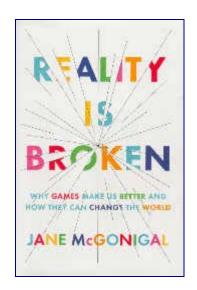
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A READER'S JOURNAL

Reality Is Broken
Why Games Make Us Better and How They
Can Change the World
by
Jane McGonigal

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In the time before the Industrial Revolution

brought division of labor, most all human activity was *autotelic(1)*, that is, activity which is self-motivated and self-rewarding, done for its own sake. As people migrated to jobs with wages and salaries, suddenly their daily work was motivated by a paycheck and the rewards of the money which could be spent on life's necessities. What little time remained for autotelic activities was greatly reduced and thus became more valuable. With repetitive activities at work becoming increasingly boring, we are led inexorably to the need for activities which provide intrinsic rewards of positive emotions, increasing personal strengths, and improving social connections — all of which "we build by engaging intensely with the world around us" outside of work. (Page 45)

In my own career I had little time for games as I worked my way up the learning curve for one job after another, each one drastically different from the other. When I homed in on a computer career (which was a do-it-yourself job in the 1960s), each project was like a completely new job. I learned how to program and debug the first real-time computers in 1966 and a couple of years later I was debugging the scientific math package for a Fortran compiler, writing simulator a brand new 16-bit minicomputer, then writing a complete data collection and reporting system for large process control computers. I progressed to bootstrapping a PASCAL compiler which is written in PASCAL code, and then into assembling, debugging, and writing code for large supervisory pipeline control systems. Each challenge built on my previous challenges, and I continued up the learning curve. When I topped the learning curve, things became increasingly boring and I was faced with long hours of work in repetitive tasks which offered me little challenge. Luckily home computers and computer games showed up at exactly the right time to relieve my boredom and send me on new paths of autotelic activities, gaming and writing.

The point-and-shoot game of DOOM arrived at exactly the same time as an intranet was installed in the plant where I worked. During our lunch break, three buddies and I would tackle the demons in DOOM and each other. The score we kept was the number of frags we made. A *frag* was basically a removal of the other player from the game, requiring him to start over somewhere else. And when a player got removed, what was his first response? To sulk and mope? Nope, maybe a short cry or moan which could be heard over his work cubicle, but then he jumped right back into the action to seek out and frag the player who had just fragged him, or any other player who stumbled across his path. The game could be played solo against the demons, but the human players were at another level of skill and unpredictability! We all had immense fun for 30 minutes and then returned to work. For me, it was as if I were 11 instead 51 years old — I was back running around at night in my yard, climbing over fences, laying in wait for, and catching

one of my three brothers by surprise in our improvised games of Cops and Robbers. At age twelve we were already expert game designers and testers. The fun games lasted, the non-fun games were quickly forgotten, or they were modified until they became fun. A few props like a cowboy pistol was all we needed, and a few hours of night-time. In the 1940s and early 1950s we had no air-conditioning or TV and our parents sat on their front porches and talked with neighbors for hours, which allowed us kids to play as much as we wanted. It was a *game heaven* for kids. We knew autotelic activities because we were constantly seeking new ones, improving on old ones, and if nothing else was available, inventing new ones on the spot. The thirty minute games of DOOM forty years later during lunch at work got my heart pumping and adrenalin flowing just like those games of Cops & Robbers when I was twelve years old. When I retired from that plant, my DOOM buddies honored me with a DOOM MASTER plaque which they had created especially for me. That plaque has a special place in the Dustbin of Time and in my Hall of Fame for cherished memories.

Isn't this supposed to be a review of a book, you may be thinking? Yes, and when I review a book, I share the thoughts which the book conjures up in me, and I allow the book to become a focal point for sharing my thoughts and memories, and they will undoubtedly conjure up some equivalent thoughts in you, we both get ready for autotelic theme of this book to unfold.

What autotelic games did you participate in your early life? Here are mine to help you get started, not all of them, but the ones I recall the best. I will omit the so-called kiddie games like Ring-Around-the-Rosie which well-intended teachers led us through. These were barely fun and definitely not *autotelic*, but *teacher-telic*. Thankfully these teacher-telic games disappeared by the time I reached High School. Graduation night, for example, was a night to practice having the kind of freedom I would have from teacher-driven activities when I attended college just a couple of months later(2).

In elementary school at recess and after school we had waves of activity which spread across the schoolyard. One day we would be playing marbles in the dirt under the perennially shady live oak trees, and then suddenly everyone showed up with tops. We would wind the string about the top's base, pull the string quickly away as we released the wooden top, and it would fall spinning to the ground. Games evolved around trying to land your spinning top on othe top of another top. Then yo-yo's would appear and we would practice our moves (called tricks) like walking-the-dog or baby-in-the-cradle, or aroundthe-world. Then pocket knives would appear and some version of Mumbly-Peg would arise. Some time in February, kites would suddenly appear in the schoolyard after school was over. If Dad had some old weather boards around, a quick pass of the pocket knife would create the spars for a kite, and some tissue paper from Mom, together with some paste of flour and water and some kite string would create all the fun of many days of kite-flying. Buying a kite was as unknown as buying crawfish during my pre-teen years. We had lots of both, but only through our own efforts. Dad knitted crawfish nets and we saved guts from chickens my mom plucked and gutted to use as bait. For kites we also needed some rags, which Mom always had plenty of. We tore the rags into strips, tied the ends together, and made the long tails which stabilized our handmade kites in strong winds. We stuck our nose up at the lazy or rich kids whose store-bought kites didn't have tails. Keeping our kites in the air and letting out big rolls of No. 50 cotton thread to the end of the hand-made spool were our goals. We heard of people flying with razor blades on the tail of their kites to bring down other kites, but we would never purposely do anything to endanger our hand-made beauties. We never lost a kite that I can recall, so careful were we with our flying techniques. My brother Paul and I once endeavored to build a box kite. It long and tedious work and when we flew it the first time, it crashed and broke into pieces. Back to the three-stick hexagonal kite design which we had mastered already.

One autotelic activity I enjoyed was building balsa stick and tissue paper models of airplanes. It was a joy to take a 10 cent box of balsa sticks and sheets, cut out the wing and fuselages formers from a printed flat of balsa wood, pin the pieces to the layout sheet, glue it together with fast-drying cement, and then cover it with tissue paper and decals to make an flying model of an airplane. In practice we rarely flew these models because they invariably crashed and that part was no fun at all.

