A NEW LIMB

In May 2000 I was fired from my job as a reporter on a finance newsletter because of an obsession with a video game. It was the best thing that ever happened to me.

The job had two parts. The first part was desperately dull but easy enough for me to bumble through. Each morning I drove out to a farmhouse office complex located deep in the English countryside and sat on a Herman Miller chair in front of a large curvilinear desk. There I processed articles about how to format corporate curricula vitae or occasionally attempted to make sense of the information I had gathered in the second part of my job. Most of the time, however, I spent clicking through a series of online forums where people discussed the ups and downs of recently released video games. Anything would do.

The second part of the job took place in London. Rising at dawn, I traveled up to Charing Cross in the old slam-door train carriages and watched in silent despair as the City drew ever closer. The country office might have been unapologetically quiet and slow, but the City was numbingly,
achingly boring. I longed for someone to talk to, someone who was even remotely inclined to escape the world of banking. Inevitably I would find myself isolated in a seminar that focused on the workings of debit systems and direct payment pipelines. I would stand up, say my name and that of my employer, and then attempt to avoid speaking for the next four or five hours. I carefully filled my notepads with poorly understood jottings. As a graduate, I had assumed that I wanted to be a journalist of some kind, but I clearly wasn’t coping with this. What should have been tight, insightful reporting ended up being vague, impressionistic, often unusable information. The world of finance remained a forbidding mystery, and the stack of John Kenneth Galbraith books by my bedside wasn’t doing much to kindle my enthusiasm for economics either.

But there was something else going on in my life that ran parallel—almost contrary—to my suit-and-tie day job: a kind of double life. During my spare moments, I was submerged in a different activity, one in which I was completely at home. It was a video game called Quake III Arena. Gaming was a daily release, a few hours of energy and color to counterbalance my career in corporate tedium. With a cup of tea and late-1990s soundtrack (Britpop with a smattering of electronica), I launched myself into evenings of gleeful acrobatics. A torrent of explosions and power-ups vigorously erased the memories of boredom.

The Quake games are the direct descendants of that most notorious of modern video games, Doom. They are combat games set in a first-person perspective and filled with the latest in spectacular graphic effects. You control your character directly, seeing things from his or her perspective, shooting when you hit the trigger button, and picking up weapons and ammunition as you move. These games seem straightforward and approachable, since they
are so close to how we experience things in real life—you run around, see things from the character’s point of view, and so on. Yet the experience of *Quake* and its kin can be baffling for anyone who hasn’t already sunk hours into mastering them. Beginners find themselves in a state of confusion, unable to avoid looking at the floor or the ceiling for extended periods. Bumping into walls, unable to aim, or finding yourself obliterated by your enemies—the list of frustrations grows by the second. And they are all due to a dastardly control system that expects you to maneuver a keyboard and mouse in unison (or two thumbsticks when playing on a gamepad)—no small feat for any novice. Then there’s all the arcane rites involved in using a desktop PC to play games: install the patches, update the drivers, tweak the gizmometer. . . . This kind of gaming doesn’t make itself easy, and it’s tough to get yourself up to speed. Of course, anyone could, theoretically, pick up and play these games; yet, like riding a bike or driving a car, they’ll need a guiding hand to get out on the road. At weekends and during spare evenings, I was such a guiding hand.

*Quake III* has the capacity to connect to “hosted” games on the Internet. This means that a dozen or so people can connect to a server and fight each other remotely from the comfort of attics, offices, and bedrooms across the world. They can make up ad hoc teams or simply run amok, blasting each other with rocket launchers and lightning guns. I played on these online servers for countless hours, chatting away, fighting, learning new techniques. In fact, the days and weeks I poured into playing this single game meant that I had become unnervingly precise. I soon played at a level that combined detailed knowledge of the game’s workings with acute learned reflexes. To those who had just started playing, this kind of play seemed almost superhuman. The experienced few used weapon physics to fly up walls or
demonstrated innate spatial awareness that defied tactical expectations of less experienced players. Landing a missile right on top of an enemy without having seen him for several minutes, just because you knew he would be right there, right then, became a routine experience. It was considered a great honor to be accused of cheating. How else indeed could anyone play a game with this kind of proficiency?

Being accused of cheating wasn’t enough for me though, and I began to desire some kind of greater recognition for my dedication. I realized I could get something more out of the time I had invested: I could start my own team. Toward the end of the 1990s, games like Quake had become popular as competitive enterprises. Amateur teams played (and still play) scheduled matches over the Internet. Online leagues blossomed, and net-based communities were formed to help run the events. These communities provided servers for the online games and orchestrated league structures for the players to battle it out. I had already been involved in one casual online team while playing the Quake clone Kingpin, which had a theme of 1920s gang violence. So when Quake III was released in 1999, I decided to enter these new gladiatorial arenas with my own squad.

My initial recruitment plan consisted of simply talking to other players. Many of them had only ever played a few video games in their lifetime, having found the predictability and solitary focus of single-player games off-putting. But they experienced the online game as a revelation. Here was something more akin to a sport, with real spectators yelling hints from the sidelines and an army of human-controlled talent to show you how it was done. This human element transformed gaming for my players, and they each experienced minor epiphanies as they joined up with other, distant gamers for five-a-side Quake games of “capture the flag.” “It was like exercising a new limb,” recalled one
gamer I spoke to about that time. “I was suddenly practicing and arranging matches every other night, as if I was in a pub footie team—even though no football team would ever have me!”

