

The Power and Pitfalls of Gamification

When tech companies first adopted the technique, there was hardly any science supporting it. Now researchers know when gamelike features help—and when they hurt.

[Katy Milkman](#) May 4, 2021 8:00 AM

Illustration: Sam Whitney; Getty Images

This Story is adapted from [How to Change: The Science of Getting from Where You Are to Where You Want to Be](#) by Katy Milkman.

When you walk 10,000 steps in a day, your Fitbit rewards you with a jiggle and some virtual fireworks, giving you a reason to pause and smile with pride. When you practice a foreign language on Duolingo multiple days in a row, you earn a “streak” and are encouraged to maintain it, giving you an extra reason to strive for repetition. When companies, teachers, coaches, or apps add features such as symbolic rewards, competition, social connections, or even just fun sounds and colors to make something feel more like play, they’re relying on “gamification” to enhance an experience that might otherwise be dull. I’d wager that most of the apps on your phone use some element of gamification, but we also see gamification in our workplaces and from our health insurers.

Gamification first took off more than a decade ago. At the time, there wasn’t much evidence for its value; the concept just seemed to make sense. Business consultants promised organizations that gamifying work could more effectively motivate employees, not by changing their work itself, but by changing its packaging, and making goal achievement a bit more exciting as a result (“Yes! I earned a star!”). Technology companies like Cisco, Microsoft, and SAP, for instance, found ways to gamify everything from learning [social media skills](#), to [verifying language translations](#), to boosting [sales performance](#)

Today, thanks to science, we know a lot more about when gamification really works, and what its boundaries seem to be. Beyond the gamified apps and software we use to learn new skills, companies like [Amazon](#) and [Uber](#) now deploy it to boost worker productivity. But to get the results we seek, in our own lives and in the workplace, it's important to understand when gamification will work—and when it will only make matters worse.

In 2012, Jana Gallus, a brilliant young economist studying for her doctorate at the University of Zurich, learned of a problem plaguing Wikipedia—and saw an opportunity to run an early test of the value of gamification. Despite the popularity of the 50-million-entry online encyclopedia available in over 280 languages, Gallus discovered that its top performing editors were leaving in droves. And since the so-called Wikipedians who keep the site's articles on everything from *Game of Thrones* to quantum mechanics accurate and up to date don't get paid a dime, the organization needed to find a way to keep its top editors engaged with the sometimes-monotonous task of curating online content without offering them money.

In the hopes of reducing turnover, Wikipedia let Gallus run an [experiment](#) with 4,000 new volunteer editors. Based on the flip of a coin, she told some deserving Wikipedia newcomers that they had earned an accolade for their efforts, and their names were listed as award winners on a Wikipedia website. They also received either one, two, or three stars, which appeared next to their username, with more stars allocated to better performers. Other newcomers who had contributed equally valuable content to Wikipedia but came out on the other end of the coin flip got no symbolic awards (and weren't told that such awards existed). Gallus thought the awards would make a monotonous task feel a bit more like a game by adding an element of fun and praise for a job well done.

She was right. The volunteers who received recognition for their efforts were 20 percent more likely to volunteer for Wikipedia again in the following month and 13 percent more likely than those who earned no praise to be active on Wikipedia a year later.

Examples like this one might make gamification seem like a no-brainer: Why

wouldn't a corporation want to make work more fun? Despite Gallus' exciting results, more recent research shows that as a top-down strategy for behavior change, gamification can easily backfire. Two of my Wharton colleagues—Ethan Mollick and Nancy Rothbard—ran an [experiment](#) that proved just that. It involved several hundred salespeople who had the somewhat boring job of reaching out to businesses and convincing them to offer coupons for discounted products or services that were then sold on their company's website (think Groupon). The salespeople earned commissions for each coupon eventually sold online.

In an attempt to make this more exciting, Mollick and Rothbard worked with professional game designers to create a basketball-themed sales game. Salespeople could earn points by closing deals with customers, with more points awarded for bigger deals. Sales from warm leads were called "layups," while cold calls were dubbed "jump shots." Giant screens on the sales floor displayed the names of top performers and showed occasional basketball animations like a successful dunk. Regular emails updated the "players" on who was winning, and when the game was over, the winner got a bottle of champagne.