Comic books were readily available. We didn't have money to buy them, but our Uncle Frank bought and read a lot of them, so when we visited our Grandma's house, we'd go immediately to the closet where he would place his already read comic books, and we'd spend the day under the pecan trees reading copies of *Henry, Lulu, Nancy, Heckle & Jeckle, Batman, Superman, Plastic Man, Captain Marvel, Blackhawks*, and a seemingly endless stream of other comic books. Friends would loan us their comic books, we would read them and return them. Many of my early moral judgments were formed by comic books. People may look down on comic books, but lacking a library of classical literature, I was reading comic books, the 5¢ Superman may not have been a classic, but it's worth a fortune today for anyone lucky enough to have saved one. What kid who was derided by adults for reading comic books would have ever decided to actually save one? My parents never said anything negative about them, they were delighted when I was delighted. They only scolded my brothers and me if we did anything to break something around the house or dared to do anything the least bit illegal. There was a kid across the street who had been to Reform School and they made it clear that where we were headed if we did anything bad. In addition to morality, they gave me the most precious gift any parent can give to a child, *freedom*. It is becoming an increasingly rare commodity among kids today, unfortunately.

I recall vividly the day that signaled the end of my childhood. It was a warm summer day somewhere in the middle of Avenue E when a couple of my thirteen-year-old peers showed me the inside of the first *Mad* comic book. It seemed like they whispered as they spoke, as if they didn't want any parents to know what they had in their hands. Naturally I wanted to see it and read it, and suddenly a vast expanse of *terra incognito* opened up for me: for the first time in my life, I was reading *satire!* The world would never be the same for me again! I doubt that I ever read *Lulu* or *Henry* again after that day, childish comic books fell away from my life and I began reading Mad comics, and buying my first comic books in the process. My world exploded with new possibilities and meaning with each Mad comic book I read. They were an excellent training course for another magazine which would make its appearance in a couple of years, *Playboy*.

Back to my earlier years, at the age of eleven or twelve got my first BB gun, a Red Ryder model with a telescope on the top of it. I soon discovered the arc of the spring-propelled BB's made the use of a telescope ridiculous, and I removed it. With my rifle, I could shoot, with careful aim and estimation of that deep arc of the BB's flight, small birds such as sparrows, goldfinches, and even some bigger cardinals and Blue Jays. It was as hard as lobbing a dime into a plate as the Penny Arcade, so I enjoyed long hours of stalking and fun for ever bird I shot. One or two birds killed in a long afternoon was deemed a great success. No human, old or young, ever got their eyes put out, as my BB gun was too precious to me to chance losing it. My dad shot birds, ducks, rabbit, and deer with his shotgun and I figured this was my basic training in learning to do the same when I grew up.

As I grew in my mid-teens, I discovered card games which I played with my friends. Seven-and-a-Half was a Blackjack type game we played for money, nickels and dimes. Knuckles was a game we played when there were no adults around because it involved payment, not in money, but in pain. If you lost a game of Knuckles, you were hit on your knuckles by the other players for as many times as number of cards you were left with. With my cousins, it was a mild tap, but with the tough guys of Westwego, these were hard slams that could leave my knuckles red for an hour or so afterward. I didn't like the pain, but the motivation so high to win, that my adrenalin was flowing at every point during the game.

Skipping forward past college and raising four children, I arrived at the very first computer games. About 1966 a primitive version of Blackjack appeared which one could play on a Teletype terminal. Then about 1972, interactive CRT displays made Pong possible (video simulation of Ping Pong), and a few years later, I had a chance to play a Lunar Lander program on a monochromatic CRT which used vector graphics to draw the lunar surface and my job was to set the Lunar Lander safely on the Moon's surface by varying the pitch and yaw and the retro-rocket thrust. A game player could have the Apollo 11 experience on a computer! Next stop was the 1980s with Wolfenstein, the first point-and-shoot game which rose to popularity. So far as I know, Wolfenstein innovated the idea of Boss Levels, which if you succeeded in fragging the bad guys and reached the top level, a Super-Bad Guy was waiting for you and this top level

often took as long to solve as all the lower levels. From the flat single-level world of Wolfenstein, DOOM meant a huge quantum leap into a reality in which you could jump over objects, climb up stairs, etc, while exploring the rooms and open spaces looking for bad creatures to frag. When DOOM morphed into QUAKE, suddenly there were artificial goals added, which reminded me of the teacher-telic activities of my youth which I disliked so much, and I quickly tired of video games after that evolution.

During the 1980s Video Game Rooms flourished all around the country, and I spent many a quarter on my favorite video games. PAC MAN was not my favorite, too teacher-telic like, probably. The ones involving space travel and Star Wars like shooting were my favorite. I recall the thrill of the first time I sped through the hurdles to let off a shot which destroyed the Death Star! Soon home computers reached and topped the level of the arcade games, and a new decade of computer games appeared on home computers like DOOM and QUAKE in the 1990s.

When I retired from the plant where I worked for 14 years, it was with the goal of spending the rest of my time writing and once I set out on that autotelic goal, I left behind the video game playing for good. The work I began was more interesting to me because I was deciding on the activity, it was rewarding, it was the most fun thing I had done in my life, and there was little time or inclination to play video games. My grandkids loved some of the new video games, however, and I received "Call to Duty - World at War" one Christmas and soon had a PS-3 Play-Station on which to play it. My PC was my full-time typewriter and data base and I could not let it be used to play games on, so the PS-3 allowed me to check some of the newer point-and-shoot games. One incredible event happened to me a couple of years after I completed the World at War game. In the last episode of the game, I had to fight my way through barricades, barbed wire fences, and machine gun nests to reach the entrance to the Reichstag, and then battle troops inside the huge auditorium until I reached the top and could hoist a victory flag. On a Baltic Sea cruise later, I took a day trip to Berlin and when I walked up to the huge green lawn in front of the Reichstag, I could see the barricades, the barbed-wire fences, and the machine gun nests, and look up at the real building towering over me. I felt no need to stand in a long line to enter the building because I had already spent hours of time exploring every inch of the building inside a video game.

Today, my monthly Good Mountain Press Digest, which will feature this review in its June, 2011 issue, is my autotelic activity. In each month's issue, I compile my writings during the month, my photographs (another autotelic activity I love), my cartoons (2 a month), emails from my Good Readers, and my Personal Notes on our activities for the preceding month. Someone asked me how long did it take me to create a Digest, and I answered simply, "A month". All of my activities of a month feed entries to the Digest. For example, my wife and I typically watch a movie on any night we don't have an outside activity, on good nights, we enjoy a Double Feature with popcorn during intermission. I make quick notes on each movie after it's over and from that, pen a short blurb about the movie. Currently there are 2257 movies we have watched. I keep a relationship data base to keep track of movies we've seen before. In fact, each separate item in the Digest that repeats requires an entry in a data base list to ensure that I do not repeat certain items, such Recipes, Cajun Stories, Cartoons, Quotations, Poems, etc. This requires almost daily updating and adding items to the Digest, so the writing of a single Digest can be said to take a month.

