The Popularity of Gamification in the Mobile and Social Era

Game vs. Gamification

Computer and video gaming is a huge and widely popular industry. The worldwide video game marketplace, which includes video game console hardware and software and online, mobile, and PC games, was forecast to reach $111 billion by 2015, driven by strong mobile gaming and video game console and software sales.[1] According to the *2013 State of Online Gaming Report* by Spil Games, the number of people who play games on computers, tablets, and smartphones "is expected to surpass 1.2 billion by the end of 2013,"[2] which is approximately 17 percent of the world's population. Over 700 million people play online games worldwide, which is more than 44 percent of 1.6 billion, the world's online population.[3] Also astonishing is the amount of time that people spend on playing games. According to game researcher Jane McGonigal, there are currently more than half a billion people worldwide playing computer and video games at least an hour a day, 183 million in the United States alone, and five million gamers in the United States are spending more than forty hours a week playing games, which is the equivalent of a full time job.[4]

Gamification has some similarity to games, but they are not exactly the same. The term *gamification* was coined by Nick Pelling in 2002.[5] But it wasn't until the second half of 2010 that the term came to see widespread adoption.[6] As the term suggests, gamification is not quite creating a game but transferring some of the positive characteristics of a game to something that is not a game, thus, gami-"fy"-ing. Those positive characteristics of a game are often loosely described as "fun," and they have the effect of engaging game players in the activity. The fun in gameplay is engineered by the four building blocks, or defining characteristics, of a game: goal, rules, feedback system, and voluntary participation.[7] In gamification, these building blocks more or less still appear but in a less pronounced manner.

Going places is mostly a mundane activity. We go to a supermarket for grocery shopping, drop by a pharmacy to pick up our medicine, visit a museum on a weekend, meet up with friends at a restaurant, and go to a dog park to walk our dogs. These are things we do in real life. Foursquare, a well-known gamification mobile app that launched in 2009, gamifies this common activity of visiting places. It invites people to check in at places, leave tips about them—such as "French toast is great at the so-and-so restaurant, but coffee is terrible"—and see which places their friends visited and what kind of tips they left. You get points and badges as you check in more. You can become the "mayor" of a certain place in Foursquare, and you may even get a tangible reward, such as a free cup of cappuccino, for the "mayor" status if you are lucky. (Foursquare removed the mayorships when it created another app call Swarm to handle check-ins in 2014 separately fro Foursquare.)

Foursquare is somewhat like a game. Participation is completely voluntary. It has a minimal rule that in order to check in to a place, one must be in close proximity to that location (tracked by the smartphone's GPS). When you check in, you get immediate feedback from the app, such as "Welcome back," and sometimes even surprise badges (see figure 1.1). On the other hand, Foursquare is clearly not a full-fledged game. When I use Foursquare, I am not playing any character or visiting a fantasy world. There is no clear goal in this gamification other than perhaps socializing with others about common locations. There is no puzzle to solve or competition to win. The things I do in Foursquare are exactly the things I do in my
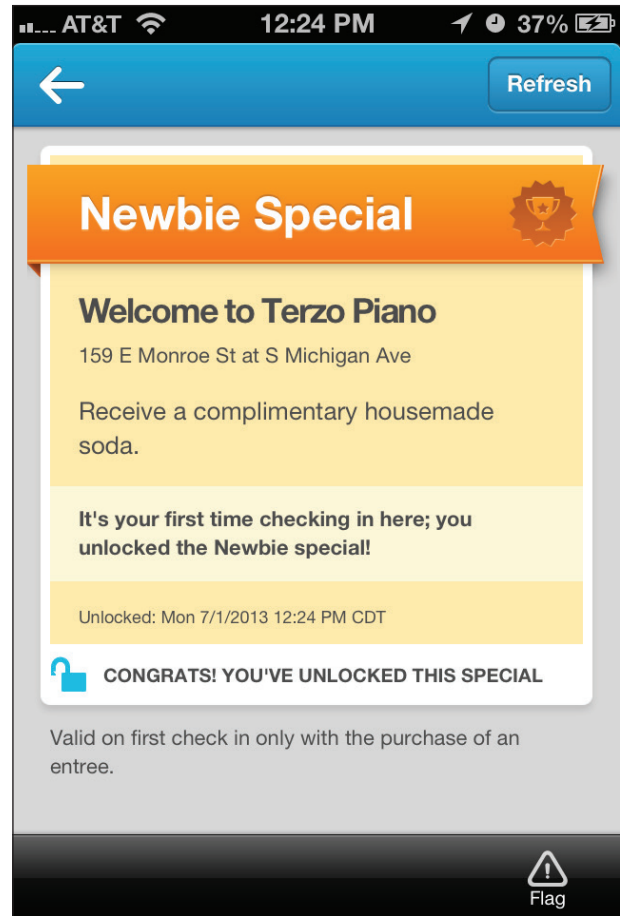
Figure 1.1
The "Newbie Special" badge that I unlocked in Foursquare. I received a complimentary housemade basil soda.

