DON'T BOTHER ME, MOM — I'M LEARNING

by MARC PRENSKY © 2003 Marc Prensky

PART I: GAMES ARE NOT THE ENEMY

In the opening three chapters of this book, I acknowledge and discuss parents' fears about games, and I'll begin to present the case that those fears are, for the most part, unfounded. I believe — and have the evidence to prove— that the real (though unspoken) reason kids play computer and video games is that they're learning. And it's by playing these games that our kids are, unconsciously, preparing themselves for their coming life in the 21st century!

Chapter 1: Of Course You're Worried: You Have No Ideas What's Going On!

"[My parents] said that video games were pointless and a complete waste of my money, time, and brain cells." — *a 14-year-old*

"In all our interviews with parents, we never found a parent who knew what their kid was doing." — a researcher

"6am. The sun is coming over the horizon. Five cops are on my tail, and a drug dealer just ran away with my money. Life isn't being kind to me right now, but in the next five minutes, I'm going to make the boys in blue wish they had picked on somebody else. "Then I'm going to track down that drug dealer and get my money back, and take whatever drugs he happens to be carrying. "And then, after all that, I'm going to go online, visit a public message board and tell the world all about it. This is all possible—in a legal, sane manner— because I am not actually doing these horrible things, but playing the deep, intriguing, and surprisingly educating Grand Theft Auto: Vice City."

If you are a parent today, you have every right to be worried about your kids video and computer game playing! Your kids are sitting (or lying) in front of the computer or TV for hours on end, - both alone and increasingly with their friends - doing something you do not understand and cannot control, except by pulling the plug out of the wall (and even then they have handhelds!) Rarely a day goes by when you don't hear on the news some new version of the "games are evil" message: "Games are too violent." "Games destroy our kids' minds." "Games teach the wrong messages." "Games turn our kids into monsters." You find yourself fighting with your kids about their game time, forcing them to turn off the machines to do their homework, or even to go outside and play on a beautiful day.

If you are a parent today, you have every right to be worried about your kids' video and computer game playing!

And then, adding insult to injury, your kids are constantly asking you to buy them *more* of this stuff—more new games, more online subscriptions, more hardware, systems, portables, cell phones. *Where will it all end?* you wonder. But the kids, it turns out, are right! You've been bamboozled into thinking all this game playing is bad! Kids *ought* to be playing these games and you *ought* to be encouraging them (within limits, of course) to play! Why? *Because they are learning!* Not only that, but almost all their learning is positive. In fact, I claim that your kids are almost certainly learning more *positive, useful* things from their video and computer games than they learn in school! "That can't be," you might say. "I've heard about video games. I know they're bad. If my kids are learning anything, it has to be negative." Sadly, most of what you heard about

games is either dead wrong, or at best way off the mark. Games are not the enemy. Today's kids want to be engaged, and their games not only engage them, but teach them valuable lessons in the process-lessons that we want them to learn. Video and computer games, in fact, are an important way that our kids are learning to prepare themselves for their 21st century lives to come. Sound ridiculous? Maybe, but it's true! It's the message your kids have been trying to tell you over and over again, but you wouldn't listen. Now, finally, PhDs, MBAs, MDs, and other responsible, intelligent adults from outside the games world are beginning to say the same thing. And they're beginning to understand, and honor the tremendous work that game developers have done over the last thirty years, and especially in the last ten years or so. So it's time, perhaps, to re-think your position. Admittedly, the first video games were fairly primitive experiences where kids-mostly boys-shot at each other mindlessly. But today, they're deep, rich, 30⁻, 50⁻ and even 100⁻hour experiences that appeal to boys and girls of all ages, to young adults, to older women, and, in fact, to people of all ages and social groups. But they especially grab our kids. One would be hard-pressed to find a young person in America who hasn't at least tried a computer or video game of one sort or another. When kids can't play games at home, they'll play at their friends', or play on the free demo machines in the stores that sell the games, or wherever they can. Probably the most important thing for you to understand about children's game playing is this: What attracts and "glues" kids to today's video and computer games is not the violence, or even the surface subject matter, i.e. the building, racing, or shooting. Instead, the true secret of why kids spend so much time on their games is that they're learning! And what they're learning is important to their future. Like all of us, including the adults who spend countless hours perfecting golfing, fishing, and other hobby skills, kids love to learn when it isn't forced on them. In fact, because their brains are still growing, kids probably love this non-forced learning even more than the rest of us. This is why game designer Rafe Koster says that the "fun" kids are always seeking is really a synonym for "unforced learning." Modern computer and video games are terrific at providing kids with unforced learning opportunities every second, and sometimes even