I mention all things because on page 3, McGonigal asks a good question.

[page 3] Gamers want to know: Where, in the real world, is that gamer sense of being fully alive, focused, and engaged in every moment? Where is the gamer feeling of power, heroic purpose, and community? Where are the bursts of exhilarating and creative game accomplishment? Where is the heart-expanding thrill of success and team victory? While gamers may experience these pleasures occasionally in their real lives, they experience them almost constantly when they're playing their favorite games.

Where is it? You must create it for yourself. Lacking the ability, the knowledge, the time to do that, games are a convenient substitute, but game activity should always point towards a time when the real game of

life itself begins, namely, when the gamer creates that kind stimulation and satisfaction in their everyday existence. At that point, the gamer will find little time for games. As the Sufi saying goes, "The existence of counterfeit gold tells us that real gold exists." Until that time arrives for a gamer, it will seem that "Reality, compared to games, is broken."

The author states a goal, a personal mission, to see a "game developer win a Nobel Prize in the next twenty-five years." (Page 10) She makes no mention of John Nash who received a Nobel Prize in 1994 for his game theory work as a Princeton graduate student. Yes, I know that is not the kind of games she was talking about, but game theory existed for a long time as thought experiments before the digital computers came along to provide simulations of the thought experiments. Another innovator in the field of game theory, Robert Axelrod, used computer simulations of the Prisoner's Dilemma and showed the robustness of cooperation in the face of defection(3). His work, when fully developed and understood, may well deserve a Nobel Peace Prize, in my opinion, because it can lead to peaceful cooperation with in every aspect of human existence.

This next passage by the author seems to be equally true if the word "game" were to be replaced by the word "sport". A sports coach could be saying those words to the team's players. Perhaps it is her intent to get video games moved up to the level of importance accorded to football, baseball, hockey, or other sports in our society. Such sports can also be seen to build virtual experience on the sports fields which will prove useful in later life.

[page 12] If you are a gamer, it's time to get over any regret you might feel about spending so much time playing games. You have not been wasting your time. You have been building up a wealth of virtual experience that, as the first half of this book will show you, can teach you about your true self: what you core strengths are, what really motivates you, and what makes you happiest. As you'll see, you have also developed world-changing ways of thinking, organizing and acting. And, as this book reveals, there are already plenty of opportunities for you to start using them for real-world good.

Near the end of this book, McGonigal lists all the things she claims that reality is, *compared to games*. Paradoxically, after giving details in each of the preceding chapters about why this is so, this list appears in the final chapter whose title is "Reality Is Better".

[page 348] Reality is too easy. Reality is depressing. It's unproductive, and hopeless. It's disconnected, and trivial. It's hard to get into. It's pointless, unrewarding, lonely, and isolating. It's hard to swallow. It's unsustainable. It's unambitious. It's disorganized and divided. It's stuck in the present.

If you feel this way about reality, or if you are stuck in some unproductive job which depresses you, the exit from which seems hopeless, the aim of which seems pointless, and if you also feel unrewarded, lonely, and isolated, well, the author has a solution for you: Games. If this describes you, then this book will be a revelation to you. And it's only about games, something you probably disdained as trivial and worthles, up until now, computer games in particular. This book can literally kick-start your life, allow you rev it up at will.

If, like me, you grew up in a target-rich environment for games of all kinds (as I listed above), then you will have already discovered that video games, computerized reality games, can be a wonderful past time.

McGonigal's four defining traits of a game were known to me by the age of five as my three brothers and I began making up games to play. One, the game had a *goal*. For "Cowboys & Indians" it might have been as simple as "Shoot the other guy first". Two, *rules*. Given that our guns didn't shoot any bullets or pellets, our rules were about what constituted a shot to remove the other guy from the game. Three: *feedback system*. How did we know the game was over? All the Indians were shot perhaps. And fourth: *voluntary participation*. The one aspect of our kid games, which none of the parent- or teacher-telic games

possessed: each game was voluntary! If you had a cap pistol, e.g., and wanted to play "Cowboys & Indians", you could play. No one forced you to join. The game went on to fill all the time available so long as everyone was having fun. Any suggestions for new goals or rules were quickly evaluated by trying them out. If they added to the fun, they were kept. The ultimate goal was fun, and everyone had a vote. If someone disagreed with a new rule, they could voluntarily drop out, and the game went on without them. There were no unhappy players in our childhood games. By definition if there was one unhappy player who tried to force his rule on us, it became a fight, but rarely led to fisticuffs, more like a brief recess from the fun, an animated discussion on how to get back to the fun as quickly as possible. If recalcitrant Joey didn't agree, he could leave. If girls wanted to play, and had a pistol, they could and did. Our Aunt Carolyn, only three years older than I, would always had a set of cowboy pistols and joined us in playing.

Computer games that became wildly popular have traits similar to our childhood games. No one kept score in our *shoot 'em up games*. The goal was to have fun and the game continued as long as we were having fun. In the early computer game Tetris, which played under some different name, the fun was not so much in the scoring, but in the playing, due to its exquisite feedback system:

[page 24] As you successfully lock in Tetris puzzle pieces, you get three kinds of feedback: visual — you can see row after row of pieces disappearing with a satisfying poof; quantitative — a prominently displayed score constantly ticks upward; and qualitative — you experience a steady increase in how challenging the game feels.

As you got better the game became more challenging. It was like riding a horse who kept going faster and you strove to keep seated as you rode it faster and faster. The next game I knew to captivate people was the *Free Cell* Solitaire game which appeared in the early Windows operating systems as a free game. It was like Solitaire card games, but with four cells where you could park cards which prevented you from making Solitaire. Those four free cells opened up moves which allowed you to complete the Solitaire on every game. A list of the dozen or so very difficult games appeared and I completed them first. There was one that was proven likely impossible by computer-testing, whose number was 11982 or something close to that. The computer had tried over 65,000 solutions and failed, and I tried several thousand before I convinced myself further attempts were fruitless. Many people began at number 1 and went up one game at a time into the 10,000s, skipping over the insoluble one. When the game was increased from 32,000 to 1,000,000, I began systematically coming down from the top. I was still using as a past-time when I became a writer, but as my activity on my Digest picked up to near full-time fun, I set Free Cell free.

I got a bit of a laugh just now as I tried to place my cursor over the text on page 26 of the *Reality Is Broken* book in order to swipe it, copy it, and paste below. Of course, it would be nice if that worked, but I prefer reading actual hard bound books, and that requires an extra step of typing or OCR scanning to input text. This time, I'm choosing the typing, which is possible for me because of that typing class in Hahnville High School where I learned to type at 60 wpm. The author is talking about the type of games on computers which I intensely disliked, such as Quake, which I played, but eventually gave up on because of the time I had to spend looking for that dumb clipboard on the desk, for example. BORING!!!

