Gamification Reader

Compilation by Mathias Fuchs

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What is Gamification all about?

“Gamification is taking things that aren’t games and and trying to make them feel more like games.“ (Schell, 2011)
--- „Gamification verwandelt Objekte, die keine Spiele sind, in etwas, das sich anfühlt wie Spiele.“

“It is suggested that ‚gamified’ applications provide insight into novel, gameful phenomena complementary to playful phenomena. Based on our research, we propose a definition of “gamification” as the use of game design elements in non-game contexts.“ (Deterding, Dixon, Khaled, Nacke, 2011)
--- „Gamification ist die Verwendung von Spieledesign-Elementen in Zusammenhängen, die nichts mit Spielen zu tun haben.“

“There is no doubt that video games are the emergent form our times and that the process of gamification is transforming our world, contaminating it like never before.“ (Reilhac, 2010)
--- „Es kann kein Zweifel darüber bestehen, dass Computerspiele das Leitmedium unserer Zeit sind und dass Gamification unsere Welt verändern wird: Es wird unsere Welt verderben.“

“Gamification is projected to be a $1.6 billion market by 2016 according to Business Week. Already, 40% of the online population are regular players of online games.“ (Games for Brands, 2012. http://wcorry.blogspot.de/2011_09_11_archive.html)
--- „Im Jahre 2016 wird Gamification ein 1.6 Milliarden Dollar Geschäft sein.“

“Gartner says by 2015 more that 50 per cent of organizations that manage innovation processes will gamify those processes.“ (Burke, 2010)
--- „Im Jahre 2015 werden 50% aller Firmen, die Innovationsprozesse steuern, Gamification dafür einsetzen.“

One year later Gartner says: “Gamification is currently being driven by novelty and hype. By 2014 80% of gamification applications will fail to deliver.” (http://www.bbc.com/future/story/20121204-can-gaming-transform-your-life)
--- „Im Jahre 2014 werden 80% dieser gamifizierten Anwendungen als gescheitert erklärt werden müssen.“

“Video games render social realities into playable form.“ (Galloway, 2006, pp 17)
--- „Computerspiele machen aus gesellschaftlicher Realität ein Spiel.“

and directly referring to Galloway: “In tune with gamification, this influence is bidirectional, i.e. inversely, reality itself becomes a playable structure.“ (Escribano 2012, p 204)
--- „Gamification macht aus spielbaren Strukturen gesellschaftliche Realität.“

“Gamification is the penetration of society with methods, metaphors, values and attributes from video and computer games.“ (Fuchs, 2011)
--- „Gamification ist die Durchdringung unserer Gesellschaft mit Methoden, Metaphern, Werten und Attributen der Computerspiele.“

“In tactical terms, gamification can be thought of as using some elements of game systems in the cause of a business objective (,,,)“gamification is used to create experiences that use the power of games (...) in spheres as diverse as HR, healthcare, finance, government and education.“ (Zichermann, 2011)
--- „In taktischer Hinsicht ist Gamification nichts als die Verwendung von Spielelementen mit der Absicht eines wirtschaftlichen Vorteils.“

“Gamification is the application of game elements and digital game design techniques to non-game problems, such as business and social impact challenges.“ (Kevin Werbach on Coursera, 2013)
--- „Gamification ist die Übertragung von Elementen der Spiele und des Computerspieldesign auf spielferne Fragestellungen, wie beispielsweise die der Ökonomie und Gesellschaft.“

“The law of work does seem utterly unfair - but there it is, and nothing can change it: the higher the pay in enjoyment the worker gets out of it, the higher shall be his pay in cash also. “ (Mark Twain: *A Connecticut Yankee in King Arthur's Court, Kap. XXVIII)*
--- „Je mehr Vergnügen du an deiner Arbeit hast, desto besser wird sie bezahlt."

“In ev’ry job that must be done
There is an element of fun
You find the fun, and snap!
The job’s a game!” (Pamela Lyndon Travers 1934)

“Never for job and pay! I detest that! Everything I do needs to be done playfully. I do it whenever I like and as long as it is fun.“ (Goethe in a letter to Riemer: *Aus dem Goethehause.* 1892*)*
--- „Nur nichts als Profession betreiben! Das ist mir zuwider; ich will alles, was ich kann, spielend treiben, was mir eben kommt und so lange die Lust daran währt."

Playing games to save water

Mar 22, 2013, From: http://www.ifpri.org/blog/playing-games-save-water

Source: Ruth Meinzen-Dick, IFPRI, A water-saving game in India

World Water Day 2013 begins the International Year of Water Cooperation. Today, we highlight an innovative research project that helps strengthen cooperation to protect and conserve this precious natural resource.

Recently, villagers in India and Colombia have been regularly gathering for a "game night." But instead of Monopoly or charades, they play a game that simulates real-life decisionmaking about water use.

How to use water—specifically, what kind of irrigation to use and type of crop to plant—is not a decision that can be made in isolation. The success of a farmer's crops and the availability of water for all farmers depend on the decisions and actions of the whole community. Water management requires people to work together to use this resource carefully and judiciously, but such collective action rarely happens.

As part of the CGIAR Research Program on Water, Land and Ecosystems, IFPRI is collaborating with the Foundation for Ecological Security in India, Universidad de los Andesin Colombia, and Arizona State University on an innovative use of experimental games to improve collective water management. These games—simulations of real-life water and farming scenarios—are designed to both measure and improve collective action in communities in India and Colombia. In India, for example, groups of five men and five women from each village must choose what to grow throughout a year's seasons with an eye toward their chosen crops' water requirements. If growing strategies use too much groundwater, the game ends—similar to real life where groundwater tables are falling, and the cost of pumping irrigation water is rising.

Feedback from the participants is enthusiastic. "For other meetings we don't sit for so long," said one villager. "But in this meeting we didn't know how the hours passed. It is because the game is related to our lives."

While researchers use these kinds of experimental games more and more to measure the likelihood of cooperation, this project is one of the first to explore whether they can also be used to strengthen cooperation. According to IFPRI's Global Food Policy Report, poor water management is linked to water scarcity and degradation, low agricultural productivity, and poor nutrition and health outcomes. If successful, this study will provide an important new tool for strengthening collective action not only for water management but for other resources as well.

LeftoverSwap
For leftover takers

You're hungry. And cheap. We understand.

You also care about reducing waste, eating locally, and want to build relationships within your community. We also understand those things.

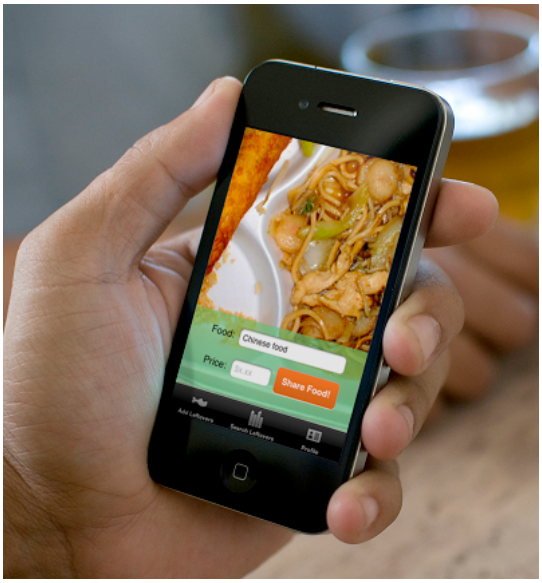
Simply fire up LeftoverSwap, view the available leftovers around you, make your selection, and arrange for pick-up or delivery. Your cheap, local, and

For leftover givers

You're stuffed. You can't take another bite, but there's so much left on your plate.

You hate the idea of throwing out food, but also don't want to be eating the same leftovers for the next few days. We understand. You want to reduce our dependence on fossil fuels and fertilizer as well. We also understand that.

Snap a picture of what you can't eat, name it, and share the rest of your meal. Your neighbors are hungry.



Top 5 Gamified Charity Apps

Written by
IVAN KUO
July 31, 2014

Gamification is well-known to boost players' engagement and interest. Players are rewarded through badges or leader boards. Health, education, and even charitable sectors are using gamification as a method to increase awareness of social issues as well as encourage donations to causes. Here are several examples of successful charity apps:

1. **Charity Miles** : Once you sign up, the app will track each mile you run, walk, or cycle. For each mile you achieve, Charity Miles donates money to one of nine reputable charities–ten cents per mile biked and twenty-five cents per mile ran. All you have to do is post your workout on social media. This app encourages you to exercise and be more charitable. A pretty healthy combination, and the app is free!

2. **Tap Project** by Unicef: You can give an underprivileged child drinking water for a day with this free app. It rewards you for not using your phone. The longer you go without using your phone, the more money is donated. For each ten minutes you don't use your phone, a sponsor will donate a day's worth of clean water.

3. **My Life as a Refugee** : This app lets you walk in the shoes of a refugee. You must make some of the same life-changing decisions that refugees make every day, sometimes with very little time to consider what the ramifications might be. The purpose of this app is to raise awareness of what Unicef does for refugees from war-torn nations.

4. **Feedie** : Taking photos of food is all the rage. Now, your photos can benefit schoolchildren in South Africa. Each time you take a pic of your food and posts it to a social media site, participating restaurants donate to the Lunchbox Fund. The nonprofit organization provides lunches to South African children. The app is free at the iTunes store.

5. **Budge** : This app allows you to compete with friends and give to charities all at once. Challenge your friends to virtually any game (chess, volleyball, running a marathon, etc.), and the loser makes a donation to a charity of their choice.

6. **iHobo** : In 2010, Depaul UK launched this tamagotchi-style app, which allowed you to care for a homeless youth for 3 days in real-time. Push notifications would remind you to secure food and shelter for the youth living on the street. You could either ignore the notifications and watch his life spiral out of control as well as lose points, or you could take care of the homeless youth and earn points. The iHobo campaign had 600,000 downloads raising awareness of homeless youth and earned over 3.8 million dollars.

According to **certain etimates** , 4.55 billion people worldwide will use smartphones in 2014. These charitable mobile apps have the potential to raise awareness of situations and people that need help. These types of apps increase fundraising for their prospective organizations. Furthermore, the charities can keep app users apprised of the latest news and developments. Once again, a win for gamification.

Amazon, Facebook And Google Design Fun Way To Cure Cancer

Hilda Scott

Cancer Research UK teams up with Amazon, Facebook and Google to create a mobile game to help with cancer research.**Credit:Reuters/iTechPost**

Cancer Research UK announced Friday, March 1, that its scientists are working with Amazon, Facebook and Google to help with finding a cure for cancer. The charity will work with these three major technology giants to create a mobile game to assist with the search for a cure.

Cancer Research UK is investing in cancer research studies that require the analysis of enormous amounts of genetic data. Scientists are using the genetic fingerprint of patients to find genetic faults that will lead to alternative ways to diagnose and treat cancer. Although modern technology enables scientists to conduct in-depth probes of tumors, machines can't do everything. The human eye is better at detecting changes than machines can, which can lead to more clues about the causes of the disease.

A special event called GameJam will be held over the weekend (March 1-3) in which 40 computer geeks will help to convert Cancer Research UK's raw gene data into a game for people to play. The goal of the "hackathon" event is to create a fun and scientific game for "citizen scientists" that will engage the public in the process of helping to analyze gene data. The "GeneRun" game will be officially launched in the summer of 2013, available as a downloadable app for mobile devices.

Expertise from Facebook UK's engineering team will support the GameJam and Facebook is heavily involved with the coordination of the event.

"For us to be involved in something as important as the search for cures for cancer is a huge honour and we hope to help build on the incredible work done by Cancer Research UK," said Philip Su, engineering site director of Facebook London in a press release. Attendees of the event are made possible through Facbook's relationships with local universities.

"At Facebook we believe the best way to solve a problem is to bring smart people together to 'hack' a solution," Su said.

Google is sponsoring and hosting the hackathon at Campus, a space located in the heart of East London's Tech City. "We think this is a great initiative and we are very excited to be able to support this project," said Theo Bertram, public policy manager at Google.

"We're making great progress in understanding the genetic reasons cancer develops. But the clues to why some drugs will work and some won't, are held in data which need to be analyzed by the human eye — and this could take years. By harnessing the collective power of citizen scientists we'll accelerate the discovery of new ways to diagnose and treat cancer much more precisely," said Cancer Research UK.

"It is exciting to be part of this project and use cloud technology, and gamification of data, to help in driving research towards finding a cure for cancer," said Teresa Carlson, vice president of Worldwide Public Sector, Amazon Web Services. Amazon will host the game free of charge and will prove free tech support assistance to participants of the GeneRun games.