real life. But Foursquare still seems to succeed in making those mundane, everyday activities a little more fun and exciting by adding game-like elements such as points and badges. If you ever cared about being the "mayor" of your favorite coffee shop, for example, whether it was for the free cup of cappuccino or for the bragging rights to your friends, you are not alone. Foursquare reached 45 million registered users and surpassed 5 billion check-ins in December 2013.[8]

Just as Foursquare gamifies visiting places, Waze gamifies another everyday activity, driving. Waze is a GPS app with gamification built in. It not only gives you driving directions but also lets you see various tips left by other users, such as heavy traffic, foggy weather, an accident, and construction on the road (figure 1.2). Waze shows each user on the map with different visual mascots, along with their points and ranks. Waze users can chat or leave messages for one another. This encourages them to leave and share more driving tips with the community. It can be exciting and fun to be tipped ahead about problems on the road. It is rewarding to get a thank-you message from other Waze users about the tip that one left about the

construction on the highway. Unlike a full-fledged game, however, Waze has a very limited number of actions one can take: getting directions, adding driving tips to the map, and communicating with other users. These are also all closely related to the real-life need and goal of getting to places as quickly as possible while avoiding bottleneck areas. A Waze user will be driving whether she plays Waze or not. But Waze adds a little bit of fun to driving and helps you pick a faster route to your destination.

Gamification has received a lot of attention recently in both business and education. *Fortune* magazine reported that companies were realizing that gamification, which uses the same mechanics that hook gamers, is an effective way to generate business.[9] In 2011, gamification was added to Gartner's hype cycle for emerging technologies.[10] Companies are leveraging gamification as a strategy to engage consumers and clients with interesting game-like mechanisms and incentives for the purpose of promotion, marketing, engagement, and customer loyalty. Over 350 companies have launched major gamification projects since 2010, and from 2012 to 2013 alone, consulting companies Deloitte,
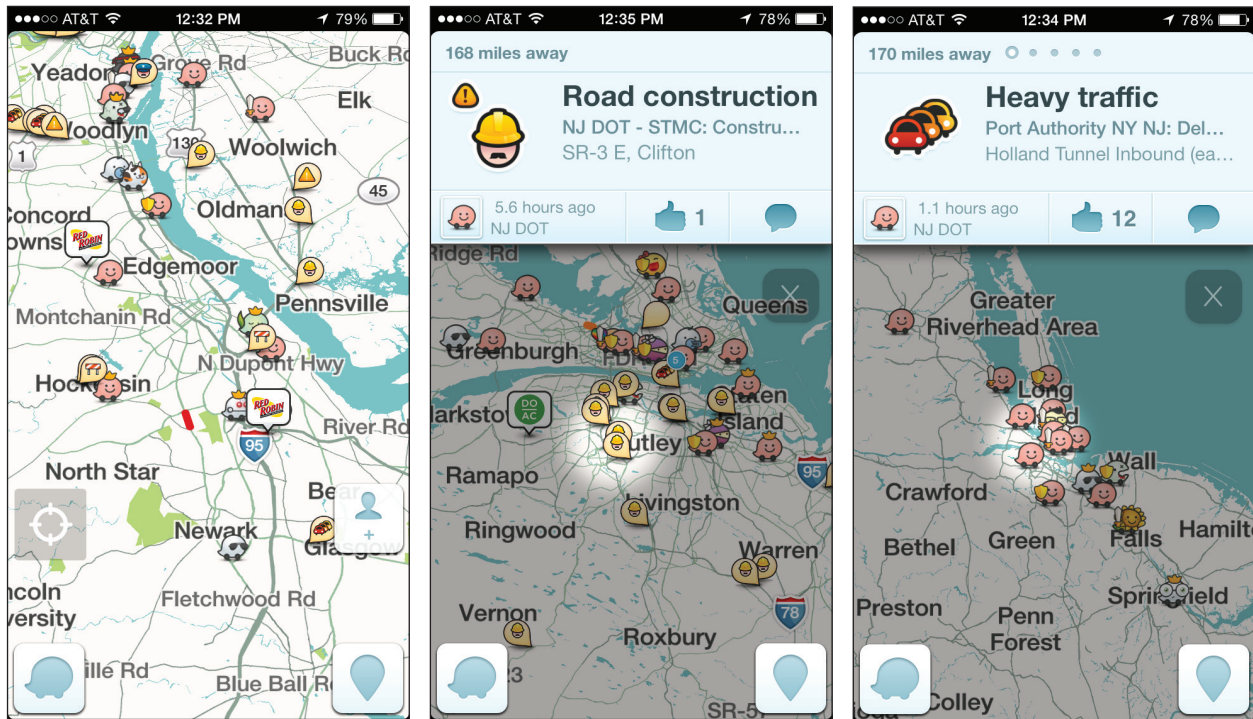
Figure 1.2
Waze screens on the smartphone showing other users' locations and the current road conditions, such as heavy traffic and road construction.