I knew how he felt. Cold mornings, adolescent disinterest, and a nagging hip injury had meant that I was banished from the sports field for many years. I wasn’t going to be able to indulge in the camaraderie that sports teams felt or in the extended buzz of victory through dedication and cooperation. That entire swathe of experience had been cut off from me by cruel circumstance and a good dose of self-defeating apathy. Now, however, there was a possibility for some kind of redemption: a sport for the quick-fingered and the computer-bound; a space of possibility in which I could mold friends and strangers into a proficient gaming team.

And so I ran trials of sorts and trained players in how best to use Quake III’s many weapons. The first few sign-ups came from one-on-one duels, which, by their nature, meant you usually got talking with the other person. Usually the conversations were with someone whose native language was Russian or Portuguese, so the experience was often bizarre, occasionally awkward, but sometimes fruitful and friendly. After a few good fights and swapped instant messenger names, the founding team members began to appear. My extensive reading of Quake forums and fan Web sites (combined with seemingly endless practice) meant that I could rapidly improve the averages of my new players. I showed them how setting the mouse pointer to a slower speed improved their accuracy and how the in-game graphics could be stripped down and reduced to create a smoother, clearer experience. It was like fine-tuning a car, only I had figured out how it all worked through Web sites, forum posts, and some reverse engineering of game files.
Meanwhile, things in the world of financial journalism lurched along in an uneven fashion. My poor performance had been noted, and I knew that the situation was a downward spiral. I dreaded the 6 a.m. starts that would land me in central London, and I longed to get back to my increasingly successful foray into team gaming. The discussions about corporate finance inexorably turned into indecipherable droning as my brain reduced the non-\textit{Quake} signal to static. I plodded on, trying not to draw attention to the idle creaking of my expensive chair. I did what I could but began to receive fewer and fewer assignments. I was worried. I felt doomed.

The team, meanwhile, had just signed its essential star player. A natural talent and an astute tactician, he gave the team a vital edge. Almost a year after signing him, I met this prodigy at a games weekend in a small town in Devon. Paul was accompanied by his brother-in-law. He was an unassuming IT technician with a receding hairline. He had an expensive car and . . . , well, there’s no accounting for people’s taste in pop music. I think it’s fair to say that we didn’t really connect, but that didn’t ultimately matter. Our shared interest in competitive \textit{Quake} was all that we needed to worry about. The team needed Paul, and for at least a short time, Paul needed the team, too.

During that time, we entered competitions and even won a few prizes for participating in the demonstration matches that were shown on the early Internet TV station Network of the World. We knew that we could never beat the best that Europe had to offer, but our game nevertheless rose to the point where we began to hold our own against the lower echelons of the top few thousand \textit{Quake} players. Even our casual play was now far from casual: we examined everything, analyzed every move in hour-long discussions after
the games. I was by now an utterly obsessed player-coach. I arranged practice schedules and sparring teams to meet us on private servers. I watched recordings of famous matches, especially those featuring teams we were about to face. I filtered everything back to my players: game configurations that might give us an advantage, tactics that would give us the edge, player formations that might give my team members a split-second drop on their opponents. What my team lacked in raw skill with a rocket launcher they would make up for in preparation, computing finesse, and insider knowledge. I was delighted when I managed to snare top-class players and distraught when we weren’t deemed talented enough to be worth their time. I constantly nursed egos in private chat rooms, trying to field the best team while at the same time giving everyone a go. “Honestly, Crazy Joe, you’re a fine player, but the others turned up for more practice sessions . . .”

I cracked down on unsporting smack talk, gave (supposedly) rousing speeches (sometimes typed, then later over Internet voice communications), and played occasional Cupid between the extremely shy woman who had joined the team and the extremely shy man whom she clearly intended to hit on. We struggled, we played, we won, and we lost. We clawed our way up through the divisions. Each victory was a euphoric celebration, each loss a crippling disaster.

On the train to London, meanwhile, I routinely passed a placard advertising some kind of telephone help line. It asked me, in bright yellow-on-pink letters, “Are you cracking up?” I looked down at the frayed edges of my notebook and wondered how long all this could go on. How long could I hold down a job when my mind was lost in gaming? Was I lying to myself about even trying to be a journalist?
Soon thereafter the crucial moment came to pass. My manager, Richard, sat me down and fixed me with a clouded look. He had, he assumed, some bad news: “We’re going to have to let you go.”

The hallelujah chorus sounded. I felt the rush of sudden freedom: now there was nothing between me and pure indulgence. I could concentrate on the team seven days a week, without interruption, without tortuous journeys into the heart of finance. It was a moment of thrilling emancipation. I plunged into it, headfirst, playing for long days and late nights. Dawn was a familiar sight at bedtime. The team grew and became more cohesive. We found like-minded teams to spar with, allowing my players to grow more confident. Soon they could play and win.

Needless to say, my attempts to secure new employment were infrequent. Stacks of unprocessed job advertisements grew on either side of my desk, and my savings dwindled. Games refused to pay the bills, and I would eventually have to make a genuine effort to look for full-time employment. I made a few sullen forays to industrial parks and office blocks, and I even began to learn simple programming languages, but unbeknownst to me at the time, my break had already arrived. I had, thanks to the insistence of some friends, applied for a position on a games magazine. I expected nothing, didn’t care, and told the interviewers much of the story you’ve been reading here. They conferred, unsure. Unsurprisingly I didn’t get the job. But I did later receive a call asking whether I could possibly write something that would help the magazine’s readers play a little better. I said I probably could and wondered if they could help me avoid having to return to London and the worrying question on the pink and yellow billboard. The answer was yes.
BLEEPING AND ZAPPING

Video games changed my life. It’s a pleasing convenience to be able to pinpoint a moment, or at least a period of time, that enables me to chart the change so precisely. Thanks to my *Quake* expertise, I was soon in a full-time job that didn’t have anything to do with corporate treasury issues or early morning meetings in bank seminar rooms. It was a radical shift both professionally and personally, and it was almost entirely unexpected. After all, games might have been crucial to my day-to-day identity, but I had never admitted as much to myself. They were a distraction, an excellent waste of time. They had no specific value, and I never expected my obsession to pay the rent and focus my entire career.