[page 26] If you poke around the room enough, you might think to pick up a clipboard lying on the desk. This movement triggers an artificial intelligence system to wake up and start speaking to you. The AI informs you that you are about to undertake a series of laboratory tests. The AI does not tell you what are being tested on. Again, it's up to you, the player, to figure it out.

I avoid games with such obstacles to fun. I was content with games in which I discovered the rules in the process of playing, and that led me to point-and-shoot games. When *Call to Duty: World at War* came to me as a Christmas present from my grandson, I enjoyed being able to choose my weapons and learn the rules as I went along on a team of Americans capturing Pelilu island in the Pacific or a team of Russians counter-attacking Germany. The first time I got to control an army tank was a thrill. What few hints I needed were flashed on the screen as I drove the tanks looking for targets to shoot, mostly enemy soldiers

on the ground or inside other tanks, who, like in my childhood "Cowboy & Indians" games, shot back at me. It was me or them and them got as much back as they put out on me! There was some time looking around for the right weapon, and one had to learn how replenish ammo and grenades by walking or running over the dead enemy, but there were no long handbooks to read. I liked the one Call to Duty game which began with a training session with various weapons. The parts I disliked were the *cul-de-sacs* in games where there seemed to be no targets left to eliminate and no way to get on to the next level or episodes. These seemed to be bugs, and the other resort was to start the current level completely over. But for the most part, I was happy re-living WWII for the first time, a war that was over before my cognitive memory ever set in at five years old. I was firing weapons I only held for a short time when I was in the Army ROTC at LSU for my freshman and sophomore years, the M-1 Garand and the Carbine rifle. Never was called on to fire them at real people, just on the target range. I dropped out of ROTC when it became voluntary for my Junior and Senior years and I was spared the ignominious fate of becoming Second-Lieutenant cannon-fodder in Vietnam later. Call to Duty was hard work, but constant fun, fighting in the field of War without getting your boots muddy, sleeping on rocks, or eating K-rations. I was simultaneously a Private with boots on the ground and a General who decided whether I would fight this next battle or not. I was happy. Call to Duty, unlike WWII or Vietnam was voluntary.

[page 28] Games make us happy because they are hard work that we choose for ourselves, and it turns out that almost nothing makes us happier than good, hard work.

We don't normally think of games as hard work. After all, we play games, and we've been taught to think of playas the very opposite of work. But nothing could be further from the truth. In fact, as Brian Sutton-Smith, a leading psychologist of play, once said, "The opposite of play isn't work. It's depression."

When we're depressed, according to the clinical definition, we suffer from two things: a pessimistic sense of inadequacy and a despondent lack of activity. If we were to reverse these two traits, we'd get something like this: an optimistic sense of our own capabilities and an invigorating rush of activity. There's no clinical psychological term that describes this positive condition. But it's a perfect description of the emotional state of gameplay. A game is an opportunity to focus our energy, with relentless optimism, at something we're good at (or getting better at) and enjoy. In other words, gameplay is the direct emotional opposite of depression.

When we're playing a good game — when we're tackling unnecessary obstacles — we are actively moving ourselves toward the positive end of the emotional spectrum. We are intensely engaged, and this puts us in precisely the right frame of mind and physical condition to generate all kinds of positive emotions and experiences. All of the neurological and physiological systems that underlie happiness — our attention systems, our reward center, our motivation systems, our emotion and memory centers — are fully activated by gameplay.

This extreme emotional activation is the primary reason why today's most successful computer and video games are so addictive and mood-boosting. When we're in a concentrated state of optimistic engagement, it suddenly becomes biologically more possible for us to think positive thoughts, to make social connections, and to build personal strengths. We are actively conditioning our minds and bodies to be happier.

In my real life today, hard work is what I choose to do every day because I consider it valuable to the world and fun to myself. But I worked the other way for the first 55 years of life, mostly doing work assigned to me by others. Often it was hard work that I loved doing, but a lot of time it was unsatisfying work which I had to do until I could figure out how to move to the next level, which in reality, is the next project or a new company. That is why I moved from job to job every few years — when I reached the top of the learning curve at one job, I jumped to another job with a new learning curve and new challenges. But we live in a time in human evolution where, at the age of 27 humans do not mature further automatically (4). Someone once said that, "Nowadays an 18-year-old is barely qualified to flip hamburgers and 9 years later is running the world." The result of this evolution shows up in so many

retirements at the age of 55 and the difficulty of out-of-work 40-somethings finding a new job. Also, consider this: the judge in a robe is probably only as mature as any 27-seven-year-old adult, no matter how austere the gray hairs may make the aged magistrate appear.

The influx of inexperienced youth in companies, new college graduates in engineering and marketing especially, also shows up in needless new varieties of everything. Every week when I shop for groceries at the local supermarket, I see some new product designed by some new graduate in market management. A new set of variations of Rotel, e.g., shows up on the shelf where only one existed the week before and suddenly I have to read labels to try to locate the original can of tomatoes and chili peppers. Fifteen new varieties of Newman's Own salad dressing appear, and I only want the original. Sometimes there are no bottles of the original on the shelf! These new graduates have to do something, so they make change for the sake of justifying their jobs, and cause ripples through the entire consumer product chain, which are often more confusing than useful. By the time the errors of these new graduates are discovered, they have moved to a new job elsewhere, and those errors have become status quo for the new set of graduates just coming in. A new engineer replaces a metal part with plastic and the failure mode only shows up years after the engineer is working elsewhere. I mention these new graduates because they are the ones given minor modification work to do which is often unfulfilling and boring. No wonder they are more interested in games than in their employer-telic work.

[page 28, 29] If only hard work in the real world had the same effect. In our real lives, hard work is too often something we do because we have to do it-to make a living, to get ahead, to meet someone else's expectations, or simply because someone else gave us a job to do. We resent that kind of work. It stresses us out. It takes time away from our friends and family. It comes with too much criticism. We're afraid of failing. We often don't get to see the direct impact of our efforts, so we rarely feel satisfied.

That's what happens to the new graduates. Now look at the other end of the spectrum, to the 45 to 55 year olds. They have reached the top of their learning curve and are not given challenging jobs, but grunt work to pass the time to retirement and pensions.

[Page 29] Or, worse, our real-world work isn't hard enough. We're bored out of our minds. We feel completely underutilized. We feel unappreciated. We are wasting our lives.