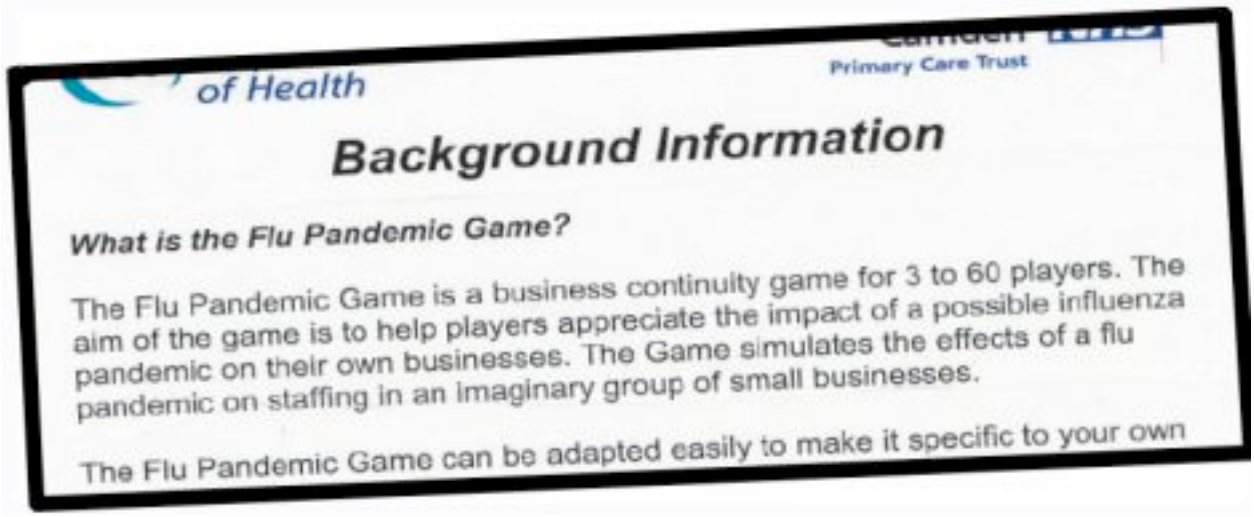
Fluedo: Health chiefs introduce their latest weapon in the war against swine flu... a dice game

By BEEZY MARSH and DANIEL BOFFEY
UPDATED: 06:52 GMT, 30 August 2009

When swine flu first struck Britain the Government responded with helplines, distribution points for anti-viral drugs and a promise of a vaccine by Christmas.
But now health chiefs have unveiled a bizarre new tactic to combat the virus – a role-play game using a set of dice.
The Flu Pandemic Game, which can be downloaded from the Department of Health's website, is for three to 60 players, takes around 90 minutes and has chance cards much like Monopoly.
Initially devised by Camden Primary Care Trust in North London, the game
is supposed to simulate 'the effects of a flu pandemic on staffing in an imaginary group of small businesses', and a version has also been developed for use in GP surgeries and hospitals.

Dicing with death: The 'Flu Pandemic Game' is being actively promoted on the Department of Health's website

Players assume the identity of staff at imaginary workplaces. These include the Istanbul Supermarket, where all 12 staff are male, in accordance with Muslim tradition.
The game has 15 rounds, each representing one working week. At the start of each round players roll a set of four dice, with the number they roll indicating whether they will go down with swine flu.
In the first round, it takes a roll of four sixes to be condemned to the virus. But as the rounds go on, the probability of each worker catching swine flu increases as the imaginary pandemic takes hold.
By round six a player need only roll two sixes to come down with the virus, which puts them out of the game for three rounds.
The surviving players are asked at the end of each round to discuss the impact that the pandemic has had on the various businesses involved.



The instructions state: 'With a typical group of players the game lasts between 45 minutes and one hour, but most players appreciate having an additional half-hour for discussion afterwards.'
And once players have finished a game using imaginary persons, they play a second time using their real job titles.
Perhaps unsurprisingly, the game also comes with a Government health warning:
'Some people may find it disturbing to play using details of their own organisation.
'The game is a simulation and has no effect on subsequent events, but it can seem a little like fortune telling.'
The rules also recommend that the person running the game, known as the facilitator, has 'substantial experience of delivering training on sensitive topics', such as child protection.
Unlike in real life, however, the game does not actually allow players to die because, as officials claim, it would make it too 'unwieldy'.
The instructions explain: 'The Flu Pandemic Game assumes a zero mortality rate. The worst realistic case modelling scenario assumes a mortality rate of 0.37 per cent based on the 1918/1919 pandemic.
'The possibility of mortality has not been included in the Flu Pandemic Game because simulating such a small probability makes the game unwieldy and too long.'
Critics have complained that it is a waste of time and that the resources should have been directed to the Government's swine flu helpline.
Katherine Murphy, of the Patients' Association, said: 'This game is a ridiculous use of time and money. The Government should be focusing on letting patients know how to get the drugs they need and whether they should be taking them.
'The money and time spent on this game could surely have been better spent on organising the swine flu helpline better and actually helping patients.'
A Department of Health spokeswoman refused to be drawn on how much the game has cost the taxpayer.
She said: 'This is part of a suite of guidance issued by the department to support local health and social care services to prepare robust pandemic action plans.
'Developing guidance is part of the department's normal emergency preparedness planning to ensure that the NHS is best able to respond.'
Sixty-six people have so far died from swine flu in Britain and 5,000 new patients were diagnosed last week. Earlier this week it was revealed that two swine flu call centres were to close because they were receiving fewer calls than predicted.

Read more: http://www.dailymail.co.uk/health/article-1209974/Fluedo-Health-chiefs-introduce-latest-weapon-war-swine-flu.html#ixzz2olHU5SZ9
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Twine, the Video-Game Technology for All

Source: http://www.nytimes.com/2014/11/23/magazine/twine-the-video-game-technology-for-all.html?smid=fb-share&_r=0

by LAURA HUDSON, NOV. 19, 2014

Porpentine, the creator of the critically acclaimed Twine game Howling Dogs.

Perhaps the most surprising thing about “GamerGate,” the culture war that continues to rage within the world of video games, is the game that touched it off. Depression Quest, created by the developers Zoe Quinn, Patrick Lindsey and Isaac Schankler, isn’t what most people think of as a video game at all. For starters, it isn’t very fun. Its real value is as an educational tool, or an exercise in empathy. Aside from occasional fuzzy Polaroid pictures that appear at the top of the screen, Depression Quest is a purely text-based game that proceeds from screen to screen through simple hyperlinks, inviting players to step into the shoes of a person suffering from clinical depression. After reading brief vignettes about what the main character is struggling with — at home, at work, in relationships — you try to make choices that steer your character out of this downward spiral. The most important choices are those the game prevents you from making, unclickable choices with red lines through them, saying things like “Shake off your funk.” As your character falls deeper into depression, more options are crossed out. You can’t sleep; you can’t call a therapist; you can’t explain how you feel to the people you love. In the depths of depression, it all feels impossible.

Although Quinn expected negative reactions to the game, things became frightening this summer after she released the game through Steam, a prominent (and mainstream) gaming platform. A jilted ex-boyfriend of hers posted a nearly-10,000-word screed that accused her of sleeping with a journalist for positive reviews. The claim, though false, set off a wave of outrage that eventually escalated into a campaign against all the designers and critics who have argued for making gaming culture more inclusive. At their most articulate, the GamerGate crusaders denounce progressive voices in games (whom they derisively call “S.J.W.s,” or “social justice warriors”), claiming that they have needlessly politicized what should be mere entertainment. At their least articulate, they have carried out sustained and vicious harassment of critics, prompting at least three women to flee their homes in the wake of rape and death threats. In Quinn’s eyes, the real motivations are clear. This is a battle over not just entertainment but identity: who gets to be called a gamer, what gets to be called a game and who gets to decide.

Quinn had created graphically oriented games before, including the satirical Ghost Hunter Hunters. But she decided to make Depression Quest through an increasingly popular program called Twine. Although

it's possible to add images and music to Twine games, they're essentially nothing but words and hyperlinks; imagine a digital "Choose Your Own Adventure" book, with a dash of retro text adventures like Zork. A free program that you can learn in one sitting, Twine also allows you to instantly publish your game so that anyone with a web browser can access it. The egalitarian ease of Twine has made it particularly popular among people who have never written a line of code — people who might not even consider themselves video-game fans, let alone developers. Chris Klimas, the web developer who created Twine as an open-source tool in 2009, points out that games made on it "provide experiences that graphical games would struggle to portray, in the same way books can offer vastly different experiences than movies do. It's easy to tell a personal story with words."

Twine games look and feel profoundly different from other games, not just because they're made with different tools but also because they're made by different people — including people who don't have any calcified notions about what video games are supposed to be or how they're supposed to work. While roughly 75 percent of developers at traditional video-game companies are male, many of the most prominent Twine developers are women, making games whose purpose is to explore personal perspectives and issues of identity, sexuality and trauma that mainstream games rarely touch on.

Although plenty of independent games venture where mainstream games fear to tread, Twine represents something even more radical: the transformation of video games into something that is not only consumed by the masses but also created by them. A result has been one of the most fascinating and diverse scenes in gaming. The very nature of Twine poses a simple but deeply controversial question: Why shouldn't more people get to be a part of games? Why shouldn't everybody?

One of the most prominent and critically acclaimed Twine games has been Howling Dogs, a haunting meditation about trauma and escapism produced in 2012 by a woman named Porpentine. The gameplay begins in a claustrophobic metal room bathed in fluorescent light. Although you can't leave, you can "escape" once a day by donning a pair of virtual-reality goggles. Each time, you're launched into a strange and lavishly described new world where you play a different role: a doomed young empress learning the art of dying; a scribe trying to capture the beauty of a garden in words; a Joan of Arc-like figure waiting to be burned on a pyre. And each time you return to the metal room, it's a little dirtier and a little more dilapidated — the world around you slowly decomposing as you try to disappear into a virtual one.

"When you have trauma," Porpentine says, "everything shrinks to this little dark room." While the immersive glow of a digital screen can offer a temporary balm, "you can't stay stuck on the things that help you deal with trauma when it's happening. You have to move on. You have to leave the dark room, or you'll stay stunted."

When I first met Porpentine outside a coffee shop in Oakland, Calif., she was wearing a skirt and patterned knee socks, her strawberry blond hair pulled back in a small plastic barrette. We decided to head to a nearby park, and as we walked across the grass, she pivoted on one foot — an instant, unconscious gesture — and did a quick little spin in the sunshine. When we arrived at a park bench, one of the first things we talked about was trash, because her Twine games teem with it: garbage, slime and sludge, pooling and oozing through dystopian landscapes peopled by cyborgs, insectoid empresses and deadly angels. In Howling Dogs, the trash piles up sticky and slow; in other games, like All I Want Is for All of My Friends to Become Insanely Powerful, tar floods the room suddenly from an indistinct source. Forget pretty things, valuable things: Porpentine's games are far more interested in what society discards as worthless.

"Trash has very positive connotations in my world," she said, trying to smooth the wild ends of her hair as the wind off a nearby lake kept bringing them to life. "A lot of my work is reclaiming that which has been debased." A transgender woman who has faced harassment for much of her life, Porpentine referred to herself as "trash-bodied" several times as we talked. It's not an insult, she explained: "Me and my friends, we hide in the trash. People call us trash, but we glorify in it." At 14, she was kicked out of her home. It's not an unusual story — an estimated 20 to 40 percent of homeless teenagers are gay, bisexual or transgender. When I asked her what she was doing before she made Twine games, she said, "Just surviving."

"I was never on the streets or in shelters, but I struggled with housing my whole life," she said. After leaving home, she found herself "in vulnerable situations where I was dependent on others — sometimes abusive people, sometimes kind people. I didn't really have much control over what happened to me, and I was always one step away from homelessness."

She created Howling Dogs shortly after she started hormone-replacement therapy in 2012, while staying in a friend's remodeled barn. It took her only seven days to make it, but soon even mainstream gaming critics were praising it, and The Boston Phoenix named it one of the five most important independent games of the year. When the developer Richard Hofmeier won the grand prize at the Independent Games Festival that year for Cart Life, he celebrated his win by spray painting the words "HOWLING DOGS" across his booth, replacing his game with hers and telling people to play it. "I don't want to say that it's fun or I love it

— it's instilled me with what I call 'holy dread,' " Hofmeier said in an interview after the festival. "It's a very special kind of territory. Pragmatic, mechanical games can't touch that kind of territory."

At the same time, like most women with public personas on the Internet, Porpentine has also received her share of hostile feedback: emails and tweets wishing her dead, and at least one detractor who called the existence of Howling Dogs "a crime." At the 2012 Interactive Fiction Competition, it won the "Golden Banana of Discord," a prize awarded for the highest standard deviation — the game that was both the most loved and the most hated. One naysayer called it "about as much fun as randomly clicking links on Wikipedia."

"I get really polarized reactions," Porpentine said in Oakland. "I deal with really violent stuff, but I also get really loving, passionate stuff. It moves me very deeply." She suggested that the backlash against her work came in part from the rarity of hearing a voice like hers at all: a transgender woman making challenging games about subjects many people would prefer to avoid. "A lot of my work deals with these topics of abuse that I feel are incredibly common to any feminine person's life," she said. "But it feels like this big secret. Life is hella traumatic. It's weird to me, because if you have an injury, why wouldn't you want to figure out the best way of dealing with it?"

Many people describe a sort of catharsis that they feel when they play Porpentine's games. There's a sudden sense of relief that something important but taboo has finally been acknowledged in a game, and perhaps has left them feeling less alone in the process. So many mainstream games are power fantasies, designed to deliver the bliss of limitless violence. Porpentine's games tend to be poetic meditations on the scars that violence leaves behind, beautiful but claustrophobic landscapes that thrust players into positions of powerlessness and challenge them to work their way out.

Twine represents something radical: the transformation of video games into something that is not only consumed by the masses but also created by them.

In her game Begscape, you become a homeless person wandering from town to town in a fantasy world, trying to scrounge up enough coins to eat and find a warm place to sleep. It is an experience of constant peril, where a single cruel act by a stranger — or a series of indifferent strangers — is all it takes to push you over the thin line between poverty and death. It's also a deeply unfair game, which is of course the point, and a game you do not win so much as survive.

"I'm very concerned with the question of pain and how we survive," she said. "Because sometimes we survive by striking to the heart of that pain and revealing it as a naked thing for the world to see. To say, No, you cannot turn away from this."

Contrary to the stereotypes about gamers, nearly 50 percent of people now playing games are female, according to the Entertainment Software Association. Even more surprising, there are more adult women playing than there are boys under 18. The demographics of game creation, however, lag significantly. Developers are still overwhelmingly male, and most mainstream games cater to the interests and expectations of young middle-class men. Getting a job as a programmer at a traditional game publisher often requires proficiency in multiple programming languages, as well as a degree in game development or computer science — fields in which women are perennially underrepresented. Unlike Twine games, which are usually made by one person without cost, a "AAA" game from a major studio can have a development team of hundreds, cost tens of millions of dollars and take years to complete. Video games are now a roughly $100 billion industry, exceeding (by some estimates) the global take of the U.S. film industry.

