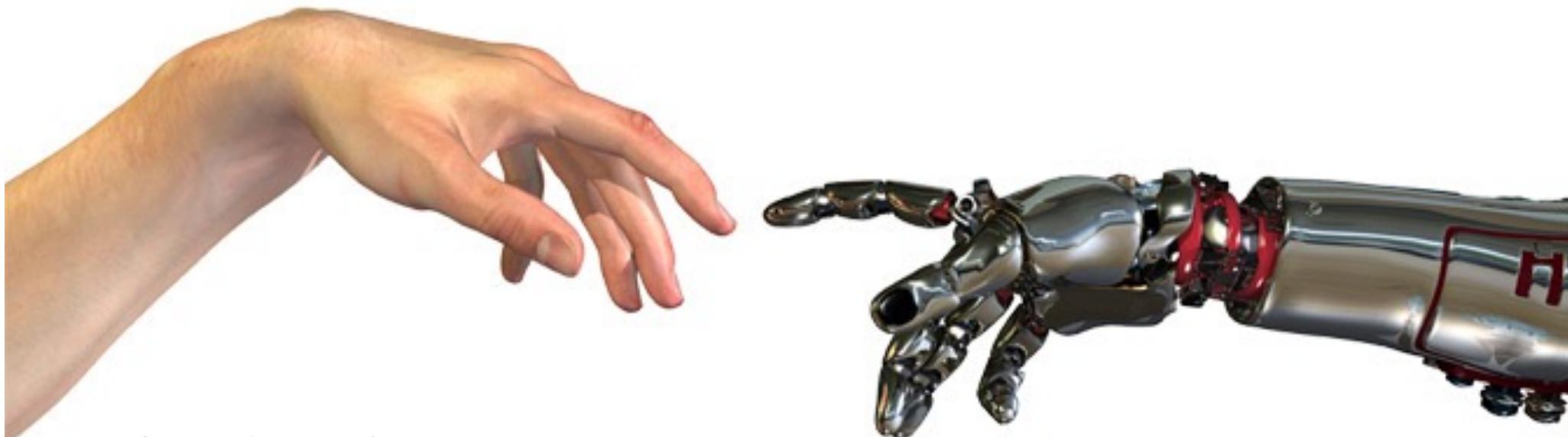


HUMAN-COMPUTER INTERACTION

UNIVERSAL PRINCIPLES OF HUMAN-COMPUTER INTERACTION DESIGN



OBJECTIVES

Persuasive Technology – Gamification Part I

- 1.) *What is it?*
- 2.) *Designing Gamification*



GAMIFICATION

HOW EFFECTIVE IS IT?



INSERT COIN TO START



Today's missions >>

1. What is gamification?
2. Designing gamification





Using play to motivate

<http://www.thefuntheory.com/piano-staircase>



Not really gamification per se, but
gamification is similar...



Gamification

How Could You Gamify It?

7 Core Game Mechanics



Badges



Levels



Leaderboards



Progress Bar



Virtual
Currency



Awards,
Trading
and Gifting



Challenges
between Users



...but it draws more specifically on video games rather than just play.

1. What is gamification?

ga•mi•fi•ca•tion [gay-muh-fi-kay-shuhn]

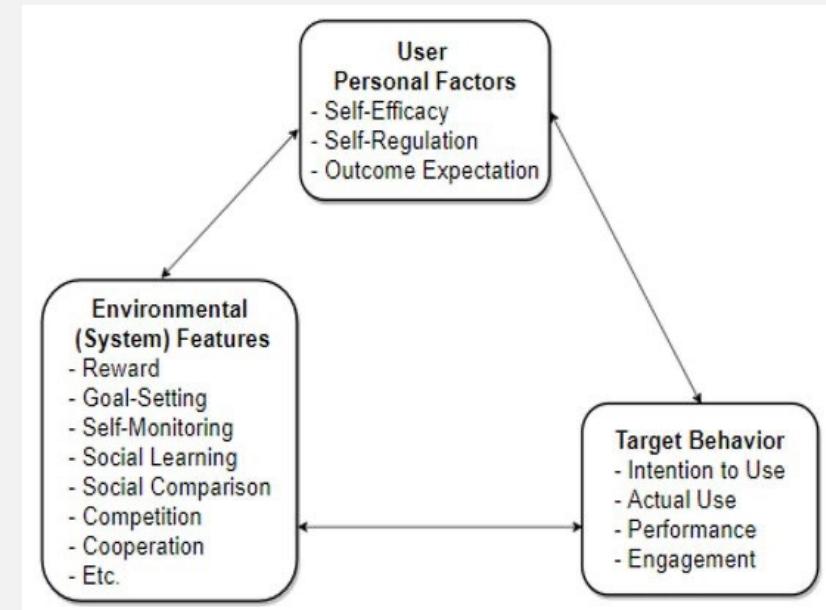
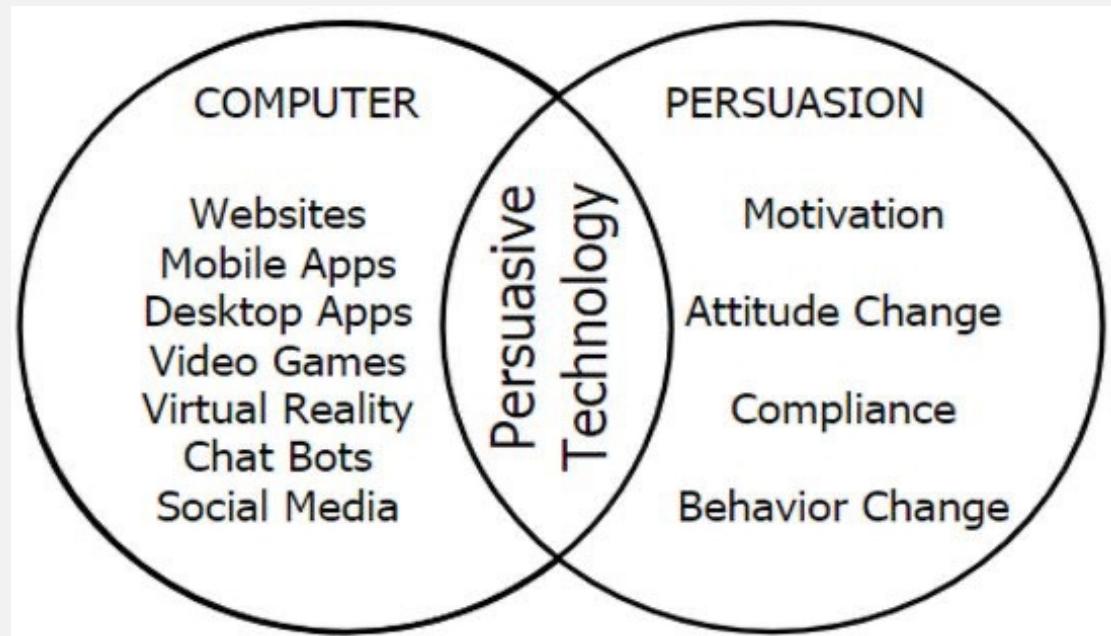
integrating game dynamics into your site,
service, community, content or campaign,
in order to drive participation.