At all ages, what we really want is work to do which is novel, exciting, and uses all of our skills, stretching us constantly until the day we die. That kind of work often appears in our favorite games more than in our everyday lives, thus the attraction of these games. Until one creates the right kind of work for oneself, fun will always seem more fun than work.

[page 31] High-stakes work, busywork, mental work, physical work, discovery work, teamwork, and creative work — with all this hard work going on in our favorite game, I'm reminded of something the playwright Noël Coward once said: "Work is more fun than fun."

When Del and I are at home, we have a Screening Room with five large TV screens to view movies and other topical events. When we go to our mountain cabin with its limited TV selections, we usually take along a Scrabble game with us. One of the gotcha's in Scrabble, the Challenge of a word laid by another player always seemed distasteful to me. Finally I suggested an alternative: allow players to look up the word ahead of time, before they lay it down. Then if someone else asks what the word means, the player can simply tell them. It had another salubrious effect: Del had admitted to me once that she never looked up words in a dictionary. Suddenly upon implementation of this rule, she began spending several hours in almost continuous thumbing of a dictionary looking for a word which fit her letters and positions on the board. One simple modification to Scrabble rules, and a tedious task previously avoided became a productive activity to win a Scrabble game. This new rule requires us to bring two large dictionaries with

us on trips now, because each of us are looking up words most of the time. We also had to remove the dumb time-limit for making a word. Without a time limit, the other player may take 15 minutes to form one word, so we may turn on the TV and watch a re-run of a series of old James Bond movies to past the time while the other player is earnestly searching for the one right word. We also allow for repetitive usages of the Blank Tiles and of the Double and Triple Word scores. These changes lead to long satisfying, high-scoring games, with lots of *fiero* moments. What is *fiero*? It might be a thrill for you to find out. Stick around to read the next passage.

[page 33] Scientists have recently documented that fiero is one of the most powerful neurochemical highs we can experience. It involves three different structures of the reward circuitry of the brain, including the mesocorticocolimbic center, which is the most typically associated with reward and addiction. Fiero is a rush unlike any other rush, and the more challenging the obstacle we overcome the more intense the fiero.

With multi-person interactive games, people are creating bonds with other people of like interests all over the globe, from *World of Warcraft* guilds to nascent Rock bands.

[page 76] It may have once been true that computer games encouraged us to interact more with machines than with each other. But if you still think of gamers as loners, then you're not playing games.

My wife, Del, and I play a lot Chore games which we designed for ourselves over the course of 35 years together. I mentioned earlier that I did the grocery shopping. Del bought the groceries until the last of her four kids moved out to college, and then continued that practice until I retired at 55 to work as a writer out of our home. I had been doing most of the cooking for the two of us on the weekends before and soon, working at home everyday, I began cooking for Del each night when she came home tired from a long day selling and managing Healthcare plans, often working 80 hours a week, at the office and at home. By taking over the grocery shopping, I made things easier for her, and it allowed me to buy exactly the things I wanted to cook for the coming week. After fifteen years of this, it is still working, and, even though Del is home much more since she retired, she seldom accompanies me to the grocery. Over the years we found fun ways to take care of the other repetitive chores around the house and Chapter 7's "Chore Wars" section inspired me to share these.

One of the least fun aspects of sharing living quarters with someone is walking into the kitchen first thing in the morning to find pots, pans, and dinnerware scattered all over the place, yelling, "Who left this mess?" only to hear back, "Not me!". So we decided to make Not Me the good guy. We began to that cleanup, one or the other of us, at night when the other one had already gone to sleep. The next morning, the kitchen would be spic and span and the other would ask who did this? The one who did it would smile and say, "I guess it was the Midnite Elves." Here is a poem I wrote about 1990 to explain the process.

The midnite elves were on the shelves and counters of the kitchen
They made them sparkle in the dark and even loaded dishes in
The dishwasher to start it running well into the winter's evening.

LO! upon the morning's early light everywhere the eyes could see The house was right — a lovely sight and who'd take the credit? Not Me.

The midnite elves enjoyed themselves and didn't look for credit They tended to their task without being asked and would only answer, "Not Me did it."

From that humble beginning, we created the *Honey Bunny* and the *Coffeemate Fairy*. We drink a lot of coffee and we use Coffeemate Creamer and Honey. The small convenient dispensers we use every day need to be refilled about once a week or so. When one of us comes to make coffee and sees the honey refilled, for example, we'll say, "I see the Honey Bunny has been here!" Note how much more fun this is to say instead of the marriage-killing equivalent, "You used up all the honey without refilling it!" Another two chores turned into fun. Sometimes the Honey Bunny and Coffeemate Fairy made visits at the same time.

From the wonderful "Rose Is Rose" comic strip in our Times-Picayune daily newspaper, we discovered the "Garbage Moment" from Jimbo, who loves to go outside under the stars and look up at them after he takes out the garbage. No one has to remind him to do so or denigrate him for not doing so, he volunteers in the game of "Garbage Moment" and enjoys his time under the starlit sky. Later, we added the Newspaper Moment as our morning equivalent game. I usually go outside to retrieve the newspaper, and I always enjoy listening to the roosters crowing across the bayou on the other side of the bamboo thicket. We have a couple of quiet games we play, one is called Koala Bear. Do you recall when Qantas Airlines had the TV commercials with cute little cuddly bear saying the tag line, "I hate Qantas"? In our version of the game, if one of us is upset, the other comes over gives a gentle hug and says, do you hate Qantas, which is a signal for the sad one to place one's head on the shoulder of the other and say quietly and poignantly, "I hate Qantas." The other one is Waterfall. In this one, we get in the shower, hug as closely together as possible so that the water is dammed up to our shoulders, then we suddenly separate and feel as though we had suddenly stepped under a waterfall. We have lots of these moments of fun, whose primary requisite for playing is that both people have a lively child still living inside of them. One day Del was copy-editing my work and wanted to change a quote from the author Christopher Fry. I told her, "You're editing Christopher Fry and the man doesn't even know you." She replied, using her child voice, "But if he did, he'd wuv me." It's never to late be a kid!

Sometimes things occasionally happen which are not fun, and one of us is doing something to make the current situation unbearable, so the other one invokes the Pissing in the Soup game, which means to accuse the spoil sport of "Pissing in the Soup." What does that mean? Well, it's the name-equivalent activity in life to pissing in the soup: "It may create more soup, but it doesn't necessarily improve the flavor!" Most of the negative interactions married couples get into which end in divorce could be reckoned to *pissing in the soup*. By calling attention to the negative activity, one of a couple is able to break up the unpleasant game of Pissing in the Soup and get on with the fun of being together again.

Sometime one of us does something so wonderful that when the other asks "How can I to repay you?" the answer comes back, "Put it in the Book." *The Book* is an imaginary book in which we log these special treats and treatments. It is creative accounting in the best sense of the word.