fractions thereof. And despite what the press would often have you believe, the overwhelming majority of this learning is positive. (We'll get into the specifics of these positive lessons in later chapters.) Unfortunately, our schools have turned "learning" into such a boring thing that most kids hate it. "Good" students are often just the ones who've learned to work the system. And more and more kids just turn school (and the rest of us) off. But they won't turn off their games.

The true secret of why kids spend so much time on their games is that they're learning things they need for their 21st century lives.

Just look around your and you'll see that the attitude of today's children toward video and computer games is the very opposite of the attitude that most of them have toward school. It's an activity they *want* to do. By the time he (or she) is 21, the average child will have logged 5,000–10,000 hours playing computer and video games - often in multihour bursts. (There are, of course, plenty of kids who prefer other things. They balance the really rabid gamers to make up the average of (depending on whom you talk to) 1– 3 hours of computer game playing per kid per day.) Unlike what's going on in most of our schools, electronic games offer children learning worlds that are so compelling, that they'll forsake almost anything else to be in them, and they'll fight hard not to have to leave them. *(Sound familiar?)* Of course that pretty much puts the lie to the 'short attention span" criticism so many parents and educators bandy about. As one professor says: "What they have short attention spans for are the old ways of learning!" It's not that the kid's *can't* do their schoolwork—their games, as we will see, are actually much more difficult. It's that they *choose not to*. Here's what it said on a t-shirt that I actually saw a kid wearing in New York City:

> "It's not attention Deficit— I'm Just Not Listening!

I believe that kids will start listening again when *we* begin to listen, and to value their pastimes and developing skills. As we move through the rest of this book, I'll show you exactly how, why, and what kids are learning from their games, and what this means for you, and your kids. We'll also talk about how you can use your kids' computer and video games to improve your relationship with your kids (believe it or not), and help them maximize the benefit from what they're learning. Remember that "horrible" rock and roll that our parents said would destroy our minds but we knew was fine? Now it's our kids' turn.

Chapter 2:

The Really GOOD News about Your Kids' Games

"I use the same hand-eye coordination to play video games as I use for surgery,"