"The amount of people who have access to the engineering education required to be in programming is very, very small," says Anna Anthropy, a game developer whose book "Rise of the Videogame Zinesters" helped put Twine on the map in 2012. "And even within that, there are a lot of ways that people are filtered out by the culture." Anthropy has taught Twine workshops to everyone from 9-year-olds to 70-something retirees who had never played a video game in their lives, and she says they picked it up with equal ease. "If you're someone who hasn't played a lot of video games and you're handed this tool where all you need to do is write, maybe you're just going to write something about you," she says. "Maybe you're going to write something about your pet. There's no reason you have to create something that's about space marines."

The beauty of Twine is that you can make games about almost anything. Over the last several years, it has also been used to create a memorial to a dead brother, a cannibal dating simulator, a 50,000-word interactive horror tale about being trapped in a spacecraft with a lethal alien. One of Anthropy's most moving Twine games, Queers in Love at the End of the World, lasts only 10 seconds. The moment it begins, a timer starts counting down to an unspecified apocalypse; that's all the time you have to say goodbye to your lover before the world disappears. There's a poignant desperation in the brief experience that cuts to the heart of grief — the sense that you simply didn't have enough time with the person you loved. Rather than offering closure, the game leaves you empty and aching by design.

Although many Twine games focus on the personal experiences of the creator, Player 2 by Lydia Neon shifts directly to the personal experiences of the players, by asking them to describe a painful, unresolved experience in their own lives and trying to provide them with a form of catharsis uniquely tailored to their experiences.

"It was a time when someone let me down," the text reads initially, although the last few words are changeable; click on them, and you can cycle through a list of other options until they describe your own particular experience: "hurt me," "belittled me," "excluded me," even "assaulted me." Then it asks you to enter the name of the person who did it, because that's the real second player in the game: the person who hurt you.

"In a sense you've been playing with them since it happened, haven't you?" the game asks. "You haven't dealt with it yet, so there they are, in the back of your mind." After offering you word choices to tell the story of what happened and how you feel, it asks if you want to do something about it. After all, the other person is just Player 2 now, and "you have the controller, not them." It closes by encouraging you to either take action or come to terms with how you feel.

Player 2 is precisely the sort of experience that many critics would reject as "not a real game" for a variety of reasons: because it doesn't give the player enough power or control; because you can't win or lose; because it isn't a test of skill; or simply because it's not "fun." Especially when a game focuses on narrative, how many choices, how much interactivity is necessary to create a game instead of just a story?

These debates are more than just pedantry, and the questions of authenticity that swirl around Twine games are the same ones that hang over so many of the people who make them: Do they really belong? When video-game fans insist on drawing hard lines around fluid definitions in ways that tend to align with cultural prejudices, perhaps it's time for them to start questioning whether what they're protecting is really more important than what they're keeping out.

Twine has particularly encouraged the development of game mechanics that capture personal and emotional experiences. Cara Ellison, a gaming critic who also made a Twine game called Sacrilege, about one-night stands, says it's a sort of innovation rarely seen in mainstream games. "All of the tools that have been honed to make video games are essentially centered around violence and systems of violence," she says, rather than working to develop what she calls "mechanics of intimacy," ways that games might express emotional experiences and relationships.

"That's something I came up against when I was researching why video games don't approach sex or love or dating in a very consistent or interesting way," Ellison says. "It's led video games to seem like they only approach this one topic. I feel like that puts off particular people who want to explore more interesting themes that don't touch on violence. Text games are the perfect place to explore those issues."

Even when they do touch on violence, Twine games tend to do it in intimate and far more complicated ways. Last year, Merritt Kopas released a Twine game called Consensual Torture Simulator, which allows you to step into the shoes of a dominant partner in a B.D.S.M. encounter. Although you are doing violent things to another person, they've all been negotiated clearly in advance; the other person might seem powerless, but the explicit insistence on consent and safe words actually leaves the power in the hands of the submissive partner and revolves around his or her desires. Looking at violence through this personal lens also invites us to rethink the role of violence in mainstream action games. Not only is brutally stripping power from enemies usually the explicit point of these games, but the people you shoot, stab and kill are typically so dehumanized that the idea of thinking about what they want and how they feel — thinking of them as people at all — seems either ridiculous or horrifying. After all, it's not really what those games were built to do.

'I'm very concerned with the question of pain and how we survive. Because sometimes we survive

by striking to the heart of that pain and revealing it as a naked thing for the world to see.'

When dusk fell in Oakland, Porpentine and I walked around until we found a Japanese restaurant that Yelp applauded for its low prices and large portions. She was hesitant at first — she's on a budget, she explained. She makes her living (less than $1,000 a month) from her games, through the crowdfunding website Patreon. But when I offered to cover it, she relaxed a bit, and we ordered a bunch of fancy sushi rolls, the kinds with names like Titanic and Lion King that come out covered in brightly-colored sauces and little flecks of tempura.

"It's been hard," she admitted. "I'm looking into more ways to leverage what I've done and make money in ways that are not obnoxious." She's working on a compilation of all her Twine games to sell independently, and when I ask whether she'd want her games on a larger platform like Steam — where Depression Quest found a significant audience but also significant harassment — she seems interested. It's a tension that

comes up often when I talk to female Twine developers: the push and pull between going big and staying small, between art and commerce, between the comparative safety (and poverty) of smaller spaces and the mainstream visibility that allowed Zoe Quinn's game to reach so many people, even as it made her a target.

Although Porpentine is a bit guarded about specifics, she describes her childhood as a survival experience: an isolated, cultish upbringing in which she often retreated into books to block out reality. "I would read all the time just to ignore what was going on around me, to ignore the yelling," she said. "I'd read nutrition labels during every meal." Words became her only form of escape; they started to feel like a physical part of her, and in some ways the only form of power she had.

"It makes me think of bargaining," she said. "It makes me think of despair. If you've ever had to bargain for your existence, to beg for something to stop, if you're physically powerless, as I was when I was a child, you're thinking, Is there anything I could possibly say that would make this stop? You become very verbally dexterous."

Ultra Business Tycoon III, another game by Porpentine, begins as a parody of an "edutainment" game from the 1990s — complete with its own antiquated shareware code. As a "prominent businessreplicant in the money business," you are tasked with amassing a million dollars. But somewhere between embezzling money from your job and evading skeleton warriors, the barrier between the game and real life starts to dissolve. Just after you finish looting and demolishing the skyscraper of a rival corporation, the game inexplicably mentions that you pass your parents' bedroom on your way out of the wreckage. It recalls the way the sunlight used to look in their room, how you used to feel safe there.

"You don't know why they started hitting you. It just happened," the narrator adds, apropos of nothing, and then whisks you back to your capitalist adventure.

Later in the game, the fourth wall slides away completely, and suddenly you're a little girl sitting at a computer playing Ultra Business Tycoon III as your older sister creeps into the room to say what feels like an oddly permanent goodbye. After she departs, you — the player, the younger sister — are faced with only one choice to select: "Turn back to game." Porpentine dedicates it to "the ones I left behind" and shifts away from text for a moment to display two images: drawings she received from her younger sister, years after Porpentine left home.

This year, Porpentine released Everything You Swallow Will One Day Come Up Like a Stone, a game about suicide. One of her most moving games, it also remains one of the most obscure — largely because she distributed it for only a single day.

"This game will be available for 24 hours and then I am deleting it forever," she wrote during its brief availability. "Suicide is a social problem. Suicide is a social failure. This game will live through social means only. This game will not be around forever because the people you fail will not be around forever."

The concept for the game is tremendously simple. A number counter is set to zero, with plus and minus buttons beneath it to make the number bigger or smaller. "I counted this high," it begins, and then the game is just that: counting up, though the purpose of doing so isn't clear at first. I've played it four or five times now and never made it all the way through without crying.

Sometimes, nothing happens when you click to the next number; other times, words appear like stray thoughts. "Who would you miss if they were gone for a day?" it asks at one point. Keep clicking, and the word "day" is replaced by "month," then by "year" and finally "forever." Sometimes it asks you questions. Sometimes it tells you stories. At one point it quotes from the suicide note of a Czech student who killed himself by self-immolation, later from a news report about a woman who committed suicide after being raped. "This is the game," it says.

The numbers start to feel like days, and the rhythm of clicking feels like passing time, like checking off days on a calendar. It isn't always "fun," per se; sometimes, when you click 10 or 15 times in a row and see nothing but an empty screen, a little part of you wonders when it's going to end. But you keep on clicking. After all, what other choice do you have? It feels like surviving.

But somewhere around the number 300, the game decides to throw you for a loop. Click the wrong link — or the right one? — and it catapults you suddenly into the tens of millions. The moment you see it, your guts twist with panic; the space between where you were and where you are becomes a vast numeric desert, and the idea of clicking millions of times to get back seems impossible. You won't be able to do it, you think for a moment — you'll just have to quit the game. Then you remember you're playing a game about suicide.

"That's what it feels like to wake up insane or with trauma," Porpentine said. "It's like, Oh, God, how do I get back there? It feels like it'll take a million days to get back, a million steps. That is the crisis. 'Will I ever be the same again?' And you won't."

A few days after our interview, I came across a quotation by the theologian John Hull that reminded me of Porpentine's work — something he said, after going blind, about the power and clarity of coming to terms with profound loss. "I've come to think of blindness as like a sword," Hull said. "It is as sharp as a sword, but it's got no handle. You have to hold it by the sharp end." I emailed the quote to Porpentine and asked if it resonated.

"Holding a sword without a handle is probably better than no sword at all," she wrote back.

Correction: November 19, 2014

An earlier version of an accompanying article omitted a creator of the video game And With Those We Love Alive. Besides Porpentine, Brenda Neotenomie worked on it.

Laura Hudson is a writer based in Portland, Ore. This is her first article for the magazine.

This video game might be the future of ADHD and Alzheimer's treatment

Welcome to the interactive future of brain medicine

- *By* Virginia Hughes on October 24, 2014 11:08 am

On October 6th, I find myself in the gleaming office of a Boston biotech. I've been seated in a clear plastic chair, where I am about to try an experimental medicine for a brain disorder I don't have.

The space is home to PureTech Ventures, the parent company of Akili Interactive Labs, which makes the new medicine. Since December, children in Florida and North Carolina have also tried the treatment as part of a formal clinical trial for attention-deficit hyperactivity disorder (ADHD). The medicine is unusual because of its delivery system: an iPad or iPhone. That's because the medication is a video game called Project: EVO.

Until now, I haven't touched a video game since about 1991. What if I fumble the mechanics, or worse — what if the game deems me cognitively deficient? One of Akili's founders, 32-year-old Eddie Martucci, hands me an iPad and I see my avatar: a yellow humanoid, floating on a jet-fueled raft down a crooked, icy river. My task seems simple: I tap on blue fish that zoom overhead, but avoid the red and green fish, as well as blue birds. Of course, I'm also steering the raft to avoid frozen spikes along the riverbank.

AS I GET BETTER, THE GAME INSTANTLY GETS HARDER

It's *hard*. It feels like I'm constantly missing my targets and smashing into the sides. Most frustrating — and addictive — of all: as I get better, the game instantly gets harder.

If Akili's clinical studies are successful, doctors will one day prescribe EVO for ADHD as well as a variety of other disorders affecting so-called executive function — the ability to plan, inhibit actions, and quickly switch between tasks. The game has been part of a dozen clinical trials to date, involving people with ADHD, Alzheimer's, autism, and depression.

The plan is realistic enough that Big Pharma wants in: Akili has already struck deals with two traditional drug companies, Pfizer and Shire. Within the industry, Martucci says, "there's definitely a growing receptivity to digital technology."

Over the past few years, a torrent of studies on video games and brain function have spurred a booming consumer market. The "digital brain health" industry reportedly grew from $600 million in annual revenues in 2009 to more than $1 billion in 2012; the biggest players are names like Lumosity, Cogmed, Posit Science, CogniFit, and Brain Resource.

But most companies aren't making medical claims; they haven't done the trials necessary for that. And what's more, scientists have said that these games promise quick-fixes they can't deliver.

In contrast, Akili is navigating through clinical trials required for EVO to become an FDA-approved medical device. If they make it, they'll have access to a completely untapped

market: patients. "We don't see other people playing in that space," says Akili co-founder Eric Elenko. "From a business perspective it represents a more lucrative opportunity."

THEY'LL HAVE ACCESS TO A COMPLETELY UNTAPPED MARKET: PATIENTS

The drugs used to treat brain disorders don't just have side-effects; they usually don't address executive dysfunction. That's because drugs don't have feedback loops that aid learning, according to Adam Gazzaley, a neuroscientist at the University of California, San Francisco. "Drugs are relatively blunt instruments," he says. "They're not selective for networks and circuits in the brain."