McGonigal's Chore Wars is a modified version of World of Warcraft where all the online quests correspond with real-world cleaning tasks and you play it with your spouses or room-mates.

[page 120] It's meant to help you track how much housework people are doing — and to inspire everyone to do more housework, more cheerfully, than they would do otherwise.

A *Fix* is McGonigal's answer to repairing some way in which she sees that "reality is broken." Fix #7 is titled "Wholehearted Participation" and its theme is stated this way, "Compared with games, reality is hard to get into. Games motivate us to participate more fully in whatever we're doing." I couldn't help but reframe the penultimate sentence this way, "Contrasted to idiocy, reality is harder to get into." (5)

Under Fix #7 is the statement "If we're forced to do something, or if we do it halfheartedly, we're not really participating." Clearly someone who is doing something halfheartedly is doing so under some imagined if not obvious compulsion. And compulsion is the sure-fire killer of spontaneity. Paul Watzlawick describes

the "Be Spontaneous Paradox" as the situation when someone commands you to do something which can only be done spontaneously. The result is a pale attempt to comply which is always fails in its attempt. Point a camera at someone and say, Smile, and you'll get their best pretend smile, but no spontaneous smile. Good photographers evolve cute approaches to get around the BSP, and the novel approaches are what create the smile, not a command to smile which would invariably fail! Erections are spontaneous, so any woman saying, "Get it up!" is more likely to create impotence instead of an erection. Sneezing is a spontaneous activity and the BSP timely applied can stop a sneezing cascade. Simply wait until after the first sneeze and say, "Do that again!" This hiccup cure is also sure-fire: wait till a hiccup has just ended and flash a twenty dollar bill in front of a person, saying this is yours if you'll give me another hiccup. Their attempt to consciously create a hiccup on command will make it impossible for the spontaneous hiccup, which was waiting within, to show itself. For putting children to sleep, it is like magic. Sleep tell the child to lay in its bed with their eyes wide open for as long as it wants. Just keep quiet and stay in bed. Invariably, unless the child has been trained to pester its parents, it will fall asleep within minutes. Tell them to "Go to sleep" and you may have an all-night insomniac on your hands.

How can education be structured in the form of a game? It is surely the most compulsive form of activity kids are subjected to: they must go every weekday until they are at least 16, they have to stay in class, study courses pre-determined for them whether they like them or not.

[page 128] Increasingly, some education innovators are calling for a more dramatic kind of game-based reform. Their ideal school doesn't use games to teach students. Their ideal school is a game, from start to finish: every course, every activity, every assignment, every moment of instruction and assessment would be designed by borrowing key mechanics and participation strategies from the most engaging multiplayer games.

Three of my grandchildren went to a project school in Bloomington, Indiana, and I had occasion to visit at their school and learn about how the school worked. Basically each pupil was allowed to choose a project and while working on this voluntary project, they learned the necessary skills and content to complete the project. In this way subject matter became something that the child needed to learn to complete a project, not something a teacher wanted to cram into a child. The difference is incredible. Participation was not voluntary, but how you chose to participate was, so the Project School meets three of the four criteria for game design: One, it has a goal, namely the project. Two, it has rules about choices of projects. Three: there is a feedback system from the teachers who judged how each student's project challenged their current level of understanding. My grandson Walden had chosen a project about Jet Fighters and wrote that I had worked for the Lockheed Aircraft Co, among other things.

Whenever anyone gets hurt, I always look for the answer to two questions, one of which will be clearly the operant reason for the illness or accident or inconvenience. The first question is: What happened because of X that would not have happened under any other circumstance? The second question is: What did *not* happen because of X that would have otherwise happened? When Jane McGonigal hit her head hard on a cabinet door standing up in 2009, she developed a concussion and the only good thing which happened to her in my mind is that when her husband tested her for a concussion by asking her who the president was, she didn't know. It definitely was a concussion, but all the tests showed that she would likely be free of the headaches, vertigo, and blurred vision in about a month. But it required no reading, no writing, no working, and no running until she was symptom-free. She even discovered that computer and video games were too much stimulation for her brain.

[page 133] Either I'm going to kill myself or I'm going to turn this into a game. After the four most miserable weeks of my life, those seemed like the only two options I had left.

Contemplating suicide under any circumstances, to use the vernacular, is a strategy to die for! Luckily she chose the second option. But what about the two questions. These are best answered by McGonigal, but from the information she gives, I would expect that the operant question would be the second, namely,

what did not happen, because her giving up computer and video games would not likely have happened under any other circumstance. When the first month found her with symptoms remaining, she was facing two or months of prolonged symptoms. This was serious.

[page 134] My doctor had told me that it was normal to feel anxious or depressed after a concussion. But she also said that anxiety and depression exacerbate concussion symptoms and make it much harder for the brain to heal itself. The more depressed or anxious you get, the more concussed you feel and the longer recovery takes.

A system of positive feedback (otherwise known as a vicious cycle) is set up, depression causes symptoms which cause more depression. One way out of the vicious cycle which she did not have at her disposal was a doyle trace. Feelings of depression are doylic memories usually from immediately before birth where one is pushed into a tighter and tighter space with no end in sight. All those feelings are stored in doylic memory because the normal memory (cognitive, cortex-based memory) does not begin to work fully until after five years old. A speed trace takes the current doylic states of depression and uses them as sled to quickly speed down the hills of memory to the location in the limbic system where the primitive doylic memory is stored, accesses it and create a cognitive memory (which the brain was too immature to do at the time, but is now capable of doing). After the speed trace, the depressive symptoms will be gone and the concussion symptoms while still present will quickly heal absent the exacerbating depressive symptoms.

What Jane McGonigal did was use what she knew best how to do: create a game. The energy of game creation will lift her spirits and help relieve the depressive symptoms. It was at this time that the first question kicked in: she did something that she would not have done under any other circumstances, she asked friends and family for help. And she created SuperBetter, a multiplayer interactive game.

[page 134] SuperBetter is a superhero-themed game that turns getting better into multiplayer adventure. It's designed to help anyone recovering from an injury or coping with a chronic condition to get better sooner — with more fun, and with less pain and misery, along the way.

She became the Concussion Slayer and the point of her mission was to start seeing herself as powerful, not powerless. This instant reframe from powerless to powerful has been used for many decades by the Senoi tribe of the Malaya peninsula in Asia. A friend of mine Jack L. Johnston studied the Senoi's dreamwork processes and taught people in the States how to use them in their own dreams. If a Senoi sub-teen boy might come to the daily morning dream session in the tribal hut and say, "A scary tiger tried to eat me in my dream!" The people around the circle would start muttering, "Wow! A thing of power! How lucky you are!" Then they would have the boy relive the dream and confront the tiger, makes friends with it, and ask the tiger for a gift as a token of its esteem. Amazingly this process works quickly to remove the fear and anxiety caused by a tiger and replace them with a feeling of power.