(see Bunchball)

Persuasive technology aims to **change behaviors** and **attitudes** through the art of persuasion without the use of coercion.

Gamification is a type of **Persuasive Technology** that leverages the persuasive power of games to cause behavior change in people.

“Captology” (an acronym for Computers As Persuasive Technologies)



Persuasive Features that Drive the Adoption of a Fitness Application and the Moderating Effect of Age and Gender

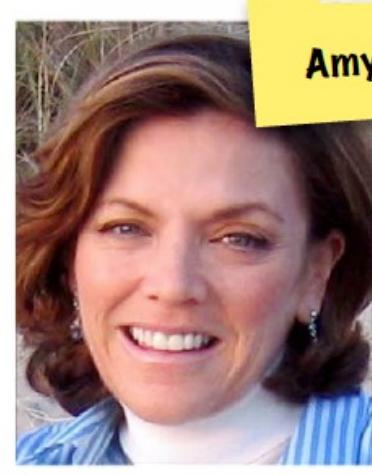
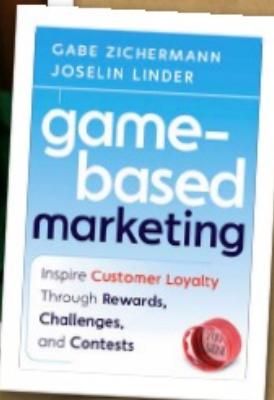
by [Kiemute Oyibo](#) * and [Julita Vassileva](#)

Multi-User Adaptive Distributed Mobile And Ubiquitous Computing (MADMUC) Lab, Department of Computer Science, University of Saskatchewan, Saskatoon, SK S7N 5C9, Canada

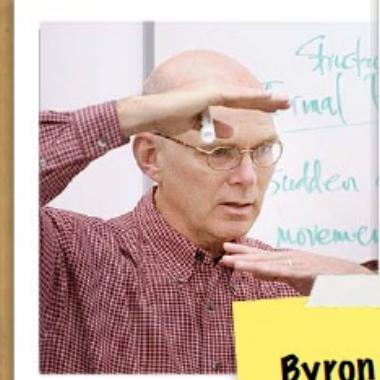
* Author to whom correspondence should be addressed.