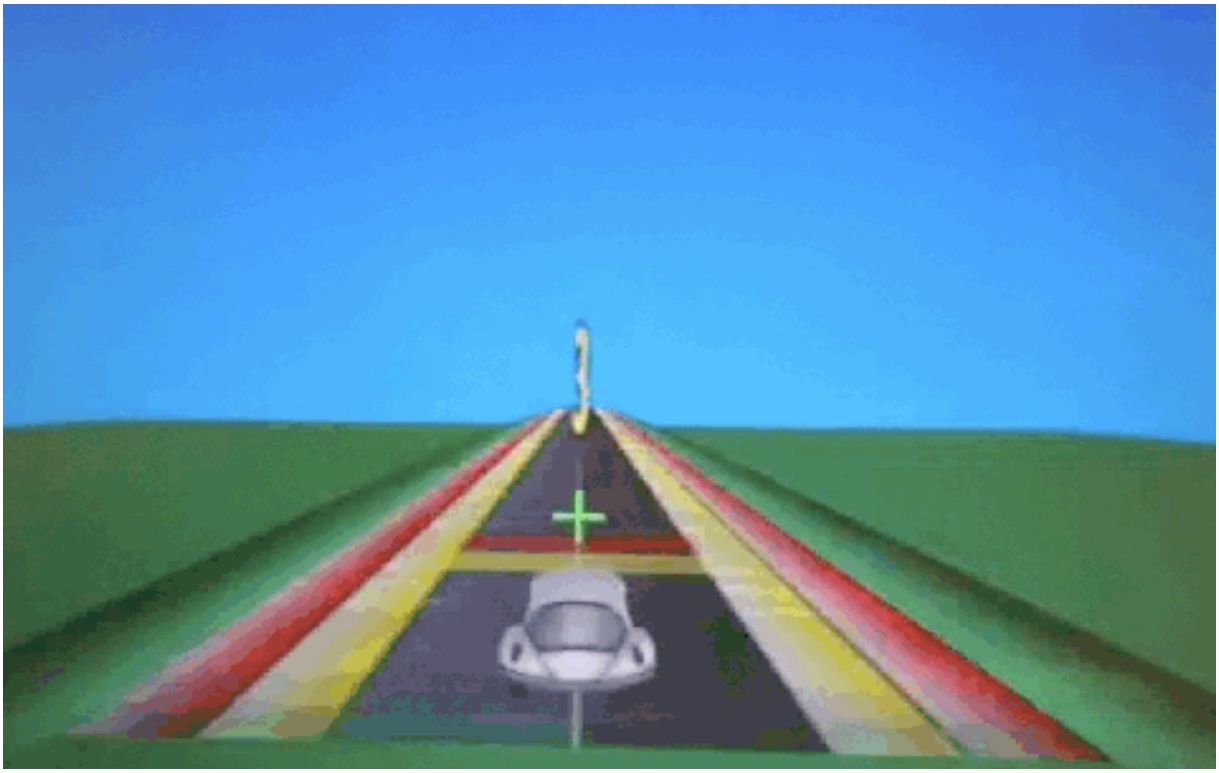
Gazzaley got interested in scientific gaming around 2008, while conducting brain-scanning studies aimed at executive function. He wondered whether training people could improve their everyday executive function skills. But his laboratory tasks were boring; getting volunteers to play them for hours was a "preposterous" idea, he recalls.

So Gazzaley got in touch with his friend Matt Omernick, a game designer at LucasArts who was working on *Star Wars: The Force Unleashed*. The duo, along with other engineers and researchers, had evening get-togethers to talk about how to translate the lab's tasks into something fun. "He'd feed us sushi and beer and we would brainstorm," Omernick says.

A man plays NeuroRacer, the predecessor to Evo (Image courtesy Globe TV & UCSF Gazzaley Lab)

The result was NeuroRacer, in which players steer a car along a curvy highway while responding to pop-up signs. Last year Gazzaley made the cover of *Nature* with a study

testing senior citizens' performance on the game. At first, the seniors were horrible at it. After a month of training, they were better than untrained 20-year-olds. More important, though: their scores on untrained skills, such as sustained attention and working memory, went way up — and remained strong for at least six months. By using scalp electrodes to measure participants' brain waves, the researchers also showed that NeuroRacer training altered participants' wave patterns: the older brains looked decidedly younger.



Design-wise, NeuroRacer is like something I might have played on my Compaq 486. "I hesitate to even call it a game, it's so simplistic," Omernick says. It did have one innovative feature: its difficulty adapted in real time. Most video games get harder as a player progresses through different levels, but Omernick says NeuroRacer was the first to update on the fly.

While working on NeuroRacer, Gazzaley and Omernick met Martucci and Elenko; together they founded Akili. The company licensed NeuroRacer's algorithm; and Omernick overhauled the design to create Project: EVO.

The most important part of EVO's design, Omernick says, was making it appealing for a wide array of players, from a 7-year-old with ADHD who loves video games to an 82-year-old grandparent who's never touched a tablet. "We had to create something universally appealing that people weren't going to be intimidated by," he says. That meant no weapons and no deaths.

"WE HAD TO CREATE SOMETHING UNIVERSALLY APPEALING THAT PEOPLE WEREN'T GOING TO BE INTIMIDATED BY."

The engineers also made EVO even more adaptive than NeuroRacer, capturing performance data 30 times a second. "People are never in a spot that's either too hard or too easy for them," Martucci says. "You just literally hand the iPad to a patient and it works."

Shire — the world's largest seller of ADHD drugs — invested an undisclosed amount in Akili early on and helped design its ongoing ADHD study. The trial enrolled 80 children ages 8 to 12; half have ADHD and the other half are cognitively normal. All will play EVO for about 30 minutes a day for a month.

Screenshot of Project: EVO

The goal is to see whether there's any difference between the ADHD group and controls on the game's metrics. In particular, the researchers want to study multitasking, which is what happens when participants must both steer and tap on birds. Multitasking is cognitively draining and some groups have a hard time with it; the Akili team believes they'll find a multitasking deficit in kids with ADHD. The trial's results will come sometime in 2015.

If that trial — about midway through the regulatory process for medical devices — finds a difference between the ADHD group and controls, then Akili will move on to a larger and more rigorous 'pivotal trial', testing the game against a placebo.

The clinical trials mean Akili also has to worry about EVO's side-effects, notes Stephen Faraone, a professor of psychiatry at SUNY Upstate Medical University who's consulted with Akili. Boys with ADHD or autism, he points out, have an increased risk of

problematic use of video games, spending more hours playing them and having trouble disengaging. (For the ADHD trial, EVO is programmed to automatically shut off after 45 minutes.) But the game format might make children less likely to avoid taking their medicine. "It's a treatment that children will want to do," Faraone says.

CHILDREN WITH ADHD ARE MORE AT-RISK FOR PROBLEMATIC USE OF VIDEO GAMES

The video-game approach makes sense based on what we know about brain circuits that are affected in ADHD, says Chandra Sripada, an assistant professor at the University of Michigan, who isn't involved with Akili. Brain imaging studies from his lab and others have shown that people with ADHD have glitches in areas involved in cognitive control, leading to an inability to stifle impulses to blurt out inappropriate words or act without thinking."The idea that these games would train the very same circuits that are weak in ADHD is very plausible," Sripada says.

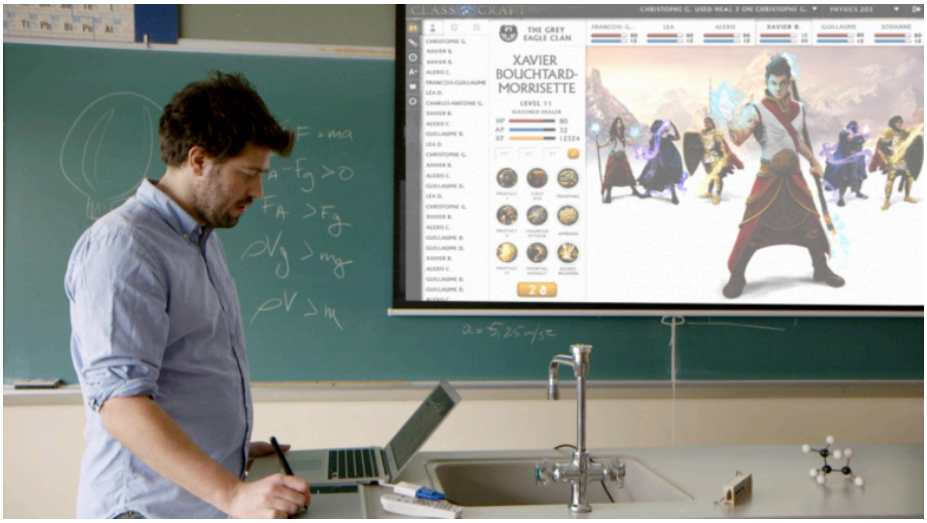
Even if EVO doesn't turn out to be an effective treatment for brain disorders, it may be useful in other ways. Pfizer is funding a 100-person clinical trial to see if EVO data can be used to find markers for healthy elderly people who develop Alzheimer's disease. Currently there's no good way to predict who will get sick. The goal of the trial is to see whether Akili's game might be used as a biomarker in future clinical trials of Alzheimer's treatments, says Dean Mastrojohn, a Pfizer spokesman.

PFIZER IS FUNDING A 100-PERSON CLINICAL TRIAL IN ALZHEIMER'S DISEASE

Elenko and Martucci gave me a peek at my data from the 15 minutes or so that I played EVO. Happily, my 30-year-old attention skills are far better than I thought they were. I have a multitasking deficit of about 5 percent, which Martucci assured me is "extremely low" for EVO — my scores were similar to those of healthy people in their 20s.

If EVO is approved by the FDA, it will be fascinating to see how its use compares to a traditional pharmaceutical. How will doctors determine dosage? Will regular consumers like me need a prescription to get it? Will there be an over-the-counter version? Though Akili is focused on the patient market, I would be surprised if it didn't eventually cross over into the giant consumer market of cognitive enhancement. On my long train ride home from Boston, as I play *2048* on my phone again and again and again, I find myself wishing I had EVO instead.

Classcraft makes the classroom a giant role-playing game — with freemium pricing



Above: Classcraft is updated live during lessons, with students able to use their powers and abilities on the fly.
Image Credit: Classcraft

May 31, 2014 12:30 PM

Dan Crawley

Shawn Young has a class full of warriors, mages, and healers. Warriors get to eat in class, mages can teleport out of a lecture, and healers can ask if an exam answer is correct.

But this isn't some *Dungeons & Dragons*-style fantasy. This is education as it's happening for over 7,000 kids in more than 25 countries right now. Young, a high-school physics teacher, has been developing and refining Classcraft, his classroom-based role-playing game for the past three years, and he says it creates a collaborative and supportive learning environment that can help turn around students who are failing.

Currently a free service, Classcraft will introduce a pay structure this fall that embraces the free-to-play model more commonly seen in mobile apps and online games like League of Legends and Runescape. It's going to turn heads in an education system used to strict budgets and paying per-head for software solutions, especially when they realize that the students will be buying gear and pets for their Classcraft avatars on iTunes.

Playing in class

If you're a gamer, being in Shawn Young's physics classroom sounds like a blast. At the start of class, his students come in and check their stats on the screen projected at the front of the room. When the bell rings, its time for a random event, which could impact one or more players. It might be a disaster, like a pupil's game character dying, or it could be something goofy like someone getting up to sing.

This helps focus the students, Young told GamesBeat during a video call, as "the second they get into class, they want to know what's going to happen."

Above: The different classes in the game balance to encourage teamwork.
Image Credit: Classcraft

As the lesson progresses, Young will dish out experience points for good work and collaboration and will give hit damage to students who lack focus or misbehave. Students can gain powers specific to their character class by levelling up, and they can use these to help and protect their teammates (or themselves), activating them live as events that unfold in the classroom.

The teacher can track all this activity in Classcraft, or, as in Young's case, the kids can use their laptops to interact with it in real-time. Come September, they'll be able to use their smartphones to keep up with the game too, with an iOS app set for release and an Android version to follow.

Cutting class and eating chocolate

As the Game Master, Young's students are playing by his rules, but the chance to turn things in their favor is always there. Some powers have potent individual and team effects, and the students can get pretty creative with them.

"There's one power, Teleport, where you can leave the class for 2 minutes," says Young, "so they'll stack that and leave for 10 minutes. That kind of annoying, but at the same time it's part of the game."

Some kids also used the warrior's power to eat in class as an excuse to bring in a chocolate fondue.

Young admits that the rewards on offer in Classcraft are often outside the normal rules of school, but he says that's what makes them so appealing. "I'm like, OK, I'm cool — this is hilarious," says Young. "It goes both ways. As the Games Master, you buy into that, [but] then when they die they get these horrible consequences.

"For them, their real life is going to school. And Classcraft is successful and significant because these rewards and punishments are significant for them."

If a pupil's hit points run out, they die. They then face a punishment that a roll of the die determines, which can include detention or copying out a five-page text.

“Typically, they’d be like, ‘Oh, you’re mean, you’re giving me detention,’ and try and get out of it,” says Young. “Now, they’re like, ‘This is the game, it’s cool, I’ll go.’ You don’t even need to check if they’re going. They’re definitely going.”

“Students don’t typically respond happily to punishments. But they are. It’s weird.”

Above: Students will be able to purchase items to customize their in-game avatar.
Image Credit: Classcraft

Transforming the classroom through collaboration

Young had the Classcraft idea in his head for several years before acting on it.

Before making it, he tried various ways of getting kids to collaborate better in class, something he believes is important in a 21st century that’s proving a boom time for sharing, not least through social media.

“I did some other experiments before where kids would work in teams and get the worst grade of the four people in their team,” says Young. “It was a little too hardcore. [*Laughs*] A little too directly relating to their grades, so some of them felt it wasn’t fair.”
Going after that group mentality is key for Young, though, and he doesn’t think the education system values it enough. “Our whole system of [pupil] rewards is based on individual assessments,” he says, “and that’s not useful for them. What’s useful for them is seeing the value of your team succeeding as opposed to yourself, working together to make your collective level go up.”

Young points out that when somebody dies in Classcraft their whole team gets punished by losing hit points. “The game is very finely balanced — risk versus reward,” he says. “There’s a collective risk of somebody dying, but at the same time there are all these incentives to collaborate. That really transforms the classroom.”

The history teacher

Ricardo Higuera teaches seventh grade world history in a rural corner of Southern California called Thermal. Nearly all the students in his middle school are eligible for free or reduced school lunches. Higuera's been trialling Classcraft for the past 4 months and he's thrilled with how it's making his students care about their grades.

"Academically, I have noticed quiz scores and class-participation increase," Higuera told me via email. "Before, some of my more apathetic students wouldn't care if they failed a quiz. Now, they're more wary to because they know it affects their character's level and team standings in the game."
Classcraft has also helped with the flow of his lessons. "I pride myself in running a smooth, 'fun' classroom even before Classcraft, but I've noticed a huge tick in the pulse of the class since we began the game," said Higuera. "Because our passing periods are notoriously short, I had a slight tardy problem — with some groups more than others — but now I have kids rushing to get to class on time."