For her second mission, McGonigal had to recruit her allies, the equivalent of the tribal folk in the hut. She then had to fight the bad guys which were the things which triggered her symptoms, the reading, running, emails, etc. Consider how brave she was being, designing and implementing the SuperBetter game while having only limited resources available to her. Soon she was identifying her *power-ups*, those fun things she could do to feel better. Then came the superhero to-do list. Her easiest to-do was baking cookies for people in her neighborhood. Eventually the game was over as she had recovered from all of her concussion symptoms. But not before she had created a new game to help other people in similar distress.

When McGonigal began talking about New Games, I remembered a Radical Therapy Conference that I attended in 1979 in Ames, Iowa. I had read about New Games, but here was my chance to participate in them. I recall the fun of playing volleyball without keeping score! It was completely voluntary and players could enter or leave the game at any time. We had the fun of making the current shot and winning, but there was no score kept, except for the amount of fun we had.

McGonigal says that "there's no score at all for getting smarter once you're out of school for good." But there are scores in the life of one's avatar in a computer game.

[page 146] "If I have one regret in life," I complained to the crowd at the Austin Convention Center, "it's that my undead priest is smarter than I am." Technically speaking, it's true: if you were to add up every A I've gotten in my real life, from junior high through graduate school, the total still wouldn't come close to my World of Warcraft character's intellect stat."

After many years of working assiduously at reading, studying and reviewing the works of Rudolf Steiner, Dave Lyons introduced me this way to a group I was in front of to lecture about Steiner's works. "Someone told me that if you have read at least 75 books on one subject, you have the equivalent of a Ph. D. Bobby Matherne has studied over 150 books on Rudolf Steiner, which makes him having a double Ph. D." I was amazed and flattered, but also glad to hear how Dave had found a way to score my achievement in one key area of my adult, out-of-school life. Perhaps my life of reading and reviewing books is like the Tetris game, quickly rotating and placing each review to plop into place, so that the stack keeps moving down with a satisfying click, and my score keeps getting higher, and books flow in faster and faster each year.

The Chapter titled "Happiness Hacking" takes on the biggest Be Spontaneous Paradox of all, Happiness! Go ahead, the self-help books say on the cover: "Be Happy — and Here's How You Do It". Sounds a lot like the famous Betty Crocker Cake Mix box which said, "Be Creative — and Here's How You Do It". Happiness activities, like creative activities, cannot be packaged in a book or a box, it must stem from self-generated activity. Happiness activities, like multi-vitamins may be useful, but not if they remain in the bottle unopened and unused, or simply forgotten about.

[page 184] What, exactly, are happiness activities? They're like the daily multivitamins of positive psychology: they've been clinically tested and proven to boost our well-being in small doses, and they're designed to fit easily into our everyday lives. There are dozens of different happiness activities in the scientific literature to choose from in addition to the three listed above, ranging from expressing our gratitude to someone daily to making a list of "bright-side" benefits whenever we experience a negative life event. And they all have one thing in common: they are backed by multiple million-dollar-plus research studies, which have conclusively demonstrated that virtually anybody who adopts one as a regular habit will get happier.

Only problem is they don't work. *Knowing* what to do to be happier does not translate automatically into *doing*. It takes *work*, and work is exactly what most unhappy people have been trained to avoid except when it's forced on them.

Every morning right about this time, I leave my computer desk and drive to PJ's Coffeeshop a few miles down the road. Working at home as a writer can turn easily into a drudge, and soon after I began writing at home I found the need to take frequent breaks like I did at the plant, only problem was that the plant had a break room where I could chat with people while sipping my coffee, and my home doesn't have a break room with people there. PJ's has become my morning break room. There's David who likes to talk about the latest Saints's game who fixes my coffee, Diane who is a regular who I always say Hi to and sometimes sit down to chat with, Penny who sits outside at a table since she smokes, Gary who worked at my plant is often there reading his newspaper and I can ask about plant related activities as he is still in the business, and so on. The *Jen Ratio* at PJ's is very high. What is the Jen Ratio? McGonigal explains how she created it from the Chinese word *jen* which means happiness.

[page 190] To measure the jen ratio of a space, you simply watch it very closely for a fixed period of time — say, one hour. You count up all the positive and negative microinteractions between strangers, keeping track of two different totals: how many

times people smile or act kindly toward each other, and how many times people act unfriendly, rude, or openly uninterested. All the positive microinteractions — such as big smiles, a hearty thank-you, a door being held open, a concerned question — get tallied on the left side of the ratio. All the negative microinteractions — a sarcastic comment, an eye roll, an unexcused bump, someone cursing under their breath — get tallied on the right side.

Having observed these kinds of microinteractions at PJ's Coffeeshop for many years, I rate the Jen Ratio there very high. I rarely leave there without a happy feeling inside, and that makes it a great break room for me in my current job. After reading about the Jen Ratio for the first time in this book, I pondered all the various places I have spent time in and realized that I have stopped going to Negative Jen places and I avoid contact with people who create Negative Jen in my presence. One of the fun activities in New Orleans is just to walk the streets of the city. McGonigal writes on page 190, "But strangers aren't always inclined to be friendly to each other." The opposite is true in this city. If a New Orleanian sees a likely tourist stopped on a street looking puzzled, soon that tourist will have a wealth of information provided by the stranger who will stop, ask if they can help, and then provide whatever help the person needs. There is no list of the friendliest cities in America, but I would put New Orleans at the top of the list. It also has the highest Jen Ratio of any city I've ever been in on a year-round basis. No need for "Happiness Hacking" (Chapter Ten) if you already live in New Orleans.

If you want to play Tombstone Hold 'Em, this is also a great city for that, because most of our tombstones are elevated from the ground due to the high water table. The game is described on page 198, 199 and is based on the poker game "Texas Hold 'Em" but instead of playing cards, it uses tombstones, dates of death, and number of names to create the suits and number on the cards. You literally touch one tombstone and need other people to touch both you and another tombstone to get the next card. This makes for a rollicking time in the cemetery by the time you get a winning straight or flush together. It's one of the games created by McGonigal as part of Happiness Hacking. This is the first use of cemeteries for fun I've encountered, since seeing the movie projected on the side of a mausoleum in a Hollywood cemetery during the movie, "Valentine's Day".