- Dr. James Rosser, Beth Israel Hospital

Want your kids to grow up to be surgeons? – Let them play video games. Dr. James Rosser, the doctor in charge of laparoscopic surgery training at New York City's Beth Israel Hospital, found that doctors who had played videogames earlier in their lives made almost forty percent fewer mistakes in surgery! Yes, that's 40 percent! Rosser now has his doctors warm up before surgery by playing video games for half an hour. And why not? The controls of laparoscopic instruments resemble a videogame controller, and the entire surgery is seen only on a computer monitor. (For more on how game playing may help your kid succeed in life, see the end of Chapter 8: "What Your Game-Playing Kid Could Become" and Chapter 17: "The Seven Games of Highly Effective People.") Dr. Rosser's findings are typical of those reported by other videogame researchers. (Yes, there are serious videogame researchers!) Remember the 1-3 hours of daily game playing I mentioned in the previous chapter? Well, evidence is quickly mounting that our children's brains are adapting to accommodate all the new technologies with which they spend so much time. It's similar to the way boomers' brains adapted to all the hours spent in front of the television, and how kids' brains adapt when they learn to read or play a musical instrument. I'll talk more about how the brain adapts to experience in Chapter 5. What, exactly, are children learning from playing electronic games, and what are the benefits those lessons provide? On the surface, children who play computer and video games learn to do things: fly airplanes, drive fast cars, be theme park operators, war fighters, civilization builders, and veterinarians (and, let's be honest, to do some not-so-nice things occasionally.) But that's *only* on the surface. Today's games, as we will see throughout this book, go much, much deeper. In 2004, University of Rochester neuroscientists C. Shawn Green and Daphne Bavelier made headlines across the U.S. with their findings that playing action, video, and computer games positively affects players' "visual selective attention." In plain language, that means that video-game playing kids learn, in situations where many things are going on at the same time, how to identify and concentrate on the most important things and filter out the rest. Does that sound like a useful skill in today's (and tomorrow's) world? No one tells kids' in advance the rules of their computer and video games-they have to figure them out by playing. This is much, many researchers say, like science-kids who play video games learn to deduce a game's rules from the facts they observe. The kids who play today's "complex" video games (and we will learn more in Chapter 7 about how these "complex" games differ significantly from the games you knew in the past) learn to *think*: through experimentation and what real scientists call "enlightened trial and error", they learn to understand and manipulate highly complicated systems. In order to "beat" their complex games kids must learn, though complicated reasoning, to create strategies for overcoming obstacles and being successful—skills that are immediately generalizable. For example, researchers have found that computer and video gamers are better at taking prudent risks in business. Many business entrepreneurs now in their 20's have found that their game-playing experiences have helped them greatly. Says one, "I remember my mom and dad yelling at me [for playing too much]—they didn't know I had a 200 person [online] guild to manage. Game players get good at taking in information from many sources, pulling together data from many places into a coherent picture of the world, and making good decisions quickly. This important skill is what the military calls 'situational

"I remember my mom and dad yelling at me—they didn't know I had a 200 person [online] guild to manage. You really get experience in life by playing these games." — Stephen Gillette, entrepreneur

awareness." It is a skill required of all military officers. As we can all observe, game players become experts at multitasking and parallel processing, i.e. doing more than thing at the same time and doing them all well. Additionally, gamers get good at collaborating with others, over a range of networks. Not only do game players acquire all these thinking, collaboration and other skills, but they begin to learn them at a very early age. Leona Higgins, a Vancouver kindergarten teacher, tells this story: "My son Sean and I had started playing *The Sims* together when he was just 5 and not yet in school. One day, as we walked past the school playground, he suddenly said, "Mom, this playground is very expensive." "How do you know?" I asked. "Well in The Sims I can buy a playground for my family that costs \$1,250 dollars and it's just a small one," he replied, 'so I think this playground cost about \$20,000. I think a lot of people went to work for a lot of days to make it." (A pre-schooler on building costs!) When I was watching a 6-year-old play Roller Coaster Tycoon, I suspected, although he had built up a decent park, that he was moving things around mostly at random. But then he cried out: "My guests are unhappy! I'd better build more bathrooms!" (A first-grader on customer satisfaction!) In his book Everything Bad Is Good For You, Steven Johnson tells of trying to "teach" Sim City to his 7-year-old nephew and having the kid point out to him, after only one sitting, that if he wanted his run-down manufacturing district to grow, he'd better lower his industrial tax rate. (A second grader on city planning!) And my favorite story of all: When Leona's kid was in kindergarten, they passed a house for

sale and Sean reached in and grabbed a spec sheet from the realtor's box. He looked at the price of the house, turned to his mother and asked "Mom, What's our Net Worth?" (Does *your* preschooler know?) Not only do kids learn these types of complex concepts from their games—beginning at a very early age—but increasingly, as we'll see later, children learn from their games *how to collaborate effectively with others*. Like many adults, you may not be aware that games have long passed out of the single-player isolation shell imposed by the initial lack of computer networking. Games, on computers and consoles, have rapidly gone back to being the social medium they have always been - but now on a worldwide scale. "Massively multiplayer" games such as *Runescape*, *Toontown*, *EverQuest*, *Lineage*, *City of Heroes*, *Star Wars Galaxies*, and *World of Warcraft* now have hundreds of thousands of people playing simultaneously, collaborating daily and nightly in clans and guilds.