Above: Ricardo Higuera's history class creating their Classcraft characters.
Image Credit: Ricardo Higuera

So far, Higuera is the only teacher in his school to try Classcraft. Some of the other staff are unsure of what it actually is and how to make it part of their teaching. Being the Game Master is a big part of that.

"The game, like anything else in education, depends on how it's used by the teacher," said Higuera. "Like role-playing games of old, the game depends a lot on the Game Master. He or she holds the power to engage players and make the game come alive."
Higuera already thinks Classcraft will be part of his teaching arsenal for years to come.

"I do think Classcraft is ideal for the age group and subject matter I work with," he told me. "Middle school, medieval world history … I mean, how cool is that — to play a World of Warcraft-like game as you're learning about samurai, knights, and the Aztecs? I'm like a kid all over again, playing *Dungeons & Dragons* with my friends."

Games Can Advance Education: A Conversation With James Paul Gee

Jordan Shapiro | July 3, 2014 | 15 Comments

Getty

Part 10 of MindShift's Guide to Games and Learning.

Most people involved with games and learning are familiar with the work of James Paul Gee. A researcher in the field of theoretical linguistics, he argues for the consideration of multiple kinds of literacy. The notion of "New Literacies" expands the conception of literacy beyond books and reading to include visual symbols and other types of representation made possible through, among other things, current digital technologies.

At this point in the evolution of education, it's critical that we expand our conception of literacy to include more than just words. In fact, we may need to reimagine how we nurture early literacy to make sure we provide a foundation not only for reading, but also for "New Literacies."

Gee is included in this series because outside of academic psycholinguistics circles, he's especially well known for his work on video games. He's written and edited many books on game-based learning and education. He's influenced countless game designers and educators. Some of his theories have provided the foundation for many of the ideas I've covered in this series, especially those having to do with systems thinking.

In the following conversation with Gee, we discuss literacy, systems thinking, education, socio-economic inequality, and, of course, video games.

Jordan Shapiro: Your book, *What Video Games Have to Teach Us About Learning and Literacy*, is a classic in games and learning circles. It is rare that I meet a game developer who doesn't mention it. Did you expect it to have such a big impact when you wrote it?

James Paul Gee: No, I did not expect such a big impact. I wrote the book because my then six-year-old's gaming turned me on to try an adult game. I had never played video games before.

I was, at first, truly amazed by how hard and long they were. To learn to play them well required a great deal of persistence past failure. Eventually, I loved playing games and realized that if I did not write about them I would not have an academic career anymore.

JS: One of key concepts in the book is that literacy is about more than just reading words. I find that it is a bit of a leap for people who aren't familiar with linguistics to grasp that idea. These days we talk about "digital literacy" and "financial literacy" as if it just means "competency." But it is more complicated than that. Can you briefly explain how literacy and systems thinking are related?

"We cannot change our society in one fell swoop. Sneak in, move quietly, attack unseen, put away the suit—be a snake."
JG: The human brain devotes only one special function to reading (namely, decoding sounds into letters and vice-versa). Otherwise, all the mental capacities that we use to understand and give meaning to print are the very same ones we use to understand and give meaning to oral language and to the world.

Current work on the mind argues that words gain meaning from experiences we have had in the world. We use our previous experiences to build simulations (images and actions) that we attach to words to assign them contextually appropriate meanings.

In a sense, then, video games are like an external version of the mind. When we understand things and plan actions we run game-like role-playing simulations in our heads. In a sense, our mind is a game engine. We can combine elements from disparate experiences and create fantasies and think through complex problems.

System thinking involves being able to think in terms of complex interacting variables that make a system more than the sum of its parts. We most certainly want to see much of the social and natural world in these terms, since being stupid about systems (e.g., global warming) can lead to nasty unintended consequences.

Video games are complex systems composed of rules that interact. Gamers must think like a designer and form hypotheses about how the rules interact so they can accomplish goals and even bring about emergent results. Thinking like a designer in order to understand systems is a core 21st Century skill.

JS: Okay, so systems thinking is related to literacy, but certainly playing video games won't teach kids how to read books, will it? In fact, the way you're talking about literacy, it applies to more than just the language arts.

And thinking in this way about literacy makes it easy to see that STEM and ELA are fundamentally both just semiotic systems. Why is this concept so important to the future of education?

JG: Understanding oral and written language involves essentially running video-game like simulations in our heads. We run problem-based simulations where we try out various actions in our heads (as ourselves or someone else) and gauge their possible consequences.

A game manual is given meaning by the game world it is about, not by a dictionary. A physics textbook is a "game manual" for the actions, experiences, and problem solving that physicists engage in. The textbook, too, is given meaning by the "game" and the world it is played in (a somewhat different world than our everyday world, since physicists, thanks to their tools, can see things like electrons).

In school, we give people texts when they have not had enough experience in the worlds the texts are about, the experiences that give the texts meaning. It is as if we were to give kids game manuals without the games. It only works for kids who are getting a lot of experiences at home—backed up by lots of talk with adults about these experiences, talk which helps the kids learn to map language on to experience and vice-versa—but it is disastrous for less advantaged kids.

Whether it is STEM or ELA, if we do not deliver the game, but only the text, we do not get problem solvers and system thinkers, we get, at best, paper-and-pencil test passers.

JS: Clearly, you're not just proposing that we throw video games into the existing educational landscape willy nilly, are you? It is not that games are going to improve test scores or content retention. You're suggesting we need to fundamentally change the way we think about learning–or at least the way we think about what and how we TEACH. Can you explain?

JG: Yes and Amen**.** Games can be used—like any other technology—to instantiate the current paradigm of mindless testing, punitive accountability, and fact-based education untied to thinking or problem solving. However, this is like using a machine gun to kill an ant.

Games and other related technologies—together of course with talk and texts—have the potential to radically change the paradigm and unless we do change the paradigm they will just be co-opted by the current grammar of schooling.

[Mindshift's Guide To Game-Based Learning]

Schools today contribute to our massive inequality by providing (some of) the rich with a good education and the poor with test-prep to fit them for future service jobs. In the face of making profit and competing with near monopolies, it is easy to sell out and become part of the problem and not part of the solution.

There is a reason why the great game heroes we love (e.g., Solid Snake, Gordon Freeman, Lara Croft, Mario) don't wear suits.

JS: It seems to me, then, that your message is more about learning from games than it is about using games. Am I correct? Your (and my) vision of a utopian school doesn't look like a video game convention full of kids clutching joysticks. So, if you had to pick one primary way of thinking about learning/teaching that our schools should appropriate from video game developers–the big soundbite takeaway–what would it be?

JG: I want to bring rich, well-mentored, well-designed learning systems to school. These systems would connect digital tools, other technologies, interactions, talk, and text (each being used for what they are best for) to marry experience and language in the name of problem-solving and design thinking.

James Paul Gee

JS: Still, video games can be one tool that's used in the classroom, right? It is possible to design really impactful game-based learning platforms, isn't it? In addition to the lessons we can learn about education from video games, do you think we should continue to integrate games into some parts of the school curricula?

JG: Of course. But I am against any one tool (think textbook) being used for everything. I want all the best tools we have used in concert with each other to create collective intelligence. I want tools to be recruited in a learning system to do the jobs for which they are best fitted (which might be different in differently designed learning systems).

For example, games are often good for preparation for future learning, motivation, and getting lots of practice in core skills and concepts at an experiential level. They can be good, as well, at helping learners to form non-cognitive skills like passion-fueled persistence past failure in the name of copious deliberate (thoughtful, strategic) practice.

JS: How about on a practical everyday level? Teachers are operating within an environment that you've called a "toxic mess." They might change the way they think about education and literacy, but actually changing the way they teach is a much bigger challenge. Parents and politicians say they want to fix education, but they stubbornly resist anything that looks like a paradigm

shift. Do you have any suggestions for how teachers might begin to make incremental changes within a maddening infrastructure?

JG: The goal is not to make the prison better, it is to let the prisoners (students and teachers) free. Our society today is a mess. We have the highest level of inequality we have ever had. We readily ignore and even disdain evidence (e.g., global warming, evolution). We have a casino capitalism unmoored from productivity or social good. School reform has very little to do with schools.

There are no other silver bullets. The problem of making school good for everyone is one of having the *social will* to gain more equality in our society, to honor more than money and status, and to give everyone the right to be a producer and participant–not just a consumer and spectator.

We keep talking about schools and teachers, because we do not want to talk about society, ourselves, and the craven way we have empowered the rich, corporations, and rampant social Darwinism. We cannot change our society in one fell swoop.

Sneak in, move quietly, attack unseen, put away the suit—be a snake.

JS: In your most recent book, *The Anti-Education Era: Creating Smarter Students Through Digital Learning*, you express a lot of concern about how technology is integrated into schools. What is it that worries you?

JG: What worries me is the way in which we in the United States have enshrined human stupidity. In an age where interacting complex systems are killing us with the consequences of greed and stupidity, we regularly disdain evidence and honor ideology. Lots of Americans believe the Earth is about 6000 years old, do not believe in evolution, and think that Christianity was about wealth and a form of social Darwinism.

For me, evidence means trying to do something in the world (as an everyday person or a scientist) and paying close and respectful attention to how the world responds to our "probe." Is its response good for our goals or should we rethink and act again in a new way? When we disrespect the world, the world bites back and, boy, is it biting back now.

Our current situation is now too dire and the complexity of the world is now too great for us to any longer rely on traditional silo-based notions of expertise (look what Alan Greenspan did to the global economy).

We need collective intelligence where we view humans, in mind and body, as plug and play devices that get smart only when they are plugged into good tools, good people, and good practices in the service of pooling knowledge and diversity to make the world a better place. Games like *Foldit* or things like *Galaxy Zoo* are already interesting beginnings here. Digital and social media can niche our silos into pure echo chambers or they can create worlds of new experiences and possibilities.

JS: What do parents and educators need to know about the future of education and the future of game-based learning? Some things about edtech are inevitable, are there places where we need to be especially mindful?

JG: When I say in talks that Armageddon is upon us, people laugh and dismiss the claim as far-fetched. But the reality is Armageddon has already come for untold millions of people in the world who are starving and dying as the consequences of global warming, the global economy, and conflicts over resources.

It is clear from massive amounts of research that while we cannot predict what will happen in the future—because we have created a swarm of black swans due our greed and stupidity—we can say it will be a time of great change and transformation.

People and institutions will have to be resilient and change with change. They will have to gain very real skills with critical thinking and complexity in order not to be dupes and victims of the rich, corporations, media, and governments. They must become activists, knowers, producers, and participants and plug into and play with right team of people and tools.

This requires ethical thinking and a vision for a better world. People must become proactive, deliberate learners in and out of school and for their lifetimes. Good parents and good teachers must mentor them to be such deliberate, strategic, and ethical learners. Then people will face the future as gamers gaming systems to mod our world.

JS: Anything else you want to say that I haven't asked you about?

JG: Don't trust people in suits who don't game.

The MindShift Guide to Games and Learning is made possible through the generous support of the Joan Ganz Cooney Center and is a project of the Games and Learning Publishing Council.

Click Your Way To Discovery In CERN's 'Particle Clicker' Game

The discovery: It's amazing how much time one can spend clicking.

By

Kelsey D. Atherton

Posted 08.11.2014 at 3:00 pm

My Particle Clicker Lab
Free beer = more science? Yes please.
Particle Clicker, CERN

The only thing holding back scientific research at my virtual lab was not enough free beer. Thanks to a new game by a group of scientists at CERN, scientific discovery is reduced down to its most basic element: Doing the same repetitive action over and over and documenting any change.**Particle Clicker**, created at a CERN **48-hour hackathon**, dresses up a popular time sink in researcher's clothing.

At the game's onset, you start with an abstracted image of the Large Hadron Collider. Then, each time you click on the particle accelerator, you generate data. With enough data, you can select projects that enhance your reputation. As data and reputation increase, so does funding, and with funding, you can hire workers like Postdocs or PhD students. You can also buy upgrades for those workers, like beer and coffee (true necessities for research).

A few hundred clicks of the mouse later, and you're laboratory is operating like a well-oiled machine.

If any of this feels familiar, it's because the game is an adaptation of another, less sciency time suck: **Cookie Clicker**. In Cookie Clicker, the "work" is done largely by grandmas and machines, not underpaid academics, and the terms are more fantastical. Still, both games revel in abstraction: Cookie Clicker eventually lets players buy a hive mind upgrade for their baking grandmothers, and in Particle Clicker, and endless supply of free beer and strong coffee turns into science. I don't know yet if original 4Loko is available in the game, but if it is, I expect my researchers to find the answer to life, the universe, and everything shortly after ingesting it.

Despite the humorous approach, Particle Clicker bakes laboratory science into the game. Data is spent on research projects, and these projects range from **symmetry principle** violations (a problem of matter versus antimatter) to research on the **Top Quark**, which is the heaviest of all quarks. This is intentional. Igor Babuschkin, the student who proposed the game, **said the games' creators** "thought it would be good to have an addictive game that sneaks in some physics content." However, I learned more about the game's research projects by Googling them, rather than from the game itself.

Still, for all the activity possible, both clicker games reward a player who puts in place a powerful, automated machine, and then mostly lets it run itself. Players check in to purchase new upgrades, but actively tending to the game as the numbers climb is pretty boring. The end result is a game that is more fun the less it's played. Occasionally, great scientific progress is made by simply letting things be, like Alexander Fleming's **fortuitous grossness letting him discover a mold that killed bacteria**, and Particle Clicker encourages that kind of thinking. In fact, the only thing a diligent player can discover that a passive player can't is the answer to where their free time went.

Michael Johansson's grand-scale Tetris features computers, keyboards and cars

Source http://www.itsnicethat.com/articles/tetris-furniture

Ah, Tetris. The primary coloured, geometric video game that happily whiled away so many primary school hours. If you're good at it, it can give you an early taster of a job well done. It's just a shame the same compartmentalizing technique can't be used for all the 3D stuff that gathers when you grow up.