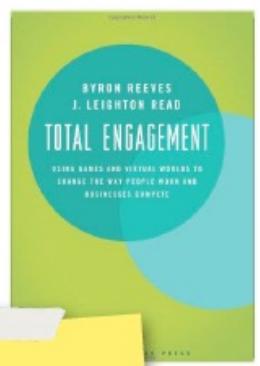
Gabe
Zicherman



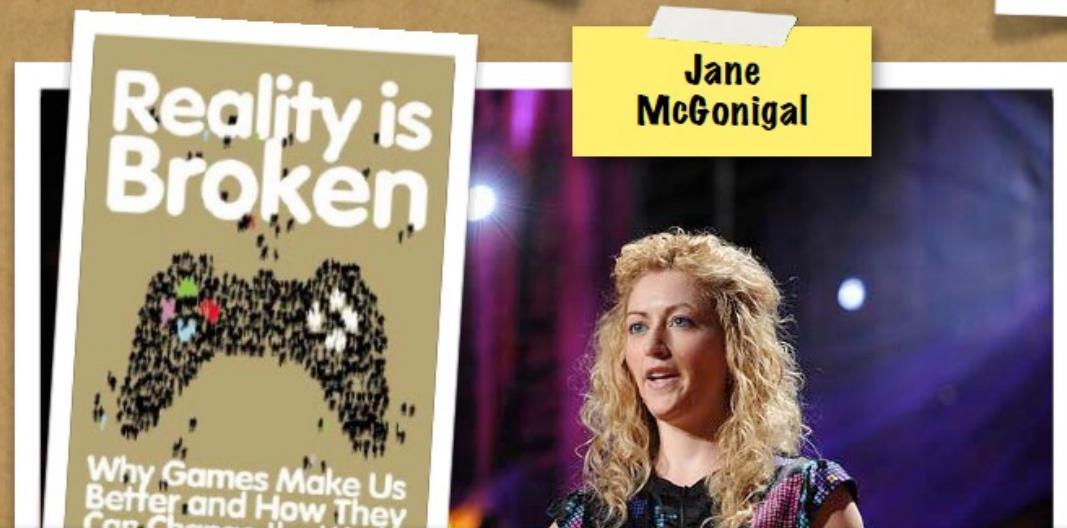
Amy Jo Kim



Byron Reeves



Jesse Schell



Jane
McGonigal

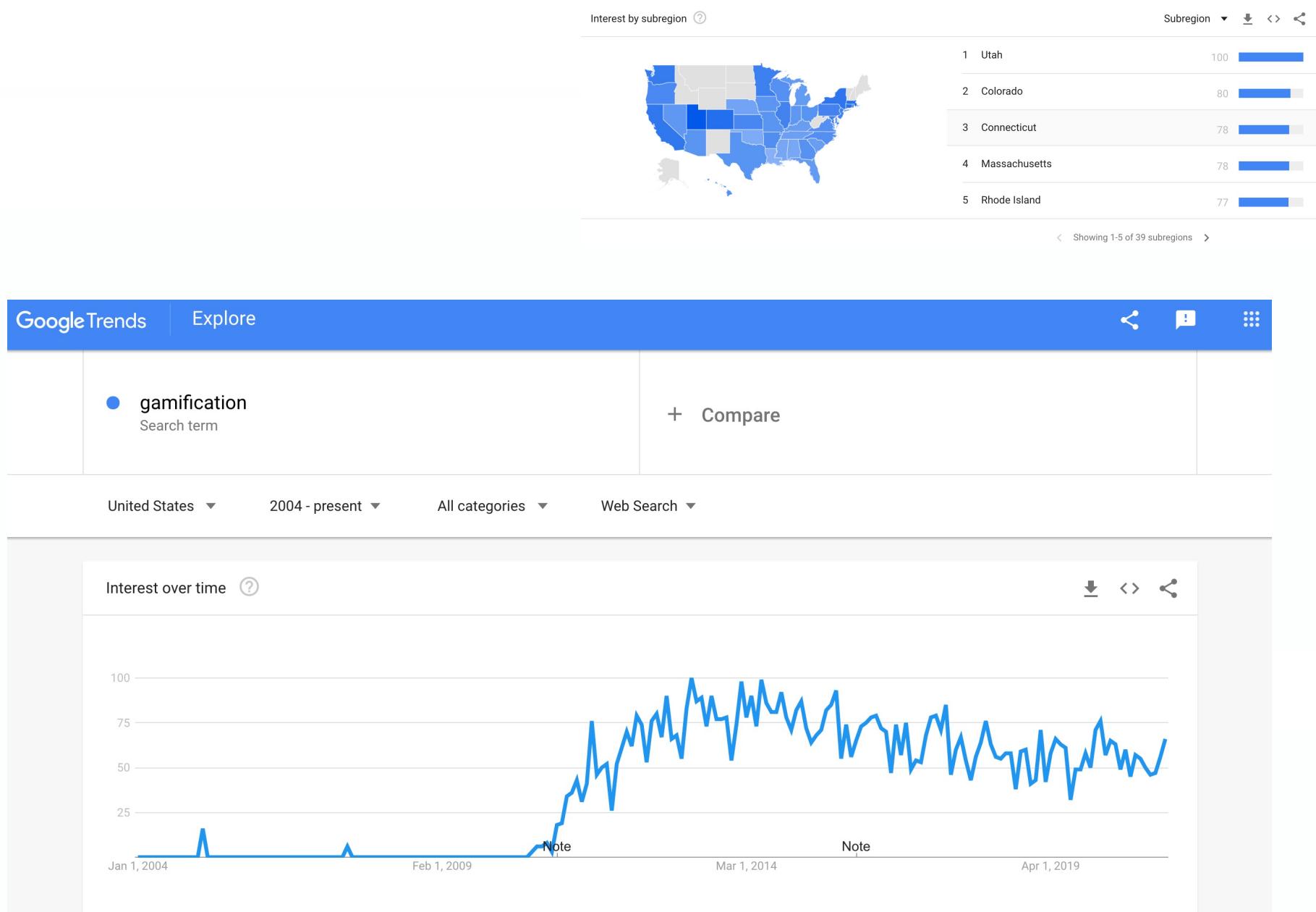


Some proponents

Depending on who you ask, these features will be framed in a vastly different manner: As a »super-charged, super-cheap« form of loyalty programs, as a new field of (meta)game design and community engagement, as the future of work as a perfect information market, as the future of advertising and advergames, or as alternate reality games to change the world for the better.

It hasn't been around for very long...

Web search interest in gamification



Gamification: Trend & Hype

1. The CAGR of the gamification market is predicted to witness a 30.1% growth between a forecast period of 2020 to 2025. (mordorintelligence.com)

In 2019, the global gamification market marked a total of USD 7.17 billion in value.

2. Meanwhile, the global sales revenue for gamification is expected to reach \$32 billion. (globenewswire.com)

Major vendors across multiple regions are already developing products as well as investing in this area.

3. According to PwC's report on top health industry issues released in 2017, 78% aged between 25 and 44 have said that they would like the use of some sort of gamification in their treatment. (belitsoft.com)

The present state of evidence shows that gamification, specifically, can have a meaningful effect on health and wellness.