Schools and Electronic Games: Missed Opportunities

"Whenever I go to school I have to 'power down."
$$-a \ student.$$

Today's game-playing kid enters the first grade able to do and understand so many complex things—from building, to flying, to reasoning—that the curriculum they are given feels to them like their mind is being put in a strait jacket, or that their milk is being laced with sedatives. Every time they go to school they must, in the words of one student, "power down." And it gets worse as the students progress up the grades. Most of today's teachers know little if anything about the digital world of their students from online gaming, to their means of exchanging, sharing, meeting, evaluating, coordinating, programming, searching, customizing and socializing. As a result, despite their best efforts, it's often impossible for these adults to design learning in the ways their students need and relish. Laments one frustrated parent (who also happens to be a well-known scientist): "The cookies on my daughter's computer know more about her interests than her teachers do."

"The cookies on my daughter's computer know more about her interests than her teachers do." — *Henry Kelly,*

Fortunately, there is reason for hope. The situation I've been describing has not gone totally unnoticed by those interested in improving our children's education, and there is an emerging collection of academics, writers, foundations, game designers, companies like Microsoft and, increasingly, the U.S. Government and Military, that are working to make parents and teachers aware of the enormous potential for learning contained in the gaming medium, and to integrate games and gamebased learning into schools. At this point you might be asking yourself: "So what's new here? My kids already have plenty of computer games for learning." You may, in fact, still have a shelf full of socalled "edutainment" CDs - the kind that typically combine reading and math exercises with animated graphics. But this is not what I am talking about. Yes, many of these edutainment games still work for pre-schoolers. But any child-even a 5-year-old-who has tried "real" games will find edutainment disks horribly primitive by comparison. The kind of learning that edutainment delivers is mostly just skill-and-drill (or as many call it "drill-and-kill,") which is totally different from the many exciting ways (often invisible on the surface) that games can, and do, teach. As I'll talk about in Chapter 28, some creative (and brave) teachers have already tried bringing commercial games right into the classroom. A British education group called "Teachers Evaluating Educational Multimedia" (TEEM), found that certain off-the-shelf commercial computer games, such as Sim City and Zoo Tycoon, can help youngsters learn logical thinking and computer literacy. In the long run what we need is to complement the learning already going on in our children's entertainment-oriented computer and video games with new "curricular" learning games that can be used in or outside of our schools. Some such games are slowly beginning to appear. MIT, for example, a pioneer in this area, has designed video games, including a physics game called Supercharged! for learning difficult concepts in science. They have partnered with Colonial Williamsburg to create a prototype of an American history game called *Revolution*. George Lucas' company Lucas Games has created online lesson plans designed to help teachers integrate many of its existing games into curricula in order to teach science, math, and critical thinking. Many other game companies, including my own Games2train, are now designing complex games for history, science, and even math curricula, a daunting academic barrier for many students. We'll learn more about all of this in Chapter 28: Getting Past Entertainment — Curricular Games Are Coming. Even Uncle Sam has gotten involved. Not long ago, U.S. Military recruiters and trainers began to notice the remarkable similarity between the profiles of gamers and military recruits. As a result, the military now does a growing percentage of its training in a game format. It currently uses over 50 different video and computer games, some off-the-shelf, others custom designed, to teach everything from military doctrine and tactics to strategy and teamwork. The biggest of the military games, called "America's Army," was released to the public for free in 2002 as an awareness-building and recruiting tool. The game, which has been continuously upgraded, now boasts more than over five million registered users, three million of whom have completed "virtual" basic training. Kids who play of America's Army learn a lot about what it feels like to train and fight in a war (minus, of course and this is important—what it feels like to actually kill someone.) Still, the game teaches skills such as first aid and medic training. And it teaches positive behavior as well. The Army is proud of having its honor code built into the game; any "friendly fire" or other regulation or honor code infractions will send a player straight to the brig at Fort Leavenworth (see next page). Computer games have, in fact, now become a language for reaching kids on any subject, expressing ideas from Christianity (the Christian Games Conference is now in its fourth year) to preventing obesity. The amount of research being done in academia on the positive effects of games