Except Michael Johansson shows it can. We first mentioned the Swedish artist's installations (or practical storage solutions) in 2010 but now that they're back, bigger and better, we thought we'd make room for them again. Packing together ping-pong tables, washing machines, drawers, boxes, shelves, sinks, suitcases, keyboards, computers, TVs and even cars to create a compact, colourful maze, these really do make the eyes boggle. With a fair few objects pre-dating the original game and others you can't quite work out the use of, Johansson's miscellaneous Tetris on a grand-scale is seriously cool.

Michael Johansson: Recollecting Koganecho, 2012. Furniture, household items.

Michael Johansson: Tetris – Witte De With, 2011. Furniture, cabinets, refrigerator, electric piano, boxes, sofa, etc.

Michael Johansson: Komplementär, 2012. Coloured furniture, coloured objects.

Michael Johansson: Self Contained, 2010. Containers, caravan, tractor, Volvo, pallets, refrigerators, etc.

Michael Johansson: Tetris – Geozavod, 2012. Objects from the storage room at Geozavod.

Michael Johansson: Horror Vacui – AIT, 2011. Objects from the storage room at AIT.

Michael Johansson: Tetris – Landskrona Museum, 2011. Objects from the storage room at Landskrona Museum.

Michael Johansson: Recollecting Koganecho, 2012. Furniture, household items.

Gaming the News

from: http://www.lrb.co.uk/blog/2013/03/05/nick-holdstock/gaming-the-news/

The people behind Game The News describe themselves as ‘the world’s first news correspondents who cover global events as games’. In *Endgame: Syria*, for example, you guide the political and military actions of ‘the rebels in their struggle’. Political events such as ‘Libya has recognised the Syrian National Council’ lead to changes in support for the rebels; troop deployments against the regime’s forces affect the levels of civilian casualties. At the end of each week there’s an instructive epigram: e.g. ‘Only the dead have seen the end of war,’ misattributed to Plato (it was George Santayana). The game ends with one or other side winning, or a peace agreement. Simplistic and partial it may be, but no more so perhaps than many other news sources. More troubling is the way it apes regular combat games: in the ‘military phase’, you’re informed of new civilian casualties to the accompaniment of exciting explosions (then again, the TV news has been doing that for years too).

The other games on the site struggle to find a balance between playability and didacticism. *Climate Defense* obliquely acknowledges this by offering two modes of play, one in which the data has been altered to make the game more enjoyable (and it’s possible to prevent climate change), the other where the problems are more realistic – and insoluble.

The only game that really works is *My Cotton Picking Life*, a response to the news thatUzbekistan uses forced labour for its cotton harvest. The dullness and monotony of the game are the whole point: it takes as long to pick a day's quota of cotton in the game as it does in the fields (though the simulation is obviously a lot less backbreaking than the real thing). I challenge anyone to keep clicking at it for more than 15 seconds.

Julen Zaballo: Jugando a la Guerra

Bilbao (Jugar es Serio) - Un estudio asegura que jugar a los videojuegos puede mejorar algunas capacidades de los adultos. El uso continuado de este entretenimiento**ayuda a mejorar la capacidad de procesamiento de la información**, así como las habilidades fundamentales a la hora de hacer frente a un problema.

El investigador **Ray Pérez de la Oficina de Investigación Naval**, dependiente del Departamento de la Armada de los Estados Unidos, afirma en una entrevista realizada en 2010 que su equipo ha descubierto que *"los jugadores de videojuegos poseen entre un 10-20% más de percepción y de habilidades cognitivas si se compara con aquellas personas no-jugadoras"*.

"Sabemos que los videojuegos pueden aumentar la memoria a corto plazo", asevera. Además, los datos revelan que este sistema de entretenimiento digital *"permite al jugador centrarse y ampliar el campo de visión"*. No obstante, los investigadores de la Oficina de Investigación Naval**prefieren ser cautos en estas afirmaciones** y admiten que estos resultados *"únicamente se han observado y medido en un entorno controlado de laboratorio"*.

Todos estos esfuerzos están enfocados al ámbito militar. *"Nuestra preocupación es el desarrollo de tecnologías y métodos de formación de capacitación para mejorar el desempeño en el campo de batalla"*, dice Pérez. *"El objetivo -continúa- es entrenar a soldados para que sean capaces de* ***solventar de manera ágil los problemas*** *y desarrollar tácticas de combate contra los terroristas"* en los conflictos bélicos.

El uso de videojuegos con fines militares **no es nuevo**. Algunas informaciones apuntan que una versión del videojuego de Atari 'Battlezone', lanzado al mercado en 1980, fue el primer 'militainment' de la historia. Uno de sus desarrolladores, Ed. Rotberg, asegura que un grupo de asesores de la Armada americana se interesaron por la tecnología del videojuego para desarrollar un simulador de su nuevo vehículo de infantería.

No obstante, Flavio Escribano de ArsGames asegura ir más allá y sitúa el nacimiento del videojuego *"en un **contexto completamente militar** en sus dos vertientes, la de Higinbotham y la del proyecto que el pentágono tenía en el MIT en donde nació 'Space War' de Steve Russell". "Esta relación no ha hecho más que afianzarse como bien indica Ed Halter en su libro From Sun Tzu to Xbox: War and Videogames"*, afirma.

Uno de los ejemplos que mayor trascendencia ha obtenido en este ámbito es 'America's Army', financiado por el ejército estadounidense con el objetivo de mejorar las tasas de reclutamiento entre los jóvenes. Es un juego de disparos en primera persona (FPS) en el que el usuario simula diversas misiones de entrenamiento.

Soldado, ¡a los mandos!

Getty Images

Las fuerzas españolas también cuentan con un 'militainment' que permite el entrenamiento para operaciones contra insurgentes. Un informe elaborado por el Centro Superior de Estudios de la Defensa Nacional y publicado en octubre de 2011, recoge que el Ministerio de Defensa es partidario de estos*"programas de simulación informatizadas"* para complementar el adiestramiento de los soldados y ahorrar costes.

En ese sentido, el pasado 14 de diciembre Defensa dio luz verde a la adquisición de **250 licencias del programa 'Virtual Battlespace 2'**(VBS2) por valor de 495.800 euros. Se trata de un simulador de combate elaborado por Bohemia Interactive Australia, responsables de videojuegos como 'Operation Flashpoint' o 'ARMA 2'. El objetivo, desarrollar los procesos cognitivos mientras se simula, de manera realista, distintas situaciones de guerra.

Los primeros indicios detectados por Pérez en este ámbito, sugieren que las mejoras cognitivas asociadas al uso de estos videojuegos puede durar*"hasta dos años y medio"*. Según este experto, los jugadores tienen lo que los expertos denominan *"plasticidad cerebral"*. *"Esto se debe a que las redes neuronales que funcionan mientras se juega a videojuegos se vuelven más pronunciadas, se **incrementa el flujo sanguíneo** y se sincronizan mejor con otras redes neuronales en el cerebro"*, defiende.

IN DEPTH| 5 December 2012

Gamification: Is it game over?

ByNic Fleming: http://www.bbc.com/future/story/20121204-can-gaming-transform-your-life

(Courtesy of Mykl Roventine on Flickr)

Taking the rules of video games and applying them to everyday life was billed as the next big thing, something that would transform everything from dull office work to how we exercise. But can it really work?

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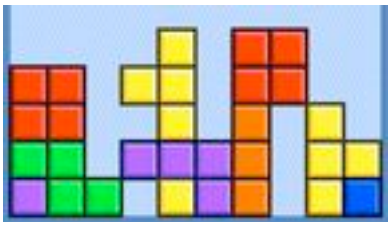

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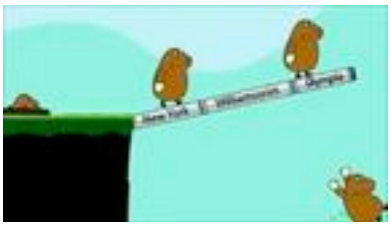


What if everything was a game?

According to research firm Gartner, 50% of companies that manage innovation and research will use gamification by 2015.
Brushed your teeth this morning? Congratulations, you get 20 points. Hit your quarterly performance target early? Good work, you get half a day's extra holiday. You voted in the recent elections so you get your third citizenship badge. But you've slipped another two places down your gym's fitness leaderboard, so that means an extra few miles on the treadmill next week.

If this all sounds like an Orwellian nightmare, think again. This is your “gamified” future.

Gamification is a buzz word used to describe systems that take elements of everyday games like chess and Donkey Kong and applies them to everyday life. Perhaps the best-known example of gamification is Foursquare, the location-based social network in which people "check in" to places via their phones. Users are awarded badges for going out and experiencing new things. And the more they frequent a place, the higher their status becomes. For example, they may become the "mayor" of their coffee shop, potentially opening the door to discounts and other prizes.

But if you think it is just tech-savvy teens hoping for a cheap latte that are in on the game, think again. Everyone from businesses to governments are busy re-designing the way they work to include elements such as completing missions, competition, social interaction, status and rewarding achievement. Activities and products that have already been gamified include buying a burger, graphics editing software, learning languages, fitness gadgets and all manner of jobs including sales, IT, customer relations and even waiting tables. Gamification gurus maintain this is only the beginning. Only last year, the US-based analysts Gartner predicted that 70% of the world's top 2000 companies will be using gamification in some form by 2014.

But now there seems to be a growing backlash. Just 12 months after Gartner predicted the huge growth in the genre, it released another report saying that “gamification is currently being driven by novelty and hype”. By 2014, it predicts that 80% of gamification applications will fail to deliver “because of poor design”. In addition, a growing number of critics are asking some probing questions: Is gamification just a rehash of old ideas, how does it work, might it be exploitative, could it actually undermine motivation and won't it trigger addiction?

Power up

The ideas that underpin gamification stretch as far back as 1937, when American psychologist BF Skinner proposed a system he called operant conditioning. The idea – perhaps best known for the images of rats hitting a lever to release food pellets - revealed how the use of rewards and punishments could also change human behaviour. A few years later Abraham Maslow put forward his needs theory of human motivation which highlighted sense of belonging, self esteem and the realisation of personal potential as key. Then in the 1970s, so-called self determination theory identified competence, relatedness and autonomy as fundamental human needs.

But on their own, these ideas were not enough. After all, boy scouts have been getting badges to reward achievement for close to a century. And competition, leaderboards and financial rewards have long been deployed to motivate sales teams and those who accumulate frequent flyer points are offered enhanced status, special offers and other privileges.

The other trend that allowed gamification to grab the limelight was so-called big data. The emergence of mobile computing, cheap storage and inexpensive sensors means that information about every aspect of our life can be collected and recorded unlike any other time in history. Cheap, portable consumers gadgets and smart phone apps can now measure aspects things like their activity levels, diet, sleep patterns, mood and health. "Everything we do is being mediated by technology, whether it is entertainment, work or sports or play, and this is generating huge amounts of user activity data," says Rajat Paharia, the founding father of gamification. "Now we can take that data and apply it to the motivation problem."

NEU: Die aktuelle Ausgabe im tazshop Die nächste Ausgabe von LE MONDE *diplomatique* liegt am 10.10.2014 der taz bei. Ab dem 9.10.2014 gibt es sie separat am Kiosk oder imtazshop

Spieltrieb

Wie wir auf Wettbewerb konditioniert werden

von Benoît Bréville und Pierre Rimbert

Jedes Jahr am 30. April wird in Amsterdam der "Königinnentag" gefeiert, ein riesiges Volksfest, bei dem insbesondere Männer die widerliche Angewohnheit haben, auf offener Straße zu urinieren. Es wurden schon die Bußgelder erhöht, aber das schien die Traditionspinkler nicht sonderlich zu beeindrucken - bis das Unternehmen Waternet, das ganz Amsterdam mit Trinkwasser versorgt und die Grachten reinigt, im Jahr 2012 zu einer ungewöhnlichen Maßnahme griff: Waternet ließ in allen Fußgängerzonen Pissoirs mit jeweils vier Becken installieren, die mit einem riesigen Bildschirm verbunden waren. Darauf konnten die Volksfestbesucher beim Wasserlassen beobachten, wie sich ihr virtuelles Reagenzglas füllte. Wer am meisten Wasser ließ, hatte gewonnen.1 Am Ende eines Tages bekam der Sieger des "Großen Pipi-Wettbewerbs" nicht nur ein Pipi-Diplom überreicht, sondern auch - sofern er in Amsterdam gemeldet war - die letzte Wasserrechnung erstattet. Tatsächlich sollen danach kaum noch Männer gesichtet worden sein, die auf offener Straße gepinkelt haben.
"Spiele sind nicht nur ein Freizeitvergnügen. Sie dienen zur Lösung von Problemen und sind eine Quelle des Glücks", meint die Spieledesignerin Jane McGonigal, die eine große Verfechterin der "Gamifizierung" (auch: Spielifizierung) ist. Ihr zufolge können Spiele uns nicht nur ermuntern, ein besseres Verhalten an den Tag zu legen, sondern überhaupt "alles neu erfinden, von Staatsangelegenheiten, Gesundheit und Erziehung bis hin zu Medien, Marketing oder Unternehmensführung".(2) Spiele, meint McGonigal, hätten sogar die Kraft, den "Frieden in die Welt zu bringen".

Es mag verrückt klingen, was McGonigal in ihrem Ratgeber schreibt. Doch es scheint immer mehr Leute zu geben, die die Sache mit der "Gamifizierung" tatsächlich ernst nehmen. Sie sitzen in Firmen und in Ämtern, vom Cornflakes-Hersteller bis zur Agentur für Arbeit, und bemühen sich auf ebenso unterhaltsame wie effiziente Weise um ihre "Kunden": "Ihre Meinung ist uns wichtig! Deshalb haben wir in allen Dienststellen ein Kundenreaktionsmanagement eingerichtet", heißt es etwa auf der Webseite der Bundesagentur für Arbeit.