4. Apple's 2014 App Store review of 100+ health apps proved a direct correlation between gamification elements embed and high user ratings. (belitsoft.com)

Fitbit, for instance, is known to have been the pioneer when it comes to incorporating gamification elements in wearable healthcare. While we all know MyFitnessPal, as the first to have used the highest number of gamification techniques.

5. 93% of the marketers say they love gamification. (optinmonster.com)

6. By 2025, gamification in the workplace will find a wider appeal to millennial employees. (trainingjournal.com)

75 percent of the global population will consist of millennials by 2025 – a generation that has experienced life on computers and video games.

7. It was forecasted that the education gamification market would hit \$1.5 billion in 2021. (statista.com)

Game-related approaches to education and problem-solving are gaining pace and making their way into the market in newly defined ways.

8. By 2021, gamification's estimated global market value will likely rise to \$11.94 billion. (statista.com)



Gamification became a *buzzword*



GAMIFICATION IS BULLSHIT

My position statement at the Wharton Gamification Symposium

August 8, 2011

short url: <http://bogo.st/wm>

tags: business , favorites , philosophy , popular , videogames

(Also available in [Portuguese](#), [Japanese](#), and reprinted at [The Atlantic](#) and [Kotaku](#))

In his short treatise [On Bullshit](#), the moral philosopher Harry Frankfurt gives us a useful theory of bullshit. We normally think of bullshit as a synonym—albeit a somewhat vulgar one—for lies or deceit. But Frankfurt argues that bullshit has nothing to do with truth.

Rather, bullshit is used to conceal, to impress or to coerce. Unlike liars, bullshitters have no use for the truth. All that matters to them is hiding their ignorance or bringing about their own benefit.

Gamification is bullshit.

I'm not being flip or glib or provocative. I'm speaking philosophically.

More specifically, gamification is marketing bullshit, invented by consultants as a means to capture the wild, coveted beast that is

[About the book](#)

[About the book](#)

[About the book](#)



A Slow Year

Game Poems by Ian Bogost

Buy from [OPEN TEXTURE](#)

[About the game](#)

[About the book](#)



Guru Meditation

for Atari VCS and iPhone

Buy [the iPhone](#)

And it's made a bit of a name for itself both good... and not so good.



ACTIVITY



HISTORY

ACHIEVEMENTS

RUN LEVELS



Jul 15, 2017
Farthest Run
4.38 mi



Jul 11, 2017
Longest Run
34:35



May 22, 2016
Fastest 1K
3:59



May 20, 2016
Fastest Mile
6:36



Jul 15, 2017
Fastest 5K
24:05



Fastest 10K



Fastest Half
Marathon



Fastest Marathon



PROGRESS TRACKING



Stats



Goals



Badges



Survey

STRAVA DASHBOARD TRAINING EXPLORE CHALLENGES SHOP Jose Benedicto Upload Activity

My Trophy Case

Achievements

- 6m 52s Marshall Petaluma Road Climb 22 days ago
- 8m 43s Petaluma Point Reyes Road Climb 22 days ago
- 5m 47s Conzelman Road Climb 22 days ago
- 6m 25s Conzelman Road Climb 22 days ago

In Progress

- Turn Up The Heat 20 days to go
- Gran Fondo 2 20 days to go
- Way Too Cool Goat Hill Challenge 33 days to go

Challenges Completed

- THE DIRT SEARCH THE DIRT SEARCH July 18, 2013 Ranked 1 of 1
- Gran Fondo 1 Gran Fondo 1 January 26, 2014 Ranked 1 of 1
- RUN 8K ROLL RUN 8K ROLL Test Challenge January 31, 2014 Ranked 1 of 1
- THE FESTIVE 500 THE FESTIVE 500 Rapha Festive 500 January 27, 2014 Ranked 1 of 1
- GRAN FONDO GRAN FONDO CHALLENGE GRAN FONDO CHALLENGE RAPHA RISING RAPHA RISING

Fitness/Health

Let's have a look at some examples. »Nike+« has been a poster child for way too many things, but by adding scores, challenges, trophies, and competitions to what would otherwise be »just« a running self-tracker, it counts as a case study for »gamifying« fitness.

Gamify Driver Behavior - Some our attempts at Montana State University & Clemson University