As a games journalist, I went on to meet plenty of other people whose lives have been changed, defined—perhaps even saved—by gaming. Many of the gamers I’ve met have been involved directly in the games industry, but others are simply people for whom gaming is a continuous presence in their lives. Games have catalyzed major changes for some of these people, as they did for me. But they usually change us in subtler ways. These subtler effects have only begun to be mapped by researchers, commentators, and gamers. Sometimes the effects seem to be negative: people so distracted that they lose sight of their responsibilities—ignoring jobs, families, and everyday lives. Other times they are positive—stimulating intellectual and personal growth or awakening unrealized ambitions in creative minds. Gaming seems to be neither wholly positive nor entirely negative: its value (or lack thereof) is indistinct and undefined. Perhaps more critically still, many people lack the conceptual vocabulary to describe games in a positive way at all. One
of the most routine complaints in the games industry is “My parents/partner/peers still don’t believe I have a proper job.” It’s not just that many people don’t take gaming seriously, they don’t know how to take it seriously. And why would they, if their only experience of it was a drunken game of *NHL Hockey* after a night out at a singles bar or the weird Japanese cartoon creatures that a younger brother or sister seems to care so much about?

I am going to try to persuade you here that games are worth paying attention to. They are worth taking seriously and thinking and talking about in some detail. They might even be a very good thing for our culture as a whole. But what is most important to my analysis is the fact of video games’ ambiguous social value: they’re beloved by gamers and derided or dismissed by the uninitiated. Of course, I might not be able to resolve that ambiguity, but I do intend to offer snapshots of gaming life that will make it a little clearer why gamers themselves value games—or at least some games—to the extent they do.

My generation is the first to live their entire lives in the company of electronic, interactive entertainment. We see the TV as a facilitator of rhythm-action rapping games as much as a way to tune into the daily news. Our expectations of what a game should be are defined not by sports, chess, or a deck of cards but by gamepads, plasma screens, and motion sensors. Our cultural backdrop is defined by exposure to a constantly evolving repertoire of technologies, technology that seems to stake out new territory for itself with each passing month: we do not expect things to stay the same. We expect newness and change. Video games represent some of the most sophisticated computing and programming technologies available: a supercomputer in every home and a complex networking gaming platform on every
mobile phone. It’s a technology that we expect to evolve. Games get prettier, faster, louder, and more expensive. Yet today’s consumers experience this rapid evolution of electronic gaming as just another element of everyday life, as commonplace as TV shows, Italian food, or shopping.

Nevertheless, many of the gamers I encounter report the same experience of feeling as if they have engaged in some kind of transgression. There’s often a sense of guilt that comes with tales of gaming exploits, as if games were a vice or a character flaw, a symptom of one kind or another. I began to take note of these reports and often found myself wondering what it was that people were really doing when they were playing video games: was it an obsession with pretty colors or with sheer novelty? Was it something deeper? Were people getting anything worthwhile out of games at all? Some researchers have begun to examine this question in some detail. Work carried out by psychologist Richard Wood and his colleagues at Nottingham Trent University included an online questionnaire in which gamers answered questions about their habits. A majority reported that they felt as if they were “wasting time” playing games, and yet most of them were hard pressed to identify what else they should have been doing with that time. Reading a book, perhaps? That was one popular answer.

I asked Henry Jenkins, the smiling, bearded codirector of the MIT Comparative Media Studies program, why he thought so many gamers gave this kind of response. Jenkins observed that many activities can be engaged with productively or unproductively and that games were no exception—a lot of the gamers probably were wasting their time by playing games. Yet there was another force at work here, one that he was keen to identify: “Most of us are over-scheduled and overburdened with other aspects of our lives, and it ought to be a sacred thing to sometimes goof off with
our mates,” said Jenkins. “But I think the issue goes deeper than that. We lack ways of justifying or explaining the value of games as a meaningful form of activity. They are under fire from all sides. Most people treat them as debased and unproductive. And we start to feel guilty because we internalize some of those perceptions and descriptions.”

I believe that the nature of those “perceptions and descriptions” is an important part of identifying what it means to be a gamer and how that identity could—and perhaps should—change. Games, particularly in the West, have been identified with a nerdy subculture and still carry negative social connotations. In some cases, games are actively vilified. The British parliamentarian Boris Johnson described the effects of video games like this: “The nippers [children] are bleeping and zapping in speechless rapture, their passive faces washed in explosions and gore. They sit for so long that their souls seem to have been sucked down the cathode-ray tube. They become like blinking lizards, motionless, absorbed, only the twitching of their hands showing they are still conscious. These machines teach them nothing. They stimulate no ratiocination, discovery, or feat of memory.”

Jon Henshaw, the editor of parenting Web site FamilyResource.com, offers a similar, if somewhat less sensational, description of what gamers are doing: “Instead of taking a trip, mountain biking, or hanging out with friends at a café, gamers spend their time in a virtual reality. Whereas real-life experiences bear long-lasting friendships and memories, video games do not. The only pictures that come from video games are screenshots, and the memories that are created from playing those games are ultimately meaningless.”