Inspirationsquelle der "Gamifizierung" ist die zuerst von Verhaltensphysiologen entwickelte und nicht unumstrittene "operante Konditionierung", die vor allem auf den Psychologen Burrhus Frederic Skinner (1904 bis 1990) zurückgeht. Skinner experimentierte zunächst mit Ratten und anderen Nagetieren und stellte fest: Handlungen von Lebewesen können von negativen "extrinsischen Motivationen" wie Repression und Angst vor Bestrafung oder positiven, wie angenehme Erfahrungen und Belohnungen, beeinflusst werden.(3) Die neuen Amsterdamer Pissoirs gehören wohl zur zweiten Kategorie.

Tombolas für eine gute Sache als unterhaltsame Einlage gehören seit Jahrhunderten zu jedem Fest und jeder großen Gala. Die aktuelle Gamification-Welle verdankt sich indes dem Zusammenspiel dreier Faktoren: der zunehmenden Zahl von Computern in privaten Haushalten, der Kapazität,

personenbezogene Daten zu speichern und zu verarbeiten, und dem Einfluss einer Ideologie, welche den Menschen mit einer Maschine gleichsetzt, Interessen für berechenbar hält und folglich nur dem Aufmerksamkeit schenkt, was nicht nur Spaß macht, sondern vor allem profitabel ist.

"Nur wenige Anhänger der Gamification erwähnen diese Parallele, aber die Art, wie die Mechanik des Spielerischen unser Leben durchdrungen hat, reflektiert auch das Vordringen der Logik des Marktes in das Innere unserer gesellschaftlichen, kulturellen und politischen Institutionen", meint der Netztheoretiker Evgeny Morozov. "Wenn man Spiele dazu verwendet, die Leute zur Einnahme ihrer Medikamente zu bringen, mit dem Rauchen aufzuhören oder in die Schule zu gehen, ist das nicht entscheidend anders, als ob man sie dafür bezahlen würde."4

Dabei geht die Idee, mit Computerspielen die Welt zu verändern, auf unabhängige Entwickler zurück, deren Ziel es ist, soziale Mechanismen zu entlarven und politisches Bewusstsein zu fördern. So knöpft sich etwa das Mailänder Entwicklerkollektiv Molleindustria (**www.molleindustria.org**) mit Vorliebe große Konzerne wie Apple oder McDonald's vor: Im Spiel "Phone Story" geht es um die Produktionsbedingungen bei Apple, und im "McDonald's Videogame" schlüpft der Spieler in die Rolle eines McDonald's-Geschäftsführers. Ziel des Spiels ist es, zu erklären, mit welchen Machenschaften sich eine Fastfoodkette durchsetzt, von der Lobbyarbeit im US-Kongress bis hin zur Korruption in den Ländern Südamerikas. Im "Antiwargame" (**www.antiwargame.org**), das der Künstler Josh On entwickelt hat, mimt der Spieler den US-Präsidenten im Krieg gegen den Terrorismus, und es wird das abgekartete Spiel aus Wirtschafts-, Militär- und Medieninteressen aufgedeckt.
Tatsächlich haben diese "persuasive games"(5) genannten Videospiele, die die Einstellungen, das Verhalten oder die sozialen Beziehungen der Nutzer verändern( )sollen, mit den spielerischen Anreizen, wie sie etwa beim neuen Amsterdamer Pissoir zum Tragen kommen, nicht viel gemein. Die Gamifizierung, die gutes Verhalten belohnt, zielt nämlich nur auf die Wirkung ab, nicht auf die Ursache.

Wenn zum Beispiel Nissan den Käufern seines jüngsten Elektroautos für sparsames Fahrverhalten Punkte gutschreibt - auf dem Bordbildschirm wird der eigene Punktestand in Konkurrenz zum Stand der anderen Nissan-Fahrer stets angezeigt -, bedient der japanische Konzern nichts anderes als einen Reflex. Ein Verständnis für die Hintergründe, die es nahelegen, mit der Energie zu haushalten, wird damit jedenfalls nicht gefördert.(6) Die virtuelle Medaille, die der sparsamste Fahrer bekommt, könnte Nissan genauso gut einem vorbildlich dressierten Affen verleihen.

Im Zeitalter von Smartphones und einer ständigen mobilen Internetverbindung schätzt man vor allem die einfache Organisation des Wettbewerbs unter den "Spielern", vom einfachen Konsumenten über den Arbeitsamt-Kunden bis hin zum Häftling. "Stellen Sie sich ein virtuelles Strafvollzugssystem vor", heißt es etwa in dem Bericht der Consultingfirma Deloitte, die Vorschläge zur Entlastung der überfüllten US-Gefängnisse machen sollte. Deloitte griff in die "Gamification"-Kiste und schlug vor, Straffällige auf Bewährung dazu zu ermuntern, die Auflagen mit einer Smartphone-App einzuhalten, die ihnen jedes Mal gegen Straferlass einzutauschende Punkte gutschreibt, wenn sie sich pünktlich bei ihrem Bewährungshelfer einfinden, oder ihnen umgekehrt Punkte abzieht, wenn sie sich vom vorgeschriebenen Aufenthaltsort entfernen.(7)

Eine Methode, die in der Lage ist, das Verhalten von Personen unbewusst zu beeinflussen, blieb natürlich auch dem Handel nicht lange verborgen. Die Firmen haben schnell verstanden, welcher Gewinn sich aus dem Universum der Computerspiele ziehen lässt, sowohl für die Rekrutierung, Ausbildung und Leistungssteigerung der Angestellten als auch für die Kundenbindung und überhaupt den gesamten Marketingbereich. Das US-amerikanische Marktforschungsunternehmen Gartner geht davon aus, dass bis 2015 rund 70 Prozent der 2 000 weltweit größten Konzerne in diversen Bereichen auf Unterhaltungstechnologien zurückgreifen werden. In den Vereinigten

Staaten, wo 2010 das Marktvolumen für digitale Gamification-Strategien bei 100 Millionen Dollar lag, könnte es bis 2015 auf 1,6 Milliarden Dollar anwachsen.(8)

Next Jump, ein New Yorker Anbieter von digitalen "loyalty programs", ist spezialisiert auf gamifizierte Belohnungssysteme in Form von Computerspielen und zählt die Bank of America, Morgan Chase oder AT & T zu seinen Kunden. Der Gamification-Guru Gabe Zicherman, der seit 2011 den jährlichen "Gamification-Gipfel" GSummit organisiert, freut sich über das "Vergnügungswettrüsten", das in so absurden Kreationen wie der "Chok! Chok! Chok!"-App gipfelt. Wer in Hongkong diese App auf sein Smartphone geladen hat und das Telefon schüttelt, wenn ein Coca-Cola-Werbespot im Fernsehen läuft, kann diverse Rabattgutscheine gewinnen. Man mag es kaum glauben, aber am Tag ihrer Markteinführung erreichte die "Chok! Chok! Chok!"-App im Apple Store Hongkong unter allen nachgefragten Anwendungen den ersten Platz.

Computerspiele kurbeln aber nicht nur den Verkauf an, sie dienen auch als Instrument in der Personalführung. Dabei verbirgt sich unter dem Deckmantel des Spielerischen oft nur die uralte Chefstrategie, den Konkurrenzkampf zwischen den eigenen Angestellten zu schüren. So klassifiziert und belohnt das "Language Quality Game" von Microsoft diejenigen Beschäftigten, die Fehlfunktionen im Windows-Betriebssystem ausfindig machen.

Manche amerikanischen Restaurants haben mittlerweile eine Praktik aus der Callcenter-Branche übernommen: Das Bedienungspersonal wird mithilfe einer von Boston Objective Logistics entwickelten App "benotet". Wer viele Gedecke serviert und das meiste Trinkgeld bekommt, dem werden sogenannte Karmapunkte gutgeschrieben. Und wer die meisten Karmapunkte gesammelt hat, darf an den besten Tischen bedienen.

Aber was ist eigentlich so reizvoll daran, beim Kassieren, Telefonieren oder Servieren neue Rekorde aufzustellen? Das digitale Vergnügungswettrüsten aus dem kalifornischen Silicon Valley lässt einen unweigerlich an sowjetische Kampagnen zur Arbeitssteigerung à la Stachanow denken. Die eigentlich zweitrangigen Spielelemente wie Punkte, Level und Medaillen rücken in den Vordergrund und werden zum Endzweck erhoben: Das Spiel selbst ist nicht mehr wichtig.

Anstatt für gute Arbeitsbedingungen und angemessene Gehälter zu sorgen und die Arbeit von innen attraktiver zu gestalten, greifen die Unternehmen zu extrinsischen Stimuli, die das Engagement für eine entfremdete, stressige und oft schlecht bezahlte Arbeit künstlich steigern sollen. Weil die Motivation sich nur aus der attraktiven Belohnung und nicht aus dem Vergnügen speist, hat diese "Software der Ausbeutung" das Spiel im Grunde genommen pervertiert, meint der Computerspiele-Experte und Blogger Ian Bogost.(9)

Ein besonders perverses Beispiel für die Software der Ausbeutung ist das "Target Checkout Game", zu dem die Kassierer der Kaufhauskette Target genötigt werden.(10) Wenn die Angestellten eine Ware scannen, leuchtet ein Zeichen auf ihrem Bildschirm auf: grün bei Einhaltung der vorgegebenen Geschwindigkeit, rot, wenn sie zu langsam sind. Wer die Schwelle von 82 Prozent erreicht, gewinnt … die Glückwünsche des Chefs; wer sie nicht erreicht, riskiert die Versetzung auf einen schlechteren Posten oder gar die Entlassung. Es ist ein Spiel, bei dem man nur verlieren und niemals gewinnen kann.

Fußnoten:
(1) In diesem Werbefilm kann man sich das Ganze anschauen: **youtube.com/watch?v=wvOh6fvIQPc** . Waternet ist im Umgang mit Urin überhaupt ein erfindungsreiches Unternehmen: So wurde etwa in einem Pilotprojekt der Urin aus öffentlichen Pissoirs gesammelt und zu Dünger weiterverarbeitet.
(2) Jane McGonigal, "Besser als die Wirklichkeit! Warum wir von Computerspielen profitieren und wie sie die Welt verändern", München (Heyne Verlag) 2012.

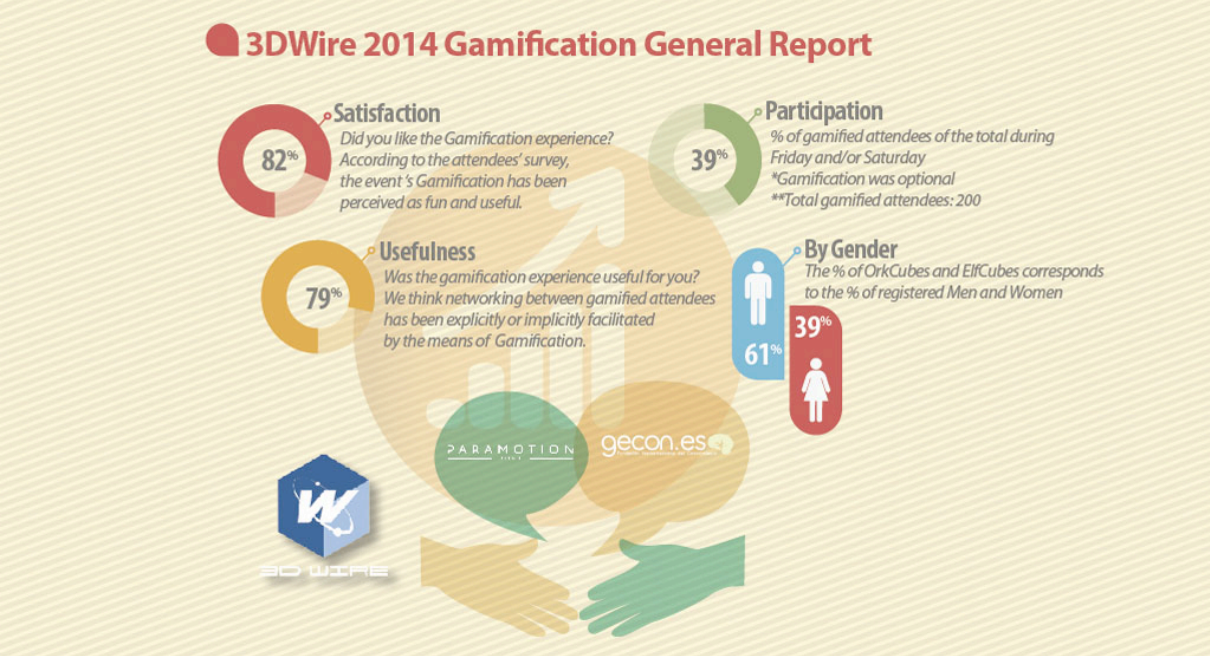
(3) Siehe Burrhus Frederic Skinner, "The Behavior of Organisms", Acton, Massachusetts (Copley Publishing Group) 1938. (1991 und 1999 nachgedruckt von der B. F. Skinner Foundation).
(4) Evgeny Morozov, "Smarte neue Welt: Digitale Technik und die Freiheit des Menschen", München (Karl Blessing) 2013.
(5) Siehe Ian Bogost, "Persuasive Games. The Expressive Power of Videogames", Cambridge, Massachusetts (The MIT Press) 2010.
(6) Siehe Rachel King, "The games companies play", *"Bloomberg Businessweek,* New York, 5. April 2011.
(7) Siehe Evgeny Morozov, "Imprisoned by innovation", *"The New York Times,* 23. März 2013.
(8) Siehe Gabe Zichermann, "Gamification is here to stay", *"The Atlantic,* Washington, D.C., November 2013.
(9) Ian Bogost, "Gamification is bullshit", 8. August 2011: **www.bogost.com** .
(10) Siehe Gabe Zicherman und Josef Linder. "The Gamification Revolution. How Leaders Leverage Game Mechanics to Crush the Competition", New York (McGraw-Hill) 2013.