Accenture, NTTData, and Capgemini began practices targeting gamification of Fortune 500 companies.[11] Jimmy Choo, a luxury brand in women's shoes, ran a gamified one-day promotion in 2010, which resulted in approximately 20,000 participants and hundreds of thousands more women who followed the game remotely. It used the streets of London as its game board and social networks as its platform in a game called CatchAChoo.[12] In order to win the prize of six pairs of trainers, participants were asked to discover certain hidden locations in London announced by the company via Facebook, Twitter, and Foursquare. This event cost well under $100,000 but turned out to be the single biggest promotional event for the company in its history.[13]

Gamification is increasingly being adopted in education as well. Quest2Learn, a charter school in New York City, is attempting to gamify an entire school system. Quest2Learn has made the entire learning process into a game, with elements such as boss levels, quests, missions, avatars, and incentives.[14] In Quest2Learn, classes such as math, science, languages, and social studies take place in virtual game worlds, which have bad guys and monsters to defeat.[15] According to the information in its Curriculum web page, Quest2Learn uses games as rule-based learning systems, creating worlds where players take on the identities and behaviors of appropriate characters such as explorers, mathematicians, historians, writers, and evolutionary biologists; use strategic thinking to make choices; solve complex problems; seek content knowledge; receive constant feedback; and consider the point of view of others.[16]

The potential of gamification has begun to receive attention in higher education, too. The *NMC Horizon Report: 2012 Higher Education Edition* reported that game-based learning would be increasingly widespread in higher education over the next few years.[17] The *NMC Horizon Report: 2013 Higher Education Edition* repeated this prediction but added the term *gamification* for the first time, thereby placing both gamification and game-based learning on the two to three years of time-to-adoption horizon.[18] In 2014, the *NMC Horizon Report* continued to place games and gamification on the two to three years of time-to-adoption horizon.[19]

Gamification in the Mobile and Social Era

Some may argue that the concept of gamification is as old as the idea of the Olympic Games, in which the status of an Olympic Games winner was symbolized by an olive-leaf crown and three-time winners were given the reward of getting their own bronze or marble statues made to be displayed at Olympia.[20] But such a claim ignores a significant backdrop of gamification, which consists of three elements: (1) the rapid adoption of the smartphone, (2) the tremendous growth of the mobile web, and (3) the increased use of social media.