Could the experience of gaming really be “meaningless”? It’s a given that many games (like many books or films) are
badly made and trashy, but are the souls of gamers actually suffering under the glare of this digital menace? My own life was changed for the better thanks to the expertise I gleaned through habitual gaming, but it seems clear to me that there’s something else to be earned from the act itself, something positive about simply spending a few hours a week playing games. The gamers I meet aren’t vacant-eyed zombies or “blinking lizards.” They (usually) have smiles on their faces, and they express lively opinions on what they’ve seen on many different types of gaming screens. So my cards are on the table: I’m going to offer some alternative, positive descriptions. This analysis will show how video games have inspired artists, transformed rags into riches, given purpose to empty lives, and entertained bored people on a Sunday afternoon. We’ll see how games turned young people into heroes and how gaming has enabled the realization of previously unimaginable ambitions. We’ll see how games can make us better people, how they dissolve the horrors of boredom—and how they can function as propaganda for a wide range of worthy and unworthy causes.

MONSTER RETURNING

Despite a deluge of positive images of hip, popular gamers since Disney’s *Tron* in 1982, games in the media have long been dogged by negative descriptions. Games are routinely associated with “youth in crisis,” and stories about obesity or falling educational scores are often illustrated by stock footage of gamers at play. Like other forms of new media before them (pulp fiction, comics, rock and roll, film, TV), games have been portrayed as harmful, morally and socially. And they seem to be particularly hazardous to the mental and physical health of the young. Yet in years of reporting on games, I’ve uncovered little evidence for such
claims; nor is this supposed degradation evident in my own life or in the lives of the people around me. (Was I really fired because of an obsession with a game, or was I simply in the wrong job?)

I’m going to supply some unambiguously positive descriptions of gaming and of gamers that I hope will, among other things, enable gamers to identify the value in their pastime and, ultimately, find even more productive and meaningful ways of engaging with it. Most of the time, of course, we will be simply “goofing off” playing Grand Theft Auto, but perhaps gamers and others will eventually be able to see that, too, as sacred.

One gamer for whom fresh descriptions of gaming are nothing new is the experimental installation artist Brody Condon. He creates artworks that are influenced as much by his video game experiences as by the emotional and social traumas that he feels define him as a human being. His work offers strange visions of gamelike figures: a computerized Elvis toting an AK-47, a thousand consecutive deaths of video game characters, a battle of performance art in an LA gallery, a sculpture of a famous game developer as he appears inside his own game.

Like many other gamers, Condon feels that much of his own personality has been shaped by gaming: “I was born the same year SpaceWar was created. I was the juvenile delinquent at the local arcades before they disappeared. I took over [role-playing sessions] if our usual Saturday afternoon scenario creator, a Presbyterian minister and religious school vice principal who still lived with his mother, was sick. I subscribed to Nintendo Power Magazine. Floppy disks came in the mail. I dressed up in fantasy armor and beat my friends over the head with sticks and foam. I sat in
a closet in front of a hand-me-down TI-99 and programmed text-based adventure games that I would lose as soon as I turned the damn thing off. I was ‘the kid that could beat any game’ at my shitty public school.”

These experiences provided Condon with his unique visual language when he eventually studied art. Games gave him a way of working that was all his own and, in doing so, enabled the artist to create himself. “These days, whenever I meet actual game developers or speak at game conferences, I feel like a kind of Frankenstein,” explained Condon as he talked to me about the connection between games and his art. “I’ve been playing their games my whole life, you know? And here I am, like the monster returning to the master that created it, arms outstretched, mumbling, ‘Give my life meaning.’”

Condon, like most artists, takes his cues from the world he is presented with, and much of that world consists of video games. If games have value here, it’s in providing Condon with a focus and language for his work and the inspiration to create it. What Condon does is recognized as art in the gallery sense, with its visually striking juxtapositions and video game materials presented out of context. In fact, game-related video installations and multimedia constructs have long been a part of gallery-level exhibitions, and the visual concepts supplied by games have been embraced by dozens of contemporary artists. But games and art nevertheless maintain an uneasy relationship. And in my opinion, the question of whether games themselves can be art in the same way that, say, sculpture and portraiture can occasionally overshadows the fact that games are used by people like Condon for highly creative and innovative purposes. This question has generated long, overwrought, often tortuous debate and has been hotly contested by
gamers, academics, and critics of all kinds. Like the value of games generally, the value of games as art is indistinct, unresolved, and notoriously messy.

Once again the thoughts of Professor Henry Jenkins are illuminating, this time on the subject of why games have had to struggle for the same status as other expressive media: “We might ask where the resistance is coming from. It is coming from partisans of other arts. It comes from film critics who are worried that their preferred medium is going to be superseded. It is coming from literary critics who are concerned that young people are playing games rather than reading books. It comes from those whose notion of art is so narrow that very few works qualify, as opposed to those of us who have a fairly expansive notion of art and are willing to welcome in new aesthetic experiences. It comes from gamers who worry that calling games art means that they are going to become too obscure and pretentious (small danger there, guys). It has to do with our totally messed up notion of what constitutes art.”

For the purposes of this text, I think that the issue of whether games constitute art can be safely ignored. I think this partly because there are so many other reasons to value games and partly because, as Condon insists, “the question of what is considered art (or not art) hasn’t been relevant since 1929, when Duchamp put a urinal on the wall.” Condon argues: “It is about context. Call it art, whatever it is, and I will accept it and will discuss it as such.” I feel the same way.

The reason for arguing that games—at least some games—deserve to be classified as art is that it offers gamers a more positive, culturally sanctioned way to describe what they do. It suggests that games are not mere trivia. It also enables us to place a higher value on—to elevate—what game developers do. Just as the term art sug-
gests that strolling through a gallery isn’t just time spent staring at passing walls, it would also suggest that gaming involves more than twitching in front of a monitor.