"The Brig" from America's Army (used by permission)

on learning is increasing rapidly, with game studies now recognized as a valid academic discipline. Papers which not so long ago sat unread on the shelf, are being reprinted and noticed by national media. Theoretical and practical guides such as What Video Games Have To Teach Us About Learning And Literacy, by University of Wisconsin (Madison) Professor of Education James Paul Gee, Got Game: How The Gamer Generation Is Reshaping Business Forever, by John C. Beck and Mitchell Wade, Everything Bad Is Good For You, by Steven Johnson, and my own Digital Game-Based *Learning*, are now available on Amazon and into multiple printings. (For these books and others, see Further Reading at the end of this book.) Recognized experts in many fields, such as former Stanford CFO William Massey, (who conceived the game Virtual U) and medical doctor Myo Thant (who conceived the game *Life and Death*), are working with game designers to build games that communicate experts' knowledge and experience. Major foundations like Sloan, Markle, Robert Wood Johnson and others are funding these efforts. In 2003, the Woodrow Wilson Center for Public Policy started a "Serious Games" initiative to increase the use of simulation and gaming in public policy debates, continuing up an effort that begin in the Clinton years with the game Sim Health. Conferences on video and computer games for health, policy, education, and the military now attract hundreds of interested teachers, trainers, funders and users.

A Long Road

But there's still a long way to go in opening up many adults' minds to the learning potential of games. Despite all the positive findings, research, and conferences, and despite the desperate cries for help from kids in school to make learning more engaging, many parents and educators still think of video and computer games as frivolous at best and harmful at worst. The press throws gasoline on the fire by running headlines about "killing games" when, in fact, the majority of video games are rated "E (everybody)," and fourteen of the top 20 video game best-sellers and fifteen of the top computer game best sellers are rated either "E" or "T (teen.)" It's really important for adults who want to help kids to separate the concept of "violence" from the idea of "all games," thus automatically condemning the latter. The knee-jerk prejudice of many adults against the mere mention of the word "game" often leads buyers, sellers, and funders of today's new educational games to refer to them by euphemisms such as "Desktop Simulators", "Synthetic Environments", or "Immersive Interactive Experiences." But that doesn't stop the end users—the kids—from seeing these new tools for what they really are: a highly effective combination of the most compelling and interactive design elements in their video and computer games with specific curricular content. The tricky part is putting the two together in ways that capture, rather than lose, the kids' interest and attention. But we are now becoming much better at this, with multiple games being developed even for tough subjects like algebra.



It will really help for all of us to learn more about the positive effects of video and computer games for learning. With our help, our children can finally gain recognition and rewards for the large amount of useful learning they already get from the games they think they play just for fun, and learn even more that is useful from truly engaging new games specifically designed to teach them the curriculum and other skills. Our kids are crying for this to happen, and it is in our power to give it to them. The remainder of this book is all about how to do this, and why it will benefit not just our children, but all of us. But before we talk more about all the benefits, let's take a closer look at what some of the harshest critics of video games have to say.

Chapter 3:

But Wait—What About All The Bad Stuff I Hear About in the Press?

"Studies generally show that violent video games can have short-term or momentary effects on children, but there is little evidence of long-term changes."

- Anahad O'Connor, science editor, The New York Times

Yes, let's talk about what you've heard. A lot of people, including, Senator Joseph Lieberman, Professor Craig Anderson, Dr. David Walsh, and trial lawyer Jack Thompson (among others), have built entire careers on being nay-sayers to games. And the press, as we've discussed, gleefully reports every negative thing it can find about video games. Some recent headlines: Games Gone Wild Computer Games Stunt Teenagers" Brains Pupils and Porn and Games, Oh My It all sounds very alarming, doesn't it? But here's the truth: The question of whether playing violent games is causing any individual child—yours, for example—to become more violent is actually too complex a question for any researchers to decide—at least in the kinds of projects that have been done until now. Yes, it's easy enough to find studies that show

