), <http://www.nickyee.com/pubs/Tree%20House%20to%20Barracks%202006.pdf>.

[55]

Nicolas Ducheneaut, Nicholas Yee, Eric Nickell, and Robert J. Moore, “Alone Together?” Exploring the Social Dynamics of Massively Multiplayer Online Games,” *ACM Conference on Human Factors in Computing Systems* (Montreal, Canada: ACM, 2006): 407-416.

[56]

To be sure, *Warcraft* players had long shown extraordinary creativity in other ways. For example, mods and player-made game tools were a prominent feature of the *Warcraft* landscape since early in the series, and also played a significant role in *World of Warcraft*.

[57]

MOO, in this context, stood for “MUD, Object Oriented.”

[58]

A.A. White, “Chatting for Dummies,” *Game Revolution*, January 1, 2003, <http://www.gamerevolution.com/review/the-sims-online>.

[59]

Chris Collins, “Why Anyone Who Cares about the Metaverse Needs to Move beyond Second Life; Now Not Later,” *Fleep’s Deep Thoughts*, August 2012, <http://www.fleptuque.com/blog/2012/08/why-anyone-who-cares-about-the-metaverse-needs-to-move-beyond-second-life-now-not-later/>.