GHOST PATTERNS

Games—like films, books, sports, and other cultural activities—cater to deep emotional, intellectual, and sensual needs. Gamers buy games not simply because they’re fine pieces of art or even well-programmed pieces of software but because they produce significant physical and emotional responses. The abstract satisfaction of deleting a row of Tetris blocks, the heart-quickening thrill of a snowboarding simulation—these are the reasons we play games. The responses produced by games vary endlessly in their qualities, but their existence and their significance is undeniable. My task, and the task that others have begun to take upon themselves, is to find out what value the responses that games produce in us really have. How do games affect us? How does playing a video game change the person who plays it?

Steven Johnson’s popular book-length thought experiment Everything Bad Is Good for You begins its exploration of the beneficial effects of playing games by pointing out that games, far from being slothful indulgence, are usually formidable undertakings. “The first and last thing that should be said about the experience of playing today’s video games, the thing that you almost never hear in mainstream coverage, is that games are fiendishly, sometimes maddeningly, hard.” Johnson spotted what I knew from playing Quake III, which is that games present us with unusual, often intractable problems. We do not sit back in our armchairs and passively digest them—we puzzle over them, wrestle with them, and defeat them.
The intellectual value of video games, Johnson argues, has to do with the fact that they aren’t explicit about their rules. Unlike a traditional game, such as chess, where the rules are fully spelled out in advance, you have to uncover the rules of individual video games as you go along. Most computer games are nonexplicit “fuzzy” experiences. “You have to probe the depths of the game’s logic to make sense of it,” says Johnson, “and like most probing expeditions you get results by trial and error, by stumbling across things, by following hunches.” Johnson suggests that this process of “probing” is a complex learned activity that is analogous to the scientific method. This assertion is seconded by Professor Stephen Heppell of the University of East Anglia, who writes in “Unlimited Learning”: “My own research work has revealed that a very clear set of strategies has evolved by children playing computer games. To succeed in even the simplest platform game, children have to lock their problem solving into a tight cycle of observe, question, hypothesize, test. Curiously, this exactly matches the scientific method that education has been trying to embed in young scientists since the birth of science.”

Video games are more about how you play them than about their fancy explosions or even their characters and stories. What motivates the mushroom people is infinitely less important than learning how to run, jump, and open treasure chests. During video game play, we engage in processes of gradual, often rather complex experimentation. These processes uncover rules about the game world that we can use again in other situations. The players who realized that every firearm recoil pattern in the game Counter-Strike was the same suddenly had a supernatural understanding of the physics of their game world: what should have been random suddenly had a pattern that could
be understood and predicted. Every single round from an automatic weapon could be anticipated.

However, unlike the scientific method, much of what gamers learn is outside conscious awareness. As we play, we internalize various rules and discover methods, often relying on them because they occasionally reap rewards or because they just happen to feel like the right thing to do in the game world. Thanks to months of playing *Quake III*, I learned instinctively that by hitting certain keys as my *Quake* character jumped, I could travel farther. As it happened, this had been specifically designed into the game, but I only realized I was doing it when, months later, I read about the concept of “strafe jumping.” Someone else, long before, realized he could get to a high ledge by jumping on the explosion from a rocket. The blast wouldn’t be enough to kill him, but the inertia would be enough to propel him higher and faster than mere leaping. This technique now arrives almost subliminally for *Quake* players, but rocket jumping has long been recognized as one of *Quake*’s key skills.

Another example of unconscious, practical learning from *Quake* is that of leading your shots. When playing in an online game, the signal from your “snapshot” of the game has to bounce from your computer to the remote computer on which the gaming is being hosted and back again. This means that where your game draws your enemy and where the server thinks he is might be slightly out of sync. Shooting slightly ahead of where you see him allows players to counter that. Many *Quake* players learned to do this without even being able to explicitly identify it as a tactic. It simply felt right.

Of course, there is also the potential for something more complicated, beyond “probing” and beyond unconscious
mastery of a gun that shoots lightning bolts. This is a process that Steven Johnson defines as “telescoping.” Telescoping refers to the way that gamers have to deal with multiple objectives, each one resting inside the next like the concentric rings in a telescope. Johnson uses the example of a *Zelda* game in which the ultimate objective is to rescue your sister. To complete this core objective, players engage in continuous management of layer after layer of secondary and tertiary objectives. Each one must be completed before other tasks are possible. For Link, the main character in *Zelda*, killing an enemy so that he can cross a bridge requires that he have a weapon. Having a weapon requires that he complete the weapon quest, completing the weapon quest means speaking to the fairy, speaking to the fairy means accessing the map, and so on and so forth. Gamers have to be able to juggle all this and understand which objectives to sideline and when to do so, if they are to get closer to their overall goal. Johnson’s thesis is that this kind of layered play develops our abilities to cope with the chaotic storm of information that constitutes modern living. Games are so hard, so complex, that we reap huge cognitive rewards by learning to overcome them. “Information overload” isn’t such a problem for those people who have taken lessons from gaming, says Johnson.

A growing body of scientific study supports Johnson’s claims. A report published in October 2006 by the Federation of American Scientists (FAS) concluded that contemporary educational systems lacked the capacity to assess the kinds of skills that video games taught, meaning that they ultimately went undetected. Additionally, the FAS paper concluded: “Video game developers have instinctively implemented many of the common axioms of learning scientists. They have used these approaches to help game players exercise a skill set closely matching the thinking, plan-
ning, learning, and technical skills increasingly demanded by employers in a wide range of industries.”