correlations between exposure to violent media and aggressive behavior. But correlation is not causation. Couldn't playing violent non-electronic games like football or rugby have the same effect? Highly likely. But one thing is certain: absolutely no one can say, when all the complex factors in a single child's life are taken into account, whether any individual child will be negatively influenced overall, or whether games will be, as they are for most kids, just another element of what the child did a lot over the course of a perfectly normal childhood. Game-playing is *not* like smoking, where no matter who you are, or what else happens in your life, the physiological effects build up and your risk of getting cancer or some other deadly condition increases with usage. Game-playing is much more like being in the military, where the aggressive side of war fighting is countered by other codes of behavior. Yes, we do occasionally hear of military personnel gone amok. But outside of war, most military people (like most game-playing kids in life) act just fine. The crazies are just that, with or without games. So you are going to have to decide for yourself-forget what the media says-whether your child is affected positively or negatively by game playing. Let me re-emphasize that I strongly believe—and I hope you do too —that kids should lead a balanced life. This typically includes, in addition to game-playing, time devoted to school, homework, sports and athletic activities, hobbies, playing outdoors, reading, etc. As parents, it's our job to make this happen. But if it doesn't, for some reason, let's not take the easy route and immediately blame (and therefore ban) our children's games. Because if we do, we are likely to doing more harm to our children than good. So, *limits*?—absolutely. *Bans*? not only unnecessary, but more likely to work against us.

Who Are These Nay Sayers?

Reporters and news anchors are by no means the only ones who seem to enjoy using games to scare parents. Many of the nay-sayers are politicians —most of whom have never played a video game in their life—looking for easy votes. At an invitation-only meeting I recently attended, one bright, well-known, up-and-coming national politician put it baldly: "[Games] are an easy target. [Attacking the games industry is] the easiest, cheapest trick that any politician can pull out." He would not, for obvious reasons, let his name be used for attribution, but I was there and heard him say it. Other critics play the videogame card for the money. Jack Thompson, an attorney who has appeared on Oprah, 60 Minutes, and Nightline, is, as of this writing, getting his 15 minutes of notoriety representing the families of two Alabama cops who were shot to death by a teenager who played the Grand Theft Auto series of games. Thompson claims that his goal is "to save lives," but I really doubt that he represents all his clients pro bono. Thompson practically leaps off the interview page, claiming, "We are going to sue the videogame manufacturers, platform manufacturers, and retailers like Wal-Mart, Circuit City and Amazon." Anybody with money, it sounds like. Thompson goes so far as to accuse people like Doug Lowenstein, head of the Entertainment Software Association, whom I personally know to be a thoughtful and reasonable guy, of being "Saddam Hussein," and of distorting the facts. Of course, Thompson himself doesn't mind scaring parents by using inflammatory terms like "killing simulators" to describe some of the military's games, when the truth is that the military's games are mostly designed to teach kids to think strategically and act as a leaders, protecting the lives of the people under their command. Thompson also claims that "it's nonsense to think that hours of playing these games doesn't have an effect." We'll see in a second why that argument doesn't hold water. Next, we come to the propagandists, who are looking to legitimize themselves with legitimate-sounding names. The biggest representative here is Dr. David Walsh, of the so-called "National Institute of Media and the Family." Is this a true research institute in the academic sense? No. It's the not-for-profit organization that Walsh set up to promote himself and his ideas. In theory, there's nothing wrong with that. But what Walsh does is take a reasonable idea—that there are *some* game players who have played games to the point that it was detrimental to their lives—and deliberately frightens parents into thinking that their normal children might also be "addicted," knowing full well-as he admits when pressed- that the overwhelming majority are not. In his public appearances, Walsh uses the term