As of January 2014, 83 percent of American adults in the age group 18–29 and 74 percent in the age group 30–49 own a smartphone.[21] Smartphones make it possible for people to access and use the Internet on the go. Suddenly, all the information stored at the world's largest library—that is, the Internet—was made available on the small screen of a smartphone, which can be carried everywhere we go. Furthermore, the GPS chip in the smartphone has made it possible for people to track their own locations as well as find out the locations of other people who share their information. The rapid adoption of the smartphone inevitably led to the tremendous growth of mobile data traffic, which again resulted in the rise of the mobile web—the part of the World Wide Web that is accessed by mobile devices—as the competitor of the traditional desktop web.[22] Over the five-year period from 2007 to 2011, wireless data traffic on AT&T, the second largest wireless carrier in the United States, has grown 20,000 percent, at least doubling itself every year since 2007.[23] Mobile data traffic is expected to grow by 61 percent annually into 2018, with the extra traffic from just one year, 2017, to be triple the size of the entire mobile Internet in 2013.[24] The most common use of the smartphone by far is in accessing social networks such as Facebook and Twitter. In 2013, smartphone users spent nine hours and six minutes a month on social networks, compared to one hour and fifteen minutes a month streaming video on the device and around one hour and eleven minutes engaged in sports-related news and videos.[25]

The combination of these three elements—the smartphone, the mobile web, and social media—made possible the popularity of gamification apps such as Foursquare and Waze. Without the smartphone and a fast enough mobile web, people would have been unable to use these gamification apps in any meaningful way. The GPS feature of a smartphone allowed people to easily share their locations. And the mobile web made the real-time information sharing on such gamification apps a reality. People who were used to the social media not only quickly adopted these gamification apps as another means to keep track of and share their own and their friends' everyday activities but also started sharing and displaying the points and the badges that they earned on social media, thereby increasing the popularity of gamification itself.

What is new about gamification is not necessarily the idea of applying gaming elements to a real-world activity, but how seamlessly, ubiquitously, and socially those gaming elements are now applied. We now carry our address book, e-mails, notes, calendar, map, social media accounts, and even spending history and patterns (if you use one of those personal finance apps) in one small smartphone. Being placed in the same device where all this information resides and which we carry everywhere we go, games can

easily slip into our real-world activities. This is a real difference between today's gamification mobile apps and all the past attempts at utilizing games and game elements for a real-world purpose. Commercial video games have been popular for years, and many of them had impressive graphics and sophisticated narratives. But the smartphone, the mobile web, and the social networks completely changed where and how games are played and game dynamics can be applied. With those three elements in place, games were transformed into portable activities interwoven with reality. If we could not carry a smartphone when we go out for a run, for example, how could we make use of Nike+, an app that gamifies running? It is this new mobile and social era that enabled games to become pervasive in everyday activities beyond an imaginary game world confined to a computer or a video game console. While there have been "serious games," which tried to utilize game elements and dynamics for education beyond mere entertainment, those serious games never achieved the same level of popularity that gamification did.

> *Nike+*
> www.nike.com/us/en_us/c/running/nikeplus/gps-app

The significance of the smartphone, the mobile web, and social media in the wide adoption and popularity of gamification does not mean that gamification must take the form of a mobile app. As we will see in the next chapter, everyday activities such as recycling or observing the speed limit while driving can be gamified without the use of a smartphone or the Internet. What makes something a game is never purely technology. However, understanding the significance of these three elements in the recent trend of gamification provides a vantage point from which we can determine where the strength of gamification lies. A simple way to understand the difference between gamification and games is that while games tend to create an imaginary world that is separate from reality, gamification creates a game layer on top of the real world.[26] We do not enter a fictitious game world when we play Foursquare, Waze, or Nike+. Instead, those gamification apps create a game layer on top of real-life activities using game elements such as points, badges, and leaderboards.

Gamification rewards our behavior on the web, often on the mobile web, with social connections and statuses. It even occasionally offers discounts or freebies that can be used in the real world. As we spend more and more time online, the boundary between our online and real life will only become increasingly blurry, and more things will start crossing over between these two domains. Gamification is an early

harbinger of this broader trend. In the next chapter, we will take a look at a number of examples of gamification and see how we can define the concept of gamification more clearly and differentiate it from other related concepts.

Notes

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