The range of cognitive skills found to benefit from time spent gaming continues to widen. Researchers at the University of Rochester in New York have been examining the plasticity of human visual processing by using video gamers as test subjects. The Rochester team wanted to see whether habitual game playing improved visual skills, and their report explained that “video game players were found to outperform non-video game players on the localization of an eccentric target among distractors, on the number of visual items they could apprehend at once, and on the fast temporal processing of visual information.” This kind of research—the cognitive neuroscience of video games—has only recently been undertaken, but it is nevertheless a rapidly expanding subject. The work so far performed in the field has consistently demonstrated that habitual gamers tend to have improved spatial cognitive skills, enhanced visual attention, and the ability to process multiple tasks with greater efficiency. Games, it seems, change gamers’ brains for the better.

NINTENDO SURGEON

It seems that gamers are learning new techniques for managing information. Academic studies have begun to illustrate that video game principles go hand in hand with new ways of learning. The Entertainment and Leisure Software Publishers Association (ELSPA) wants to show us that games can help in other, more formal places, too—particularly in schools.

ELSPA has made numerous attempts to provide due credit for the activities of its members. An example of this is their 2006 paper “Unlimited Learning,” which set out to
highlight how games fit into the overall process of learning and education in schools. The paper lists dozens of examples in which games have been used as teaching aids and learning tools. It shows that games give us the capacity to teach in ways that were previously out of reach. We could imagine, for example, a board game or pen-and-paper role-playing games based on running a school, but when you add to this a computer, 3-D planning systems, and the ability to control real-time calculations of costs as they will be encountered in the real world, you suddenly have something both accessible to children and complex enough to teach adult ideas.

One U.K. school, in Birmingham, opted for an approach that melded exactly these kinds of ideas. A contributor to the ELSPA report explained how it worked: “We were originally going to use SimCity 4 but thought it too detailed for the 1.5 hours we had the children. School Tycoon [a commercial product] allowed us to get the children to develop their spatial thinking skills, fiscal skills, numeracy, and even social awareness. Many did not realize the jobs that are entailed in running a school and how essential they are. The pupils were given cards to make their own ‘physical’ school within a budget and were then shown the software. They were allowed to play in the ‘sandbox’ mode for an hour and then we print-screened the final school with financial and academic results to determine who had been successful.” Approaches like the School Tycoon project allow students to benefit from the graphic, illustrative qualities of gaming systems, while at the same time learning to work with physical models and practical mathematical systems. Better still, being good with games is something that kids want to demonstrate to their peers.

Another teacher, Tim Rylands, used an adapted version of the game Myst as a teaching aid in classes of children
7–11 years old. The game improved literacy because of its text focus and its comparative “cool.” The appeal of playing a video game to the children meant that they maintained attention longer than they would have done with a book, even though the amount of text delivered was similar. Using the game also had other social effects for the class, because it was played by committee rather than through solo decision making. One of the students had this to say about her experience: “The most difficult thing about using Myst at first was having to make decisions as a group to solve the problems. We needed to learn a lot of negotiation skills so that we could work our way towards the solutions together. It’s fun to talk about where you have got up to in the game and how to solve different problems.” In this case, gaming was not simply a cognitive exercise or cerebral puzzle, it was a social conundrum that children were forced to resolve through discussion and cooperation.

In many ways, of course, these examples are really nothing new. We’ve known for a long time that the process of play is crucial to the development of all greater mammals, particularly humans. Studies with developing animals have consistently shown that creatures who have been deprived of suitable play suffer from developmental problems. Psychologist Diane Ackerman’s 2000 book on the development of human beings, Deep Play, has this to say about our most vital method of learning: “Play is an activity enjoyed for its own sake. It is our brain’s favorite way of learning and maneuvering. Because we think of play as the opposite of seriousness, we don’t notice that it governs most of society. . . . even in its least intoxicating forms, play feels satisfying, absorbing, and has rules and a life of its own, while offering rare challenges. It is organic to who and what we are, a process as instinctive as breathing.” We learn through infantile roughhousing, we learn through adventures with our
toys, and some of us learned secondary-level French by playing pirated adventure games. Whatever the particulars, there’s no way to deny its significance. Video games are rapidly becoming a dominant and useful form of play: now we have to understand why that is and what it means.

If schoolchildren can learn from the inherent playfulness of video games, then so, surely, can U.S. marines. In early 2006, the University of California’s Information Sciences Institute developed a learning suite called Tactical Iraqi, with the aim of teaching soldiers how to interact successfully with Iraqi civilians. The system was based on familiar video game conventions: a first-person point of view, a menu of options for character behavior, and so on. The system taught spoken as well as body language, allowing soldiers to experiment in a safe environment and learn the best way to approach social situations with the people they were going to be policing on a daily basis. Allowing soldiers to work and practice at their own computer terminal wasn’t just convenient for military instructors, it was also (reportedly) intuitive to a generation of soldiers who had grown up with video games.

The U.S. military has explained that video games were “necessary and natural” for training. Nevertheless, there is no evidence whatsoever that games have a causal link to violence or that gamers are less inhibited about using weapons, as some U.S. military officials have suggested. All such claims have, so far, been groundless and often transparently motivated by ulterior concerns. (I’m a Quake genius and I can’t hit a clay pigeon with a 12 gauge.) Personally, I regard projects like Tactical Iraqi as positive for gamers, even if the politics of that particular project seem dubious and even if military officials do harbor hopes that games will teach their charges how to destroy people with multimillion-dollar attack helicopters.
I do not want to diminish the idea that games are good for hand-eye coordination. There are plenty of reasons to believe that playing video games increases proficiency with technological interfaces and improves general “twitch” skills, and the importance of this should not be understated. Our interaction with electronic and mechanical devices becomes ever more important as the technological level of society rises. One crucial example of the relation of games to this phenomenon comes from the work performed by New York surgeon Dr. James Rosser. An exponent of “minimally invasive surgery” and an experienced medical practitioner, Rosser seems about as far from artist Brody Condon as you might care to imagine. Yet both are gamers who have made something positive from their time spent with games. Both men have applied what they learned from games to their professional lives. Games helped Condon find his mode of artistic expression; Rosser used them to improve the coordination and dexterity of his trainee surgeons. Rosser insists that playing on a Nintendo console is as essential a part of the success of his Top Gun training program as more traditional exercises. Surgeons who played at least three hours of Super Monkey Ball each week made 37 percent fewer errors, according to Rosser. Games weren’t optional or trivial for this surgeon: they were mandatory. “You have to be a Nintendo surgeon,” he told Wired magazine.