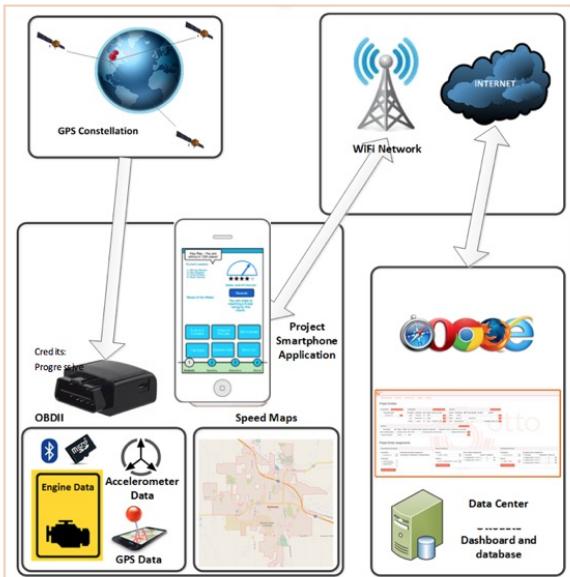


Figure 4. Application and Vehicle Network Schematic

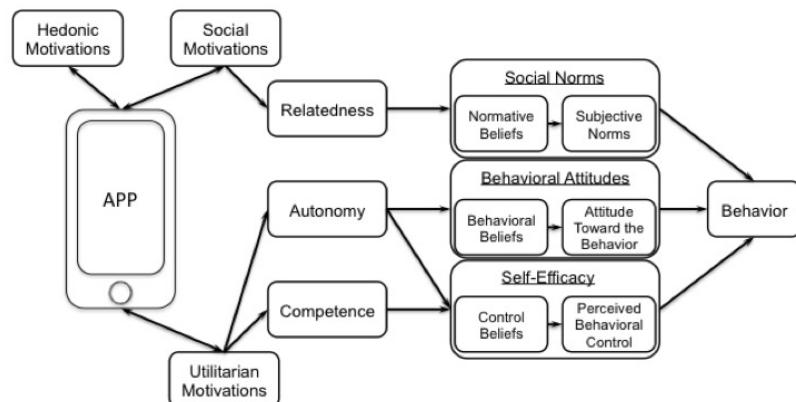


Figure 2. Gamification and Health-Behavior Theory Behind Application Development

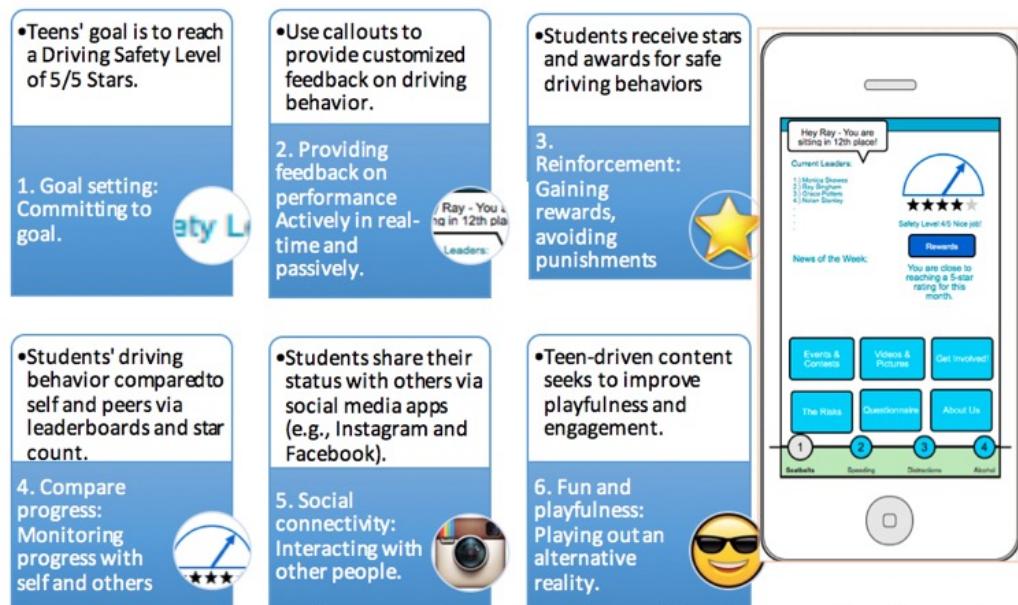
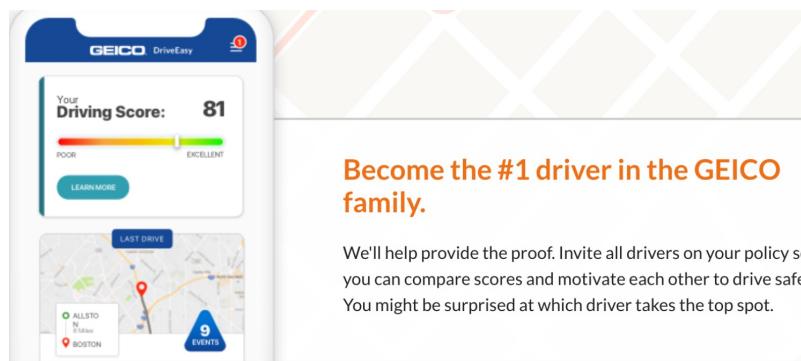


Figure 3. Persuasive Architecture of Gamification and its Six Persuasive Strategies Applied to Our Application



Become the #1 driver in the GEICO family.

We'll help provide the proof. Invite all drivers on your policy so you can compare scores and motivate each other to drive safer. You might be surprised at which driver takes the top spot.

Trip Details Log for 2014 FORD MUSTANG

Date	Trips	Driving time (hr:min:sec)	Mileage	Hard brakes	Speed chart
[+] Sunday, 06/01/2014	3	01:44:30	110.05	1	
[+] Saturday, 05/31/2014	6	02:29:09	126.14	0	
[+] Friday, 05/30/2014	11	02:13:56	94.57	0	
[+] Wednesday, 05/28/2014	5	01:53:34	48.18	0	
[+] Tuesday, 05/27/2014	7	01:14:55	30.98	0	
[+] Sunday, 05/25/2014	3	00:33:26	9.17	0	
[+] Saturday, 05/24/2014	3	02:07:48	69.1	0	
[+] Friday, 05/23/2014	7	01:02:06	35.11	0	

[It's Free! Get started here ▶](#)[Overview](#)[See all accounts](#)[Auto categorization](#)[Easy budgeting](#)[Timely alerts](#)[Safe and secure](#)[It's free!](#)[Helpful graphs](#)[Achieve your goals](#)[Find savings](#)[Track investments](#)[Mobile apps](#)

Ready? Set? Goals!



Whether you want to get out of debt, buy a home or save for retirement, Mint helps you get there. Just enter how much money you need, set a date, and link your goal to specific accounts so it's easy to stick to your plan.