One other Happiness Hack is the Top-Secret Dance-Off in which a player dances in disguise and posts the video on the Internet to compete. "TSDO is an environment with an off-the-charts high jen ratio." (Page 213)

In the Chapter "Engagement Economy" we learn about crowdsourcing, "coined by technology journalist Jeff Howe in 2006, (it) is shorthand for outsourcing a job to the crowd." You invite people over the Internet to cooperate in tackling a big project. Wikipedia, an on-line encyclopedia, was created by more than 10 million people, unpaid and anonymous (mostly). The *Guardian* in England needed massive help in sorting through Member of Parliaments' expenses to confirm suspicions of blatant misuse of taxpayers's money. So they developed an online game, Investigate Your MP, after converting and condensing 458,832 documents and placing them on-line. The game was to review each document for revealing information about misuse. Within three days, 20,000 players had already analyzed more than 170,000 documents. (page 221). The data revealed such facts as this: on average, each MP expensed twice the amount of salary received. Soon hundreds of MPs were ordered to repay about two million dollars. (Page 225)

Wikipedia has good game community as defined by McGonigal. Here's how Wikipedians describe it:

[page 230] Every *unique location* (article) in the *game world* encyclopedia) has a *tavern* ("talk page," or discussion forum) where players have the opportunity to interact with any other player in real time. Players often become friends with other players, and some have even arranged to *meet in real life*.

In the waning years of the 20th Century, I spent a lot of time in a List called Steiner98 and over the succeeding years I have met in person a half dozen of the members of the List who are located all over the

country, and it's always been a wonderful meeting, as of old friends not of new friends. As for the Tavern in Wikipedia, I wonder if there is a doyletics Tavern. If anyone knows, please let me know, as I would like to raise a quaff with the regulars. As the founder of the science of doyletics, I was not allowed to create the entry for doyletics, but at some point, I will wish to see what it contains.

One of the things I do on the way to my break room at PJ's Coffeeshop, is listen to Teaching Company lectures. My current lecturer is Grant L. Voth, who wrote in his Lecture 47 Notes for Borges's *Labyrinths* the following about his famous story, "Tlön, Uqbar, Orbis Tertius." (On page 207 of Teaching Company's course, *The History of World Literature*.)

[Grant L. Voth] The story is about the gradual discovery of a society which over the past three centuries has created first an imaginary land and then an imaginary planet. One of its founding members was Bishop Berkeley, the Idealist philosopher, so it turns out to be a most intriguing and interesting kind of place. It is, of course, also logically consistent and coherent because it was made by humans using the rules of human logic and language. When word of this imaginary planet gets out into the world, the world begins to adapt itself to Tlön; even objects unique to this created world begin to show up in ours. The reason for this is clear: Tlön is made up, but it is orderly, rational, and understandable vis-a-vis our own reality, whose order and rules and meaning we never grasp. As Oscar Wilde said half a century earlier, reality is merely process looking for form. Art is form, and when someone creates something of formal perfection, we try to adapt reality to it; thus, the world is becoming Tlön.

Wikipedia is like the imaginary land of Tlön: it started out as someone's imagination, and soon people from all over the world were adding entries which brought it into the realm of reality in a big way. One cannot look up an item without getting a link to Wikipedia today. The imaginary has become real due to crowdsourcing of an on-line encyclopedia.

Earlier in this review (page 348 passage), I gave a list of "reality slams" or potshots that McGonigal takes on reality in this book. To her credit, she takes back these slams in the final Chapter "Reality Is Better".

[page 348, 349] Reality is all of these things. But in at least one crucially important way, reality is also better: reality is our destiny.

We are hardwired to care about reality — with every cell in our bodies and every neuron in our brains. We are the result of five million years' worth of genetic adaptations, each and every one designed to help us survive our natural environment and thrive in our real, physical world.

That's why our single most urgent mission in life-the mission of every human being on the planet — is to engage with reality, as fully and as deeply as we can, every waking moment of our lives.

That doesn't mean we can't play games. It simply means that we have to stop thinking of games as only escapist entertainment.

Perhaps we should think of games the way the ancient Lydians did, she says. They invented dice games and spent 18 years eating every other day and on intervening days, they played dice games. Eventually they decided that experience was telling them that the land could support only half of the population, so one-half the citizens of Lydia moved away to what is now Italy and settled in a fertile region and became known as Estruscans. While they were playing games, the Lydians were also doing crowdsourcing by involving the entire population in an experiment in survival which led to a solution to the problem of starvation in Lydia.

Like the Lydians, games today help keep us alive, happy, and connected with others. Video game players need no longer be looked down on as lonely losers wasting their life away in computers.

In the 1980s I heard a lot criticism of video games as the Game Rooms popped up all over the country and

kids were dropping quarters for thrills in all kinds of games. When the Desert Storm War came, I predicted that American kids who had spent years shooting down spaceships in various video games and, who were now flying fighter jets and manning army tanks, would have no trouble dispatching Iraqi kids who grew up in the same time period learning to jockey a camel. History proved my hunch was correct. The games we play today prepare us for the real world we will live in tomorrow, and sometimes, like with Wikipedia and Desert Storm, the two will develop together, the real world of today holding hands with the world of tomorrow in ways we cannot imagine, a future which will be quite extraordinary.

	1. Autotelic was coined from Greek words for <i>auto</i> and <i>goal</i> by Csikszentmihalyi in <i>Beyond</i> and <i>Anxiety</i> .
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in recent activities prevalent	<b>2.</b> There seems to be a ground-swell of parent-telic activities following High School graduation years. The parents design a so-called <i>Mystery Trip</i> for all the graduates. An all-night set of designed by parents for the kids to have fun. Why go to all that bother? There seems to be a phobia which prevents parents from allowing 18-year-olds (who can sign up to be killed in the to design their own fun activities for their own graduation night.
Return to	text directly before Footnote 2.
Cooperat	3. His simulation work on Prisoner's Dilemma is documented in his book, Evolution of ion. See my review at <a href="http://www.doyletics.com/art/teocart.htm">http://www.doyletics.com/art/teocart.htm</a> .
Cooperat	,
Return to   Footnote	text directly before Footnote 3.  4. This insight comes from Rudolf Steiner. Here are two of the places in which this feature of volution is discussed: Aspects of Human Evolution and The Mysteries of the East and of
Return to   Footnote human ev Christian	text directly before Footnote 3.  4. This insight comes from Rudolf Steiner. Here are two of the places in which this feature of volution is discussed: Aspects of Human Evolution and The Mysteries of the East and of
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 $Reality\ Is\ Broken\ Why\ Games\ Make\ Us\ Better\ and\ How\ They\ Can\ Change\ the\ World\ by\ Jane\ McGonigal,\ A\ Evolution\ of\ Consciousness\ ARJ2\ Review\ by\ Bobby\ ...$ 