THE ELECTRONIC ANTIDOTE

Computerization has transformed our idea of what constitutes a game. The Copenhagen-based gaming academic Jesper Juul argues that the computer stands to the medium of gaming as the printing press stands to the medium of writing. Until the printing press was invented, the written word
only had a limited set of applications; likewise, games were previously limited to boards, cards, or verbal play. Now, thanks to computing technologies, their application and potential seems unlimited, and they could scarcely be more different in their content and themes: contrast *Robotron* and *Oblivion* or *Second Life* and *Blast Corps*. Video games represent a previously unimagined terrain for play, one that is almost impossible to survey with any authority. A critic of games journalism recently asked, “Where is the Lester Bangs of games journalism?” And a chorus of gamers responded, “Where is the man who has time to play even a fraction of the games out there?” In just 40 years, the concept of gaming has exploded into a wide palette of gaming experience. The possibilities for play—and learning through play—are gradually opening up new ground (as well as meticulously retreading successful ideas over and over). They are also ushering in some pleasing, constructive trends. Still, I am far from thinking that laudable ends, such as learning and education, are the most important possibilities that have been opened up by the proliferation and evolution of gaming. In fact, though those are positive things, what is most valuable to me about computerized play is the fact that it offers new and far greater possibilities for being entertained.

This claim, of course, brings us full circle back to a more conventional idea of what games are: namely, that they’re fun ways to pass time. Sure, they improve reaction-based skills—skills that are often transferable and demonstrable, as Dr. Rosser believes them to be. And they might just make us better soldiers or students. But that’s not their main function. In some cases, they might even make us smarter, as Steven Johnson suggests, by improving such cognitive skills as information handling and problem solving. But let’s not lose sight of their core value: games are
an antidote to boredom, an excellent cure for a seriously de-
bilitating malaise.

I believe that boredom is a far greater problem than most people are willing to acknowledge. This lack of ac-
knowledgment may reflect the fact that boredom is so closely associated with idleness that many people find it hard to believe that someone might be bored for legitimate reasons. Boredom is frequently dismissed as a personal fail-
ing. But that’s simply not the case. Boredom is often a re-
sult of circumstance rather than a general lack of enter-
prise. A person will often be bored by something. We often find ourselves at a motivational loss or without the means to keep our minds suitably occupied—think of the impor-
tance of a toy to a child whose family is visiting the antique realm of an elderly relative or the significance of a book or mobile phone when stranded in the experiential desert of an international airport. We all experience boredom at some time or other, although some of us are more resistant to it than others. It seems safe to say that avoiding bore-
dom is important to almost everyone, and some of us have developed complex strategies for expunging it completely. Perhaps one of the crucial reasons why boredom is so ig-
nored is that it is gone and forgotten when it is resolved. Unlike melancholy or alienation, boredom is utterly tran-
sient and intangible. It is so nebulous and vague that philosophers and psychologists despair of coming to grips with it in any meaningful or helpful way.

My personal familiarity with the agonies of boredom drove me to think about it in more depth, but I initially un-
derstood little about the condition. Boredom remains elu-
sive to almost anyone you might talk to—even the literature of boredom is notably uninformative and thin. Most of my own understanding of it derives from a book called A Phi-
losophy of Boredom, by the Norwegian philosophy professor
Lars Svendsen. This unassuming little tome, first published in 2005, strikes deep at the heart of the concept, identifying trends within boredom, strains of boredom, and the relationship between boredom and modern life. Until you take some time to consider boredom as a significant and complex subject, as Svendsen does, it might not seem particularly significant. The more we delve, however, the more we see how broad the problem is. Svendsen, too, notes that boredom is one of the least well-studied aspects of human life, despite widespread reference to its consequences throughout philosophy and literature. Being less romantic than other maladies of the soul, boredom has been relatively neglected by humanists and scientists.

What is clear is that use of the term boredom has increased ceaselessly since the eighteenth century. It cannot be found in English before 1760, and although Svendsen notes that some European languages came up with equivalent words in the centuries before, they were generally derivations of the Latin for “hate” and carried similar meanings. Usage of the term in its contemporary sense nevertheless increased steadily from the late eighteenth century, and by 1932, boredom had come to denote something genuinely worth worrying about, as Svendsen cites Bertrand Russell’s thoughts on the matter: “Boredom as a factor in human behavior has received, in my opinion, far less attention than it deserves. It has, I believe, been one of the motive powers through the historical epoch, and it is so at the present day more than ever.” Boredom, it seems, is not a new problem, but it is one of peculiar concern to modern humans.

Svendsen also quotes Fernando Pessoa, who identifies boredom as “the feeling that there’s nothing worth doing.” The bored are those people for whom no activity seems satisfactory. The problem is often not that there is a lack of
things to do in general but, rather, that there is a lack of things that are worthwhile. Boredom can arise in all kinds of situations, but it usually makes itself known when we cannot do what we want to do or when we must do something we do not wish to do or something we cannot find a satisfactory reason for. “Boredom is not a question of idleness,” suggests Svendsen, “but of meaning.” Boredom does not, however, equate to the kind of meaninglessness found in depression. The bored are not necessarily unhappy with life; they are simply unfulfilled by circumstances, activities, and the things around them.