Finance

Similarly, the personal finance management service [Mint.com](#) allows you to set yourself financial goals and track your progress towards them.



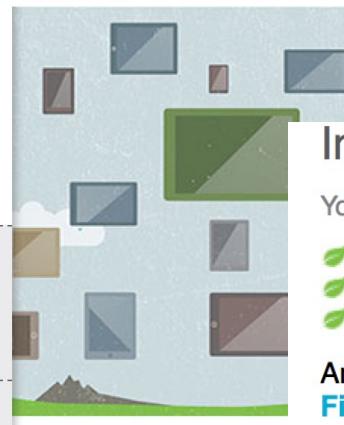
December Energy Report

lmsvail99@yahoo.com

Since October 2011, all Nest Thermostat schedules have saved:

1,454,734,715 kWh

That's enough energy to power all the tablets in the US for a year.



Interesting fact:

You earned a total of 92 Nest Leafs in 2013. That's more Leafs per month than ever before!

- 80% of Nesters in your area
- 85% of Nesters in Montana
- 95% of Nesters overall

And here's how your state did compared to the rest of the country.

[Find out how to get more Leafs >](#)



A look at your Leafs:

This month, the average Nest Thermostat owner earned 17 Leafs. Here's how many you earned:



Here's how you did:



A Survey of Empirical Studies on Persuasive Technologies to Promote Sustainable Living

July 2018 · Sustainable Computing: Informatics and Systems 19 · [Follow journal](#)

DOI: [10.1016/j.suscom.2018.08.001](https://doi.org/10.1016/j.suscom.2018.08.001)

Projects: [Online Peer Support Groups](#) · [Human Factors and Ergonomics Society Annual Conference](#)

Sruthy Orozhiyathumana Agnisarman · Kapil Chalil Madathil · Laura Stanley



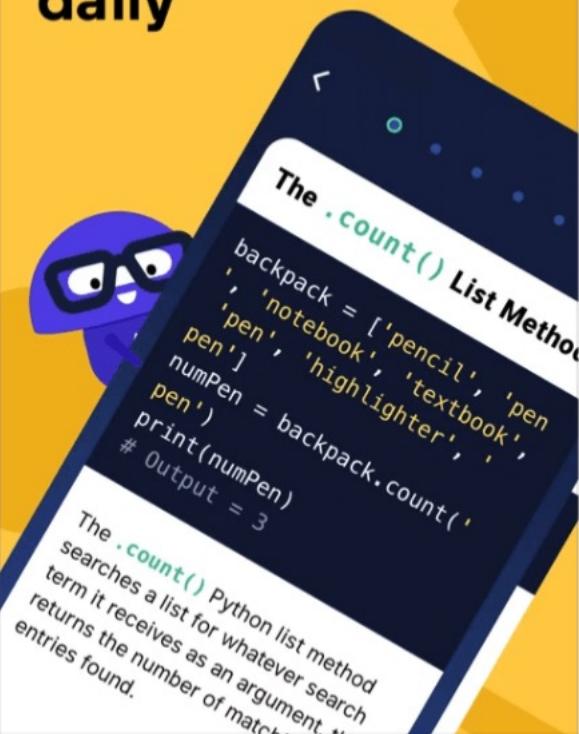
The results from these 38 articles found that behavioral changes were observed in 42% of the studies. In addition, of the 19 studies reporting an increase in awareness, 8 also reported a behavior change, suggesting a relationship between awareness and behavioral change.

Sustainability

In the area of sustainability, Nest allows you to compare and earn "eco leafs" on how energy efficient you are in your home.

Codecademy Go

Review coding
concepts
daily

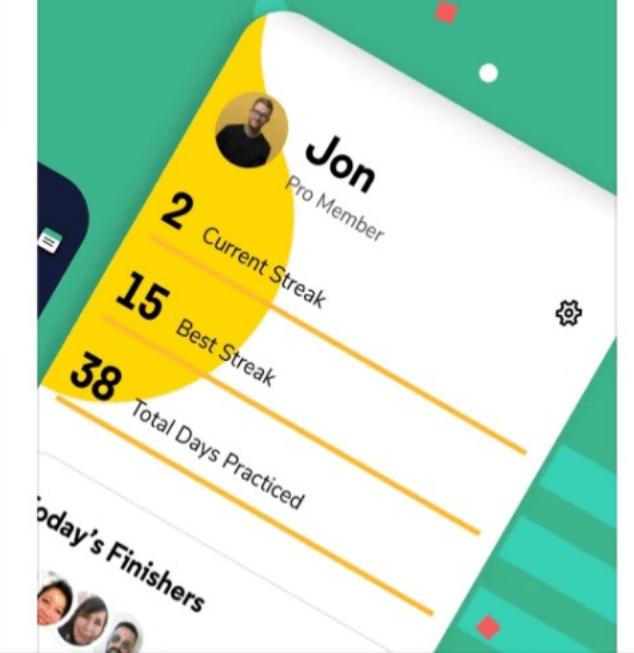


Practice on the go

Two of the three variables in the given block of Javascript code should contain **undefined**