"addiction" incessantly, never mentioning that there may be other factors than games, such as co-addictions or addictive personalities, which lie at the root of many people's problems. This type of distortion of the facts is dangerous, in my opinion. Walsh bolsters his arguments with what he calls "scientific" data, such as measurements of heartbeat and blood chemicals, which he also very deceptively applies. When Walsh offers measurements that, in fact, do change with certain types of game playing he never bothers to mention or explain that a number of other pastimes, such as competitive sports, produce the same effects. And saddest of all, in his rush to scare parents, Walsh and his group are not above exploiting kids, either. Check out the video of the young child on their site at www.mediawise.org, and then read what I say in Chapter 16 of this book. Walsh's approach, which many politicians rely on for their "evidence," is pure propaganda, i.e. telling only one side of the story in a way designed to alarm. (One of the things that gives this away is that on their site, the most prominent button of all is "Donate.") If you are looking for information online, a much more impartial group is the Canadian-based Media Awareness Network, at www.mediaawareness. ca. Amid the "easy target" politicians, the "propagandists" like Walsh, and the 'sue-'em-all fanatics" like Thompson, however, there are also some serious researchers who think gameplaying does harm. Probably the best-known proponent of the "games-are-bad-for-yourkids' argument is Dr. Craig A. Anderson. I've met Dr. Anderson, and he is a nice, reasonable man, who argues passionately that "studies show" that violence in media causes violence in people who use those media. While most of his evidence is based on studies of TV, some involves games. Anderson has done meta-analyses, comparing and combining many smaller studies, and has taken pains to refute his critics point by point. One of his papers, found online, is listed in the "Further Reading" section at the end of the book. But as passionate as Anderson is, it is important to remember that there are a number of equally passionate, equally qualified researchers on the other side.

So Who's Telling the Truth?

To some extent, everyone is—or at least part of it. To find the real answer, you have to think about *context*. It's a given that exposure to media, including games, influences people. So when Craig Anderson's research indicates that violent video games "are associated" with aggressive thoughts and behavior, and increased psychological arousal—especially in the very short term, which is all he measures—no one is terribly shocked. It makes perfect sense, which is why Jack Thompson's arguments also make sense—on the surface. However, Anderson's claim that violent video games actually *cause* aggressive behavior (and/or a decrease in helping behavior) is highly disputed. As I mentioned earlier, the same kinds of aggressive thoughts and behavior that Anderson identifies are also associated with a number of other activities we all condone, such as football. Acknowledgment of that fact is glaringly absent from most of these nay-sayers' work. In fact, the first study to look at the longer lasting effects of games (also listed in the Further Reading section) comes to the opposite conclusion. The key point here though, is that in order to seriously influence our everyday behavior in a long-term sense, the effects of media (or of anything else) have to be both strong and unmitigated. If a child were raised hearing nothing but English spoken with a particular regional accent, or heard nothing but country music played, or read only romance novels, or watched "Gone With The Wind" three times a day, we could-and should—expect those factors to have a significant influence on that child's life. We could reasonably expect that child to speak with that regional accent, prefer country music, have romantic expectations, and act like Scarlet O'Hara or Rhett Butler. Similarly, if a child did nothing but watch violent movies all day every day, or did nothing but play violent games all day, or saw nothing but violence in and around his home, one could reasonably expect their behavior to be violent. Unless, of course, there are counterbalancing influences. And that is precisely our job, as parents, teachers and society: to provide those counterbalancing influences. Our kids, like the rest of us, are surrounded by a huge variety of impressions and messages. They come from the media we see and hear, but also from our families, our friends, our schools, our jobs, our reading, our clubs and sports, our religion. Some messages are violent, to be sure, but a great many more are not. And most American kids are also exposed to frequent media messages telling them that violence is not the way to solve life's problems. So when children see or experience something violent, yes, they take in those images and emotions (how could they not), but they also balance them in their mind against all the other messages they receive. Most kids (including yours, I suspect) will tell you that they know the violence in games isn't something one should, or would, do in real life. "Duh" is a common reaction. "It's a game!" said the last one I asked. I suspect this is the same as our own reactions as kids when our parents tried to tell us that rock and roll would destroy our minds. In his book A Theory of Fun for Game Design, game designer Rafe Koster argues that kids don't even see the violence for what adults think it represents. They see it rather as just a form of window dressing to what they are really doing, which is trying achieving goals and beat the game. Gerard Jones, in *Killing* Monsters, makes a "catharsis" argument, showing how kids have always gotten to act out their violent impulses through games and other media, and so do not need to in real life. Reviewer Charles Herold of *The New York Times* argues similarly that games offer a way to be aggressive without hurting anyone in the process. Anderson rejects these arguments, but the facts remain. Violent crime in the U.S. has gone down dramatically during the same period that game playing has dramatically increased. More importantly, the overwhelming majority of normal kids who see some violent movies and play some violent games, but receive the usual, societal counter-messages, do not and will not act violently in public or in private. Admittedly, some people, who have grown up in the most horrible, violent or abusive conditions, might have far fewer nonviolent counterbalancing messages. And soldiers in war, forced to do violence against messages they have received, such as "do not kill," can suffer lasting effects. Still, the vast majority of political refugees, prisoners of war, torture victims, child abuse survivors and former soldiers never become violent. But there will always be people who simply "tune out" the counterbalancing messages: serial killers, terrorists, and others. But your kids? Realistically, the chances that they aren't getting enough nonviolent messages to offset the violence they see or experience in games is so small