Aus dem Französischen von Dirk Höfer

Le Monde diplomatique Nr. 10285 vom 13.12.2013, 338 Zeilen, Benoît Bréville / Pierre Rimbert

3DWire 2014: Gamification Results

29/11/2014 Flavio Escribano



Authors: Flavio Escribano >> @ludictador and Jordi Moretón Galí >> @jordimgali
Spanish Version / Versión en Castellano: Descarga

Introduction

In September 2014 GECON.ES received a request from Paramotion Films to gamify**3DWire** event. We have published a report which we summarize below.
The following are the download links to the infographic summary of the presentation and to the Gamification Global Report of 3DWire 2014:

- **3DWire2014_GAM_Infographic**
- **3DWireGAM 2014 Global Report vFinal**

Why Gamify 3DWire?

3DWire is an annual international event created and organized by Paramotion Films, a production company. The event is held in Segovia (Spain) and is geared towards animation and digital audiovisual production (New Media, ICT and Videogames), bringing together lots of professionals, both national and international.
Paramotion Films requested GECON.ES the creation of the first Gamified experience for 3DWire, defining two main objectives:

1. To attract attendees to less frequented areas of the event.
2. To promote networking between attendees.

On the other hand GECON.ES defined other research objectives related to the Gamification of social places like congresses:

1. To study the fun factor as a dynamization element and as a facilitator of goal attainment in this area of application.
2. To study the segmentation and habits of event attendees.

The methodology used in-house tools and knowledge as well as other frameworks, highlighting the Gamification Model Canvas (in its GameOn! Toolkit format) by Sergio Jiménez Arenas.

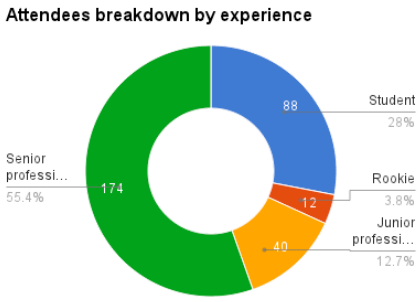
- We designed 8 Quests covering organization's objectives. These quests allowed us to profile attendees by the means of a character sheet –the Gamified accreditation– and were distributed spatially and linked to the event agenda.
- Among others, these quests involved exploration, altruism and achievementdynamics, all of it garnished in 8bit fantasy style with two rivaled factions: ElfCubes and OrkCubes, that drove the event's storytelling.
- Finally, we designed a data collecting system to get meaningful statistics of the event. We did an inventory of all Gamification components –all of them analog-, counting the number of coins, badges and the rest of stickers so to characterize and understand the event dynamics and attendees' behavior (those that decided to gamify their experience).

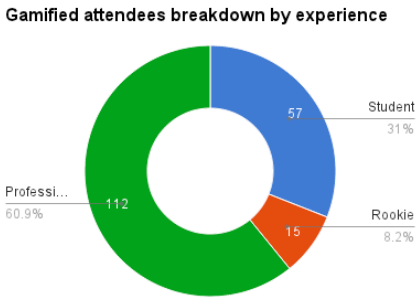
Bits of the medieval fantasy items of 3DWire created by the Paramotion Films team. Source: 3DWire / Alberto Sen / @LabBambara

Results

Many data was collected, of which we highlight the following:

1. Over 800 quests in total were completed.
2. Up to 39% of the attendees during Friday and/or Saturday experimented with Gamification, meaning over 150 attendees. Of these, 39% were female and 61% male. Coincidentally, the proportions of Elfcubes and OrkCubes accreditations were similar, 41% and 59%.
3. If segmented by expertise, proportions of gamified attendees and proportions of overall attendees (gamified and non-gamified), were:



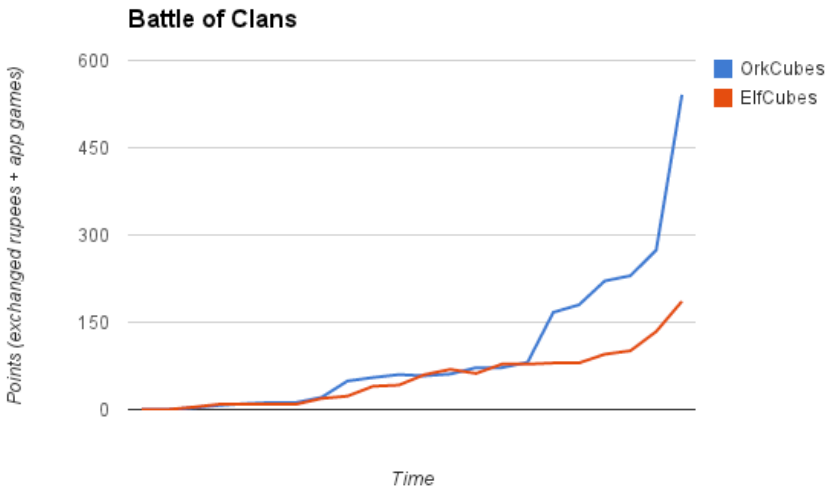


4. 77% of the forecasted coins (rupees) were distributed. Of those, 66% were redeemed for prizes. 38% of prizes were redeemed and, of these, the average priced ones were the most wanted.

5. Up to 131 gamified attendees went to the Showroom (a less visited area in previous editions of the event). The number of visits made to the 15 stands was up to 642, in other words, a maximum of 50 visits per stand. We'd like to highlight that more than 61% of the total rupees were given in the Showroom.

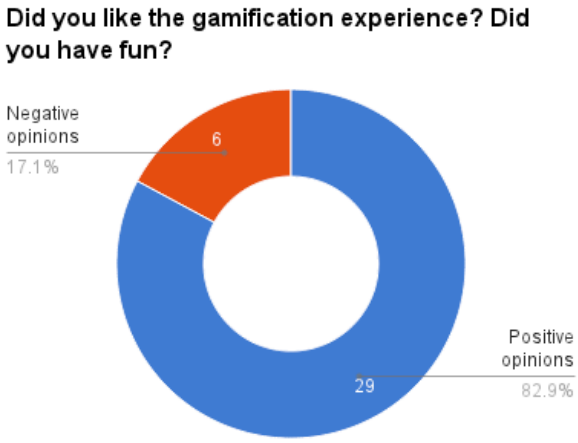
6. Over 360 potions of gratitude (metal badges) were printed, 73% of the total purchased by the organization.

7. The end result of the battle of clans was 182 points for the ElfCubes and 541 points for the OrkCubes. The proportion of points is 26% and 74%, respectively, which indicates that regardless of the proportion of attendees from one faction or another, OrkCubes (¿male profiles?) were more competitive than ElfCubes (¿female profiles?).

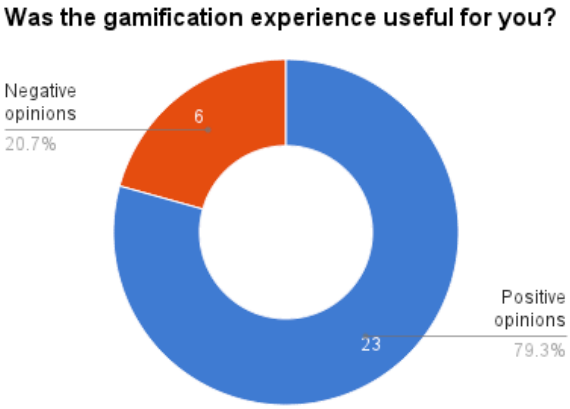


8. The organization launched a satisfaction survey to the attendees to get, among others, feedback on the impact of Gamification. The conclusions of it are the following:

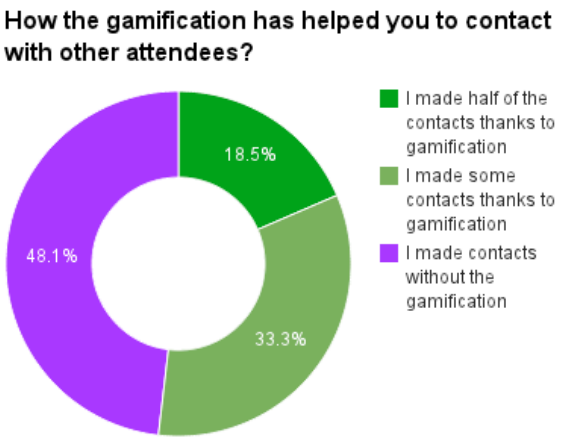
- About the ATTRACTIVENESS and FUN FACTOR of 3DWire's Gamification we gathered that positive opinions are a majority (82,9% vs 17,1%). Overall the experience was enjoyed and was perceived as fun. Several attendees (27%) also explicitly stated that it was interesting.



- On the USEFULNESS of Gamification in 3DWire we can see that positive opinions are the majority (79.3%). This is consistent with the widespread opinion that gamification was useful (generically) except for a few opinions that highlight a playful, entertaining component, but not useful for their specific goals.



- On the usefulness of Gamification specifically to FACILITATE NETWORKGING**almost 52% of gamified attendees answered that it was indeed useful for networking**. Our interpretation of this is that for the remaining 48% Gamification has not been useful for networking but in no case one can infer that gamification worsened it.



Conclusions

The conclusions we draw from the experience of having gamified the event are:

1. Benefits of Gamification for both attendees and the production team.

Thanks to 3D Wire we have been able to experiment how the proposed Gamification has enhanced the experience and overall satisfaction of the event for both participants and organizers.

- Improvement of assistance to various program events. In this experience we improved assistance to less frequented areas in previous editions, but we believe that the Gamification can also improve attendance at events that happen in bad timings (eg lectures early in the morning).
- Improved interaction between the attendees and participants exhibiting in showrooms or other types of space / POIs.
- Improved networking among attendees. We have verified how Gamification facilitates introductions and cooperation, either by creating a playful state that predisposes to socialize or that by means of elements like the gamified accreditation helps attendees to break the ice.
- Improved media coverage, either in social networks, TV or radio. Gamification, thanks to its innovative look and transversality of its application, creates excitement and interest in the media as well as fun/significant situations that are easily shareable by participants themselves in their own social networks.
- Added fun to the event. Although Gamification doesn't transform the event into a game, playful element remains one of the great aspects that enhance the experience. In this sense Gamification generates fun facilitating the benefits mentioned above and adding a substantial increase in attendee loyalty.
- Encourages the production team by including them in a meta-narrative and interaction layer above the production of a conventional event that keeps them motivated.

2. The place of Gamification in events

Gamification should be integrated within the event but not overshadow it. Gamification should not be the focus, but to support the objectives of the event and enhance the experience for attendees. Gamification is not the creation of a game but the application of game design elements in the event design, supporting its program needs.

3. Importance and role of Storytelling

In some cases Gamification needs a context and in our case this was the storytelling and the supporting elements, without which much of the power of immersion and commitment to the experience and Gamification would have been lost and would have become a more mechanical exercise. The storytelling has to be aligned with the audiences, who have to be familiar with the terminology, visual elements and even with the dynamics and mechanics.

4. Profiling & Targeting

We stress the importance of a good analysis of the potential public during the design phase. To do this the information available in the event web registration process was very useful.

5. KPI & Stats in events thanks to Gamification

We have also seen that Gamification is a very useful tool for statistical control, among others valid to measure attendance, participation and user activity flows and to complement the classic data logging and monitoring in events.

The compiled dataset, inferences, deductions and new assumptions made, start a yearly time series that will delve further throwing light on the value of Gamification as a useful and effective technique in a more scientific way.

Open Access

We hope that the reports and logged data we publish serve the Gamification community and researchers to support their work. We believe that open access policies, both in terms of documents as well as data, are the way to a more efficient and effective progress.

Gamification team (not complete!) A lot of work but a ton of fun! Source: @LabBambara

Acknowledgements

GECON.ES wishes to express our gratitude to the Paramotion Films staff, specially to its director José Luis Farias, for having entrusted us the Gamification of 3D Wire, as well as the excellent volunteer team – Game Masters: Pablo Franco Corral, Rodrigo Lasanta, Luis Vallejo, Oscar Luis Fermosel and Manu Saiz, without them it wouldn't have been possible to develop a project like this and with this success.

The following are the download links to the infographic summary of the presentation and to the Gamification Global Report of 3DWire 2014:

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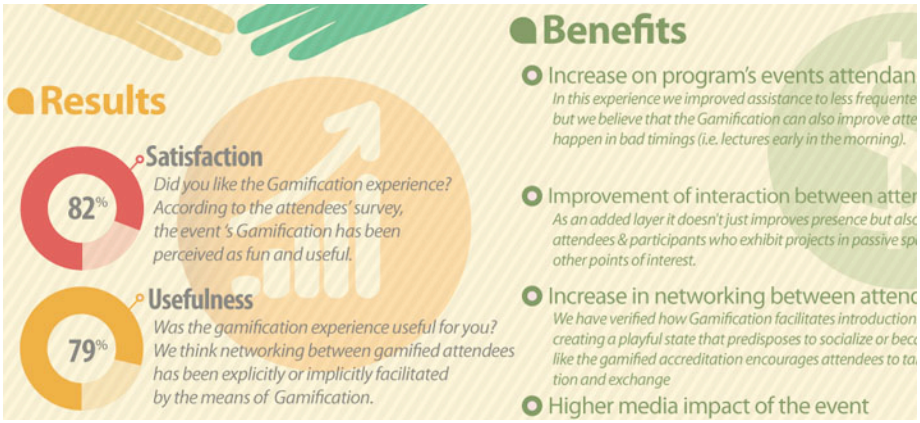

Detail of the Research Results' infography

Event's phots at https://www.flickr.com/photos/106314026@N08/sets/72157647877977999/
Under specific request we provide the following Annexes

- **Annex 1: Game Master's manual**
- **Annex 2: Player's instructions (No)Handbook**
- **Annex 3: Volunteers' survey results**
- **Annex 4: Attendees' survey results**
- **Annex 5: Statistical data control sheet**

Don't hesitate to contact us at info@gecon.es and ask for your copy of any annex you are interested on.
Thank you very much.

GAME ON! lab
makin' it happen