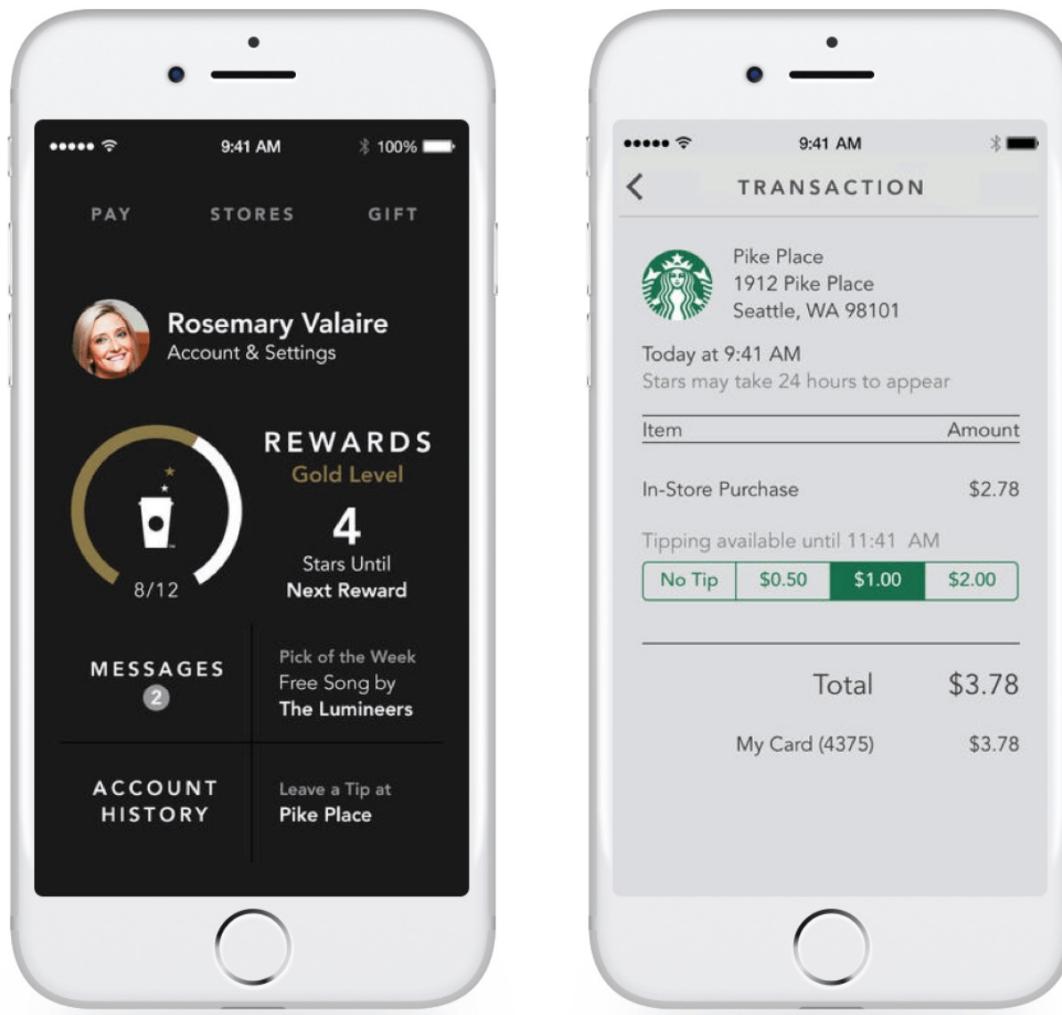
```
let number [ ] ;  
let flag [ ] ;
```

Keep up your streak



Learning

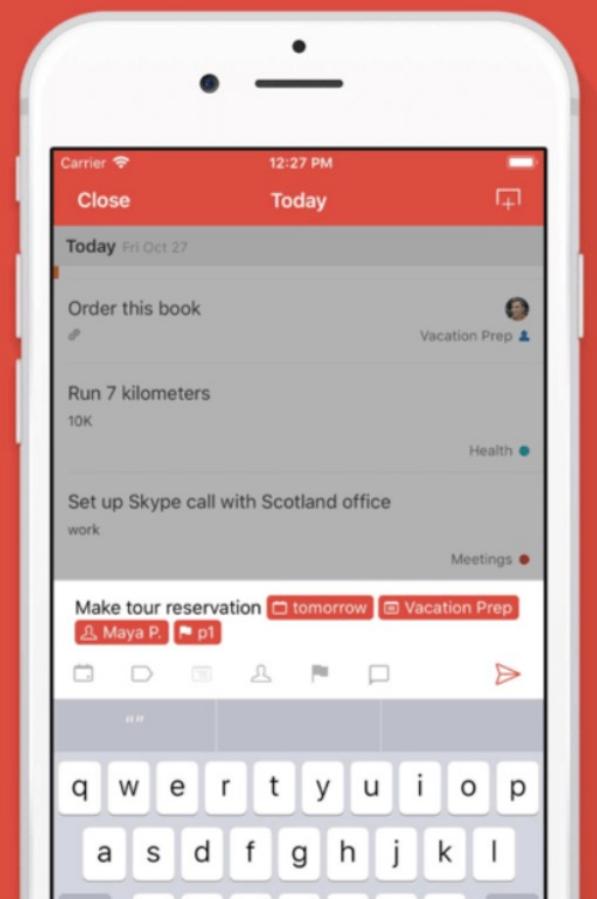
In the learning industry, companies try to make learning stick and engage by adding minigames, challenges, (redeemable) points and leaderboards to them.