as to be nonexistent. Even Anderson admits that "further research will likely find some significant moderators [his term for counter-influences] of violent video game affects." Oh, and did I mention that most of the video and computer games bought and played are not violent" So you can relax. Your kids are OK. Nevertheless, it is your responsibility as a parent, and all of our responsibility as members of a peaceful society, to keep our non-violent counter-messages at the highest possible level, lest any of our kids do get the wrong idea. In fact, talking to your kids about their games, and providing such counter-messages, is the key recommendation of this book. It is also important to remember that merely "playing a lot" is not "addiction," any more than "reading a lot" is. Still, should your kid, after careful examination, turn out to be one of the small minority who are truly addicted, or otherwise shows signs of being involved in games in a harmful way, I offer advice in Chapter 10. Finally, just so you don't think that the arguments I'm making are nothing more than my own speculation, please read the words of a parent who managed to get past the negative press and use her own power of observation and judgment—as I hope you will do by the time you have finished this book: "When I observed our son playing one of his games, I was surprised to find that the goal of our son's game was not to kill or be killed but to build power and partnerships. Our son realized that the only way he was going to advance in rank was to take command and lead the battles. I was surprised when his headset didn't work and I heard his conversations on Teamspeak broadcast over his computer as he was strategizing with men, women and teens from across the globe in order to advance a level in one of his online games. "After I had opened the door of acceptance and understanding of our son's intense interest and passion for online games, our son often shared stories from his virtual teammates, some of whom were stationed on Army bases, some housewives, a man who was unemployed and looking for work and who had convinced his wife that his time online was spent researching jobs when in fact, he was meeting his virtual teammates, teens who had feigned sickness to stay home to participate in that day's attacks and the man who watched his nine-month-old son while his wife worked every weekend and the boy often interfered with his shots as he pounded the keyboard. These people and more were our son's virtual friends from all over the world and they often shared personal stories of success, illness and embarrassing moments. "The summer after our son turned sixteen, we insisted that he get a job outside of the home, in part to limit some of his online time. He was no longer the shy boy that he was at fifteen and felt comfortable having conversations with adults which I attributed to his online conversations that included many adults. These adults continue to converse with him and give him career advice. Any parent of a teen knows that another adult's advice is often heard when the parent can say the same thing and it is ignored. When you have several adults giving the same advice, the teen listens. Fortunately, his network included caring people and they gave him a lot of sound advice." And now that you know the flaws in the logic and arguments presented by critics of games, and now that you can hear counter-arguments forming in your head when politicians and others mindlessly attack games and the kids who play them, let's go find out more about who today's kids —including our own—really are. The answers will help us greatly in understanding our kids' games, why they love them, and what they learn from them. And they might surprise you!