In my experience, gamers are rarely bored when they have access to their hobby. (And many are deeply bored when disconnected from it.) Obviously games do not provide a solution for everyone, but could they be the gamer’s antidote to boredom and therefore meaninglessness? Could the end-in-itself of mastering Pac-Man or Secret Of Mana be enough to banish the curse of boredom from our lives? And does that imply that games provide us with a distinct value? In a world where so many of us feel bored and alienated from our jobs, could games provide a special kind of amusement, one that instantly dissolves the memory of office-bound tedium? Are these fantasy projects really just as good as anything else—books, art, team sports, study, politics—that might fill out lives? Are the small victories in digital worlds really enough to keep the gray blankness of boredom at bay? “Leisure is in itself no more meaningful than work,” says Svendsen. “The basic question is how one chooses to be idle.” For those of us who choose video games, “idleness” can seem extremely satisfying, although we’re seldom idle in any obvious sense. Games are hives of activity. A few hours spent defeating puzzles in Mario Sunshine (often passing the controller back and forth between my partner and myself) seems just as fulfilling as most
other leisure activities and happily balloons to fill almost any length of time you might imagine. Games are often dismissed as a timesink that makes us oblivious to the passing of the hours—but that’s part of the reason we play them, and it is, in my opinion, a very good thing.

It is not a coincidence that video games now comprise some of the most sophisticated and expensive technologies in the world. We have plowed countless millions of dollars into developing these electronic systems, and only a fraction of it is done for purely commercial reasons. The other motivation—amusement—is far more powerful. Gaming has claimed a huge stake in our culture, especially if you define culture as the time we spend on doing things that we don’t have to do. And it is not chance that our digital entertainments are so complex and demanding. Getting to the end of *Space Trip* or completing *Resident Evil 4* are hardly trivial undertakings, and it says something about our desperation to sidestep boredom that so many tens of thousands of people have worked their way up to level 60 (or 70) in *World of Warcraft.*

Games represent a uniquely modern response to the proliferating phenomenon of boredom. Games are an electronic antidote to the chronic condition prophesied by Londoner and author J. G. Ballard: “I would sum up my fear about the future in one word: boring. And that’s my one fear: that everything has happened; nothing exciting or new or interesting is ever going to happen again. . . . the future is just going to be a vast, conforming suburb of the soul.” Ballard’s fiction is famous for exploring the idea that humans might end up resorting to psychopathic acts to escape this “suburb of the soul.” He sees the homogenous and commercialized future as a bleak one, filled with Svendsen’s boredom-through-meaninglessness. But my aim here is to show that we have rather less destructive solutions at hand.
for diverting such a bleak future—tools for play; engines for novelty and thrill, expression and exploration. Take time to examine a cross section of video games and you’ll encounter grand life simulations, blistering fictive racing experiments, ultradetailed management tools, savage retina-roasting fractal spectra, pet dogs, Escher physics, digital cooking competitions, boundless horror, and impossible geographies. Even if you don’t share the bleak outlook of soothsayers like Ballard, video games still represent a fascinating, ostentatious landscape of experiences that were not previously available to us. Perhaps we have boredom to thank for that.

The differences between genres of games are now so startling that commentators often struggle with the label of “game” when attempting to describe them. Contrast the players who puzzle through *Tetris* to the *Second Life* denizens who run businesses in virtual worlds. Contrast people jigging on dance mats to the long, slow precipitation of planning in a game of *SimCity*. Contrast my 40 minutes of absolute reptilian-response engagement in a game of *Quake* to a *World of Warcraft* player harvesting herbs to make a magic potion. The differences, the experiential wealth of gaming, makes it tough to describe and even harder to survey, but the games do all have one thing in common: for minutes, hours, weeks, months, and years of our lives, games defeat boredom.

In his 2006 essay “The Space to Play,” the Nokia futurist Matt Jones considered the issues of play and gaming from the point of view of a designer and technological speculator. Jones wanted to show how designers could learn from activities like gaming to make their products more intuitive and more engaging. In so doing, he highlighted the psychological concept of “flow.” Jones explains: “Whether thrilling or relaxing, one thing that games de-
signers can teach those wrestling with other more general forms of interaction design is a mastery of ‘flow.’ Identified by psychologist Mihaly Csikszentmihalyi, flow in human experience ‘is a mental state of operation in which the person is fully immersed in what he or she is doing, characterized by a feeling of energized focus, full involvement, and success in the process of the activity’ (to use the Wikipedia definition). Flow and play are inextricable—Csikszentmihalyi refers to the ‘playground’ environment necessary to attain a flow state, and the balance of challenge and ability that governs the flow state is essential to the sustenance of good play.”

The flow state is familiar to all gamers (the slang reference is something like “being in the zone”), and it was the main reason why I was obsessed with *Quake III*. Running the team and my subsequent lifestyle changes were means to the perfect moments of electronic combat, the feeling of control and precision, the awareness of flow. The same thing can, of course, be true of driving a car, having an excellent conversation, or being immersed in writing. But the extent to which our experience of games is an experience of psychological flow goes some way to explaining why we value it. And in my opinion, this experience is more than enough. Notwithstanding all the other ways games might change us, all the improvements to cognitive skills, social well-being, and welfare they can offer, the best—and ultimately only necessary—defense of games is that they keep us engaged and entertained. From extended engagement in hypnotic pattern completion to punctuated moments of joy in victory, we get something from gaming that feels important. As games proliferate and become still more sophisticated, we may well find that the Ballardian idea of the future as inevitably boring becomes unthinkable. Gamers, I think, are already there.