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FINDINGS

# On a Hunt for What Makes Gamers Keep Gaming



Viktor Koen

By JOHN TIERNEY  
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By the age of 21, the typical American has spent 10,000 hours playing computer games, and endured a smaller but much drearier chunk of time listening to sermons about this sinful habit. Why, the experts wail, are so many people [wasting](#) their lives solving meaningless puzzles in virtual worlds?

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Now some other experts — ones who have actually played these games — are asking more interesting questions. Why are these virtual worlds so much more absorbing than school and work? How could these gamers' labors be used to solve real-world puzzles? Why can't life be more like a video game?

"Gamers are engaged, focused, and happy," says [Edward Castronova](#), a professor of telecommunications at [Indiana University](#) who has studied and designed online games. "How many employers wish they could say that about even a tenth of their work force?"

"Many activities in games are not very different from work activities. Look at information on a screen, discern immediate objectives, choose what to click and drag."

[Jane McGonigal](#), a game designer and researcher at the Institute for the Future, sums up the new argument in her coming book, "Reality Is Broken: Why Games Make Us Better and How They Can Change the World." It's a manifesto urging designers to aim high — why not a [Nobel Prize](#)? — with games that solve scientific problems and promote happiness in daily life.

In the past, puzzles and games were sometimes considered useful instructional tools. The emperor Charlemagne hired a scholar to compile "Problems to Sharpen the Young," a collection of puzzles like the [old one about ferrying animals across a river](#) (without leaving the hungry fox on the same bank as the defenseless goat). The British credited their victory over [Napoleon](#) to the games played on the fields of Eton.

But once puzzles and gaming went digital, once the industry's revenues rivaled Hollywood's, once children and adults became so absorbed that they forsook even television, then the activity was routinely denounced as "escapism" and an "addiction."

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Meanwhile, a few researchers were more interested in understanding why players were becoming so absorbed and focused. They seemed to be achieving the state of “flow” that [psychologists](#) had used to describe master musicians and champion athletes, but the gamers were getting there right away instead of having to train for years.

One game-design consultant, [Nicole Lazzaro](#), the president of XEODesign, recorded the facial expressions of players and interviewed them along with their friends and relatives to identify the crucial ingredients of a good game. One ingredient is “hard fun,” which Ms. Lazzaro defines as overcoming obstacles in pursuit of a goal. That’s the same appeal of old-fashioned puzzles, but the video games provide something new: instantaneous feedback and continual encouragement, both from the computer and from the other players.

Players get steady rewards for little achievements as they amass points and progress to higher levels, with the challenges becoming harder as their skill increases.

Even though they fail over and over, they remain motivated to keep going until they succeed and experience what game researchers call “fiero.” The term (Italian for “proud”) describes the feeling that makes a gamer lift both arms above the head in triumph.

It’s not a gesture you see often in classrooms or offices or on the street, but game designers like Dr. McGonigal are working on that. She has designed [Cruel 2 B Kind](#), a game in which players advance by being nice to strangers in public places, and which has been played in more than 50 cities on four continents.

She and her husband are among the avid players of [Chorewars](#), an online game in which they earn real rewards (like the privilege of choosing the music for their next car ride) by doing chores at their apartment in San Francisco. Cleaning the bathroom is worth so many points that she has sometimes hid the toilet brush to prevent him from getting too far ahead.

Other people, working through a “microvolunteering” Web site called [Sparked](#), are using a smartphone app undertake quests for nonprofit groups like [First Aid Corps](#), which is compiling a worldwide map of the locations of [defibrillators](#) available for cardiac emergencies. Instead of looking for magical healing potions in virtual worlds, these players scour buildings for defibrillators that haven’t been cataloged yet. If that defibrillator later helps save someone’s life, the player’s online glory increases (along with the sense of fiero).

To properly apply gaming techniques to school and work and other institutions, there are certain core principles to keep in mind, says [Tom Chatfield](#), a British journalist and the author of “Fun Inc.: Why Gaming Will Dominate the Twenty-First Century.” These include using an “experience system” (like an avatar or a profile that levels up), creating a variety of short-term and long-term goals, and rewarding effort continually while also providing occasional unexpected rewards.

“One of the most profound transformations we can learn from games,” he says, “is how to turn the sense that someone has ‘failed’ into the sense that they ‘haven’t succeeded yet.’”

Some schools are starting to borrow gamers’ system of quests and rewards, and the principles could be applied to lots of enterprises, especially colossal collaborations online. By one estimate, Dr. McGonigal notes, creating [Wikipedia](#) took eight years and 100 million hours of work, but that’s only half the number of hours spent in a single week by people playing [World of Warcraft](#).

“Whoever figures out how to effectively engage them first for real work is going to reap enormous benefits,” Dr. McGonigal predicts.

Researchers like Dr. Castronova have already benefited by tracking the economic transactions and social behavior in online games. Now that [Facebook](#) and smartphones have enabled virtual communities to be created fairly cheaply, Dr. Castronova is hoping to build a prototype that could be adapted by researchers studying a variety of real-world problems.

“Social media like video games are the only research tool we’ve ever had that lets us do controlled experiments on large-scale problems like [global warming](#), terrorism and pandemics,” Dr. Castronova says. “Not everything in virtual environments maps onto real behavior, but a heck of a lot does. Rules like ‘buy low, sell high’ and ‘tall people are sexier’ play out exactly the same way, whether the environment is virtual or real.”

Dr. Castronova envisions creating financial games to study how bubbles and panics occur, or virtual cities to see how they respond to disasters.

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“One reason that policy keeps screwing up — think Katrina — is because it never gets tested,” he says. “In the real world, you can’t create five versions of New Orleans and throw five hurricanes at them to test different logistics. But you can do that in virtual environments.”

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Well, you can do it as long as there enough players in that virtual New Orleans who are having enough fun to keep serving as unpaid lab rats. Researchers will need the skills exhibited by Tom Sawyer when he persuaded his friends it would be a joyous privilege to whitewash a fence.

Tom discovered, as Twain explained, “that Work consists of whatever a body is obliged to do, and that Play consists of whatever a body is not obliged to do.” The ultimate challenge, when trying to extract work from the World of Warcraft questers and other players, will be persuading them that it’s still just a game.

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