Employees on just one sales floor participated; the rest were left out. My colleagues then compared the trajectories of salespeople who played the game with those who didn't. Though they'd had high hopes, Mollick and Rothbard were surprised to find that playing the game didn't improve sales performance, and it also didn't improve the way salespeople felt at work. But digging into their data further revealed a very interesting pattern.

The researchers had asked everyone in their game a set of questions: Did people follow the game? Did they understand the rules? Did they think it was fair? These questions were designed to measure which salespeople had "entered the magic circle," meaning that they agreed to be bound by the game's rules rather than the normal rules that ordinarily guide their work. After all, if people haven't entered a game mentally, there's no real point to it.

Sure enough, the salespeople who felt that the basketball game was a load of baloney actually felt worse about work after the game was introduced, and their sales performance declined slightly. The game benefited only the salespeople who had fully bought into it—they became significantly more

upbeat at work.

My colleagues argue that their study highlights a common mistake companies make with gamification: Gamification is unhelpful and can even be *harmful* if people feel that their employer is forcing them to participate in "mandatory fun." Another issue is that if a game is a dud, it doesn't do anyone any good. Gamification can be a miraculous way to boost engagement with monotonous tasks at work and beyond, or an over-hyped strategy doomed to fail. What matters most is how the people playing the game feel about it.

Gamification may have worked so beautifully at Wikipedia in part *because* Wikipedians don't get paid but instead come to the site as volunteers. And it's relatively safe to say that volunteers for any organization want to be there and want to be productive, or else why would they be volunteering? Wikipedia editors devote time to the world's largest online encyclopedia because they're intrinsically motivated to help share knowledge widely, just as volunteers for the Nature Conservancy want to help the environment. So Wikipedians naturally have the goal that the site's awards are designed to reinforce.

At its best, gamification seems to work when it helps people achieve the goals they want to reach anyway by making the *process* of goal achievement more exciting. When people fully buy into a game, the results can be impressive, durably improving volunteers' productivity, boosting worker morale, and even, as seen in one [recent study](#), robustly helping families increase their step counts. But gamification can tank when players don't buy in. If a game is mandatory and designed to encourage people to do something they don't particularly care to do (like achieving an outstanding record of attendance at [school](#)), or if it feels manipulative, it can backfire. Amazon seems to understand this: They've kept their gamification program entirely [optional](#) so employees who enjoy it can use it, but it isn't imposed on anyone.

This latest science suggests it makes lots of sense for apps to continue gamifying our achievements, so long as they're promoting goals we're intrinsically eager to reach. But when it comes to using gamelike features to promote change we might not find so appealing, gamification doesn't seem

to be a workaround for more substantive solutions.





While not every context is the right one, under certain conditions, gamification can make pursuing your aspirations feel more like play. And that is a powerful tool in any personal or professional quest for change.

Adapted from *How to Change: The Science of Getting from Where You Are to Where You Want to Be* by Katy Milkman; foreword by Angela Duckworth, in agreement with Portfolio, an imprint of Penguin Publishing Group, a division of Penguin Random House LLC. Copyright © Katherine L. Milkman, 2021.

WIRED Opinion publishes articles by outside contributors representing a wide range of viewpoints. Read more opinions [here](#), and see our submission guidelines [here](#). Submit an op-ed at opinion@wired.com.

Enter your email to get the Wired newsletter

More Great WIRED Stories

-  The latest on tech, science, and more: [Get our newsletters!](#)
- When the boss of all dating apps [met the pandemic](#)
- Serve food in far-away restaurants—[right from your couch](#)
- Sneaky new bacteria on the ISS could [build a future on Mars](#)
- Let's just agree that [Stadia is actually fine](#)
- The healing [power of JavaScript](#)
-  Explore AI like never before with [our new database](#)
-  WIRED Games: Get the latest [tips, reviews, and more](#)
-  Torn between the latest phones? Never fear—check out our [iPhone buying guide](#) and [favorite Android phones](#)