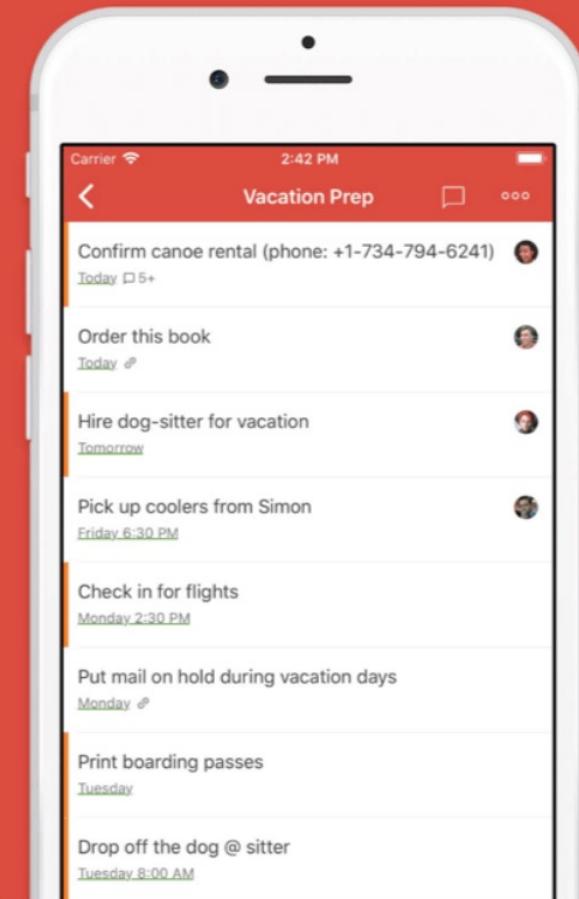
Shopping/Loyalty Programs

In retail shopping/loyalty programs , companies like »Starbucks« bring the concept of gamification

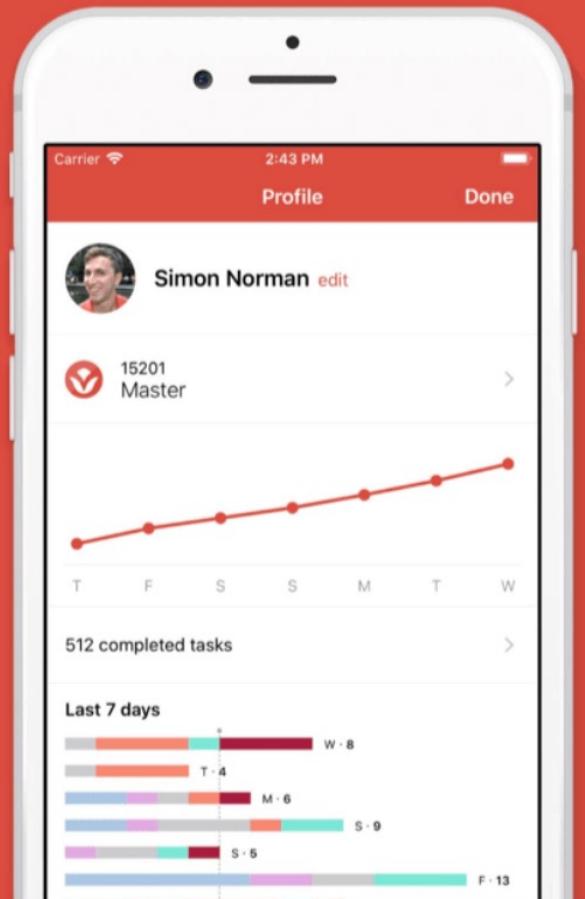
Get organized **in seconds**



Delegate tasks in
shared projects



Measure your **daily progress**



Productivity



todoist

And even in the productivity space, several companies have set up services to add game elements to work tasks, as in the case of.



The homepage for BigDoor shows the BigDoor logo at the top with navigation links for our platform, developers, resources, about us, blog, sign up, and login. The main headline is "Add Game Mechanics to Your Site" with a subtext: "We make it easy to create a virtual economy for your users. Add badges, levels, points, leaderboards and virtual goods to your online world." A green "GET STARTED" button is present. To the right is a screenshot of a dashboard showing various game mechanics like global stats, new rewards, and a multi-control panel.

The MOJO homepage features the MOJO logo at the top. Below it is a section titled "Reward your fans for visiting your web site and sharing your content." with a subtext: "Get them involved with fun, interactive games and challenges." A grid of circular icons representing different reward types like staff, Etsy, and smiley faces is shown.

The Badgeville homepage has a dark background with the badgeville logo and the text "Get Badgeville soon for your website or blog!". It features three large, colorful icons: a green piggy bank, a yellow fist pointing up with the number "#1", and an orange ribbon.

The CubePoints homepage has a dark background with the cubepoints logo and a speech bubble icon. It includes a "Current Version: 2.1.3 (Changelog)" link and a "HOME", "FEATURES", and "DOWNLOAD" menu.

The GetGlue homepage features the getglue logo and the tagline "Reveal Your Tastes. Discover New Favorites. Earn Rewards." It includes a "JOIN NOW" button, "Connect with Facebook", and "Create a free account". Below the text is a stack of books and a smartphone displaying various app icons.

The iActionable homepage has a blue background with the iActionable logo and navigation links for Home, Pricing, How It Works, API, and About. The main headline is "Keep Your Users on Your Site" with a subtext: "Hello, We're iActionable. Game Mechanics – there are many ways to do it wrong. Adding points and achievements to your site doesn't have to be a grind. iActionable makes it easy to get your reputation system up to speed quickly and easily. Let us know what your users are doing and how they earn rewards and we'll do the heavy lifting. Let us worry about game mechanics and get back to doing what you do best." To the right is a sidebar with a progress bar for "I'm Actionable" and a "Follow Us On Twitter" button.

Service Vendors and Agencies

Finally, a couple of service vendors and agencies have sprung up that offer game elements (points, badges, ...) as a service layer to integrate into your site, as well as gamification design.