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# TALES FROM 2040

#003

AUGUST  
2012



**HOW FACEBOOK BEAT THE  
BANKS AND RAISED AN  
ARMY OF NEW VOLUNTEERS**

A SHORT STORY FROM A BRIGHTER FUTURE  
BY CHRISTOPHER CARDINAL

# TALES FROM 2040

**TALE #003: HOW FACEBOOK BEAT THE BANKS  
AND RAISED AN ARMY OF NEW VOLUNTEERS**



**CHRISTOPHER CARDINAL**



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*To my parents,  
thank you for loving this scoundrel*

*I can never repay the kindness you have shown me;  
I can only pay it forward*

## AUTHOR'S NOTE: PAY IT FORWARD

Neither Facebook, nor Apple, nor Lady Gaga asked me to spend seven years writing these books, and the decision to give them away for free was my own. No one owes me anything.

*Tales from 2040* is an experiment. The goal is to build a network of paid professionals who work together to continue providing this unrequested consulting, developing more ways for powerful companies to make solving social problems a profitable part of their business, with donations from the public and each satisfied client funding the next project. This may be a worthwhile endeavor or a foolish daydream, but I trust the market will provide a clear answer.

If you feel this work is socially beneficial and wish to see it continue, please pay it forward by sharing these books with others, or better yet, sharing your own vision of a brighter future with the world. For details, please visit:

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# HOW FACEBOOK BEAT THE BANKS AND RAISED AN ARMY OF NEW VOLUNTEERS

Last year, in honor of Mark Zuckerberg's 55th birthday, columnist Carey Sarto wrote an editorial about how much had changed in the 35 years since Facebook was founded. An excerpt:

*My 7-year-old grandson recently asked why the icon for the Facebook badge he won in a soccer tournament was a small gold cup, rather than a soccer ball.<sup>1</sup> Realizing that he had never seen an actual, physical trophy, I dug one of mine out of the garage. He examined it closely, a puzzled expression on his face.*

*"What do you drink out of it?" he asked.*

*I explained that when I was his age, we didn't have digital awards, and this was what we got instead. Unimpressed, he handed it back and said, "If it's a cup you can't drink out of, then what good is it?"*

*Stammering for a lame answer made me feel like as much a relic of another era as the lump of wood and metal in my hands, but it drove home the point that times have changed.*

*Yesterday I started my car with Facebook, drove to the store where I bought my groceries with Facebook, including a new salad dressing that Facebook offered me a coupon to try because their algorithms thought I would like it. (I did.)*

*Today, Mark Zuckerberg qualifies for senior citizen discounts (not that he needs them). Remember when Zuck was an adorable young geek who wore hoodies and Facebook was just a website where you caught up with friends?*

With Facebook playing such a central role in so many facets of our daily lives, unless you were there, it's hard to believe there was a time when people thought Facebook was just a fad.<sup>2</sup> In fact, in the decade before Facebook, a host of similar applications had already come to and, for the most part, gone from the American market.

Starting in the late 1990s, a long string of companies each held the top spot as the largest online social network for a couple of years, then faded into obscurity as users flocked to another. First it was SixDegrees.com, then it was LiveJournal, which lost to Friendster, which was surpassed by MySpace.<sup>3</sup> In 2008, Facebook took the lead, making it the new company to beat.<sup>4</sup> Every company before it had been “the next big thing” at one point, but each had been replaced. What would make Facebook any different? Given the history of fickle users, despite the company's rapid success, its eventual downfall seemed inevitable.<sup>5</sup>

Nevertheless, 2010 was a banner year for Mark Zuckerberg. Facebook had its first fully profitable year,<sup>6</sup> hit a half billion users,<sup>7</sup> and unseated Google as the most popular site in the world.<sup>8</sup> To top it off, *Time* named Zuckerberg the Person of the Year,<sup>9</sup> *Vanity Fair* called him the most influential person of the Information Age,<sup>10</sup> and a

Hollywood blockbuster about his rise to power won several Academy Awards.<sup>11</sup>

The next year, though, Facebook started losing users by the millions in the US.<sup>12</sup> Everyone in the tech industry wondered who would dethrone Facebook. Would it be Twitter? It received more press despite having only a fraction of the usage,<sup>13</sup> largely because it was widely used by celebrities. Or perhaps the four NYU students who raised \$200,000 through Kickstarter to create *Diaspora*, an open-source social web?<sup>14</sup> Or the *App.net* team, who similarly raised over \$500,000 to develop a social networking application that was advertising-free?<sup>15</sup> Maybe LinkedIn? Often called “Facebook for grownups,” the site catered to professionals and had solid revenue as well as over 150 million users.<sup>16</sup> And what about Google, the 800-pound gorilla of the web? It had recently launched *Google+*, an application designed from the ground up to take down Facebook, and it had also reportedly made a huge investment in Zynga, the maker of the games that helped make Facebook so popular.<sup>17</sup>

Furthermore, other large countries were dominated by services that were not popular in North America or Europe. Friendster, for example, grew to become the favorite social networking site of the Philippines and much of Southeast Asia. Google’s *Orkut*, which never caught on in America, was wildly popular in Brazil and India. Vkontakte owned Russia, Mixi had Japan, and Qzone controlled China.<sup>18</sup> If the social networking war were laid out on a map, much of the world would have been occupied by enemy armies.

And it was a war. Tech companies were fighting over ownership of information that was not really any of theirs in the first place: our personal data. In July 2011, after

Google and Twitter could not hammer out an agreement, all our tweets suddenly disappeared from Google's real-time search.<sup>19</sup> Three days later, Facebook blocked a Google *Chrome* extension that let users export their Facebook friends to other applications like *Google+*.<sup>20</sup>

Building walls around information like this seemed out of character for Zuckerberg, a person who summed himself up on his own Facebook page by writing, "I'm trying to make the world a more open place."<sup>21</sup> Someone who, just three months earlier, decided to share the specifications for Facebook's highly efficient data centers so others could benefit from their research and development, and he did this at a time when most companies treated these details as trade secrets.<sup>22</sup> Then again, the company would soon have shareholders to be accountable to, so it would inevitably have to start playing hardball at some point.

## FACEBOOK OPENS UP

In February 2012, Facebook announced that it was going public with the largest tech IPO in history.<sup>23</sup> At the time, its service was already immensely popular. Americans spent more time on Facebook than any other site,<sup>24</sup> and the company had nearly a billion users globally, over half of whom logged on each day. About one out of eight people in the world used the site each month,<sup>25</sup> and they were all connected to each other by fewer than five people, on average.<sup>26</sup> Facebook's rise in popularity was also matched with financial success, as profits and revenue had both more than quadrupled in the previous two years.<sup>27</sup>

Not all the news was so rosy, however. To become a publicly traded company, Facebook had to identify potential risk factors in a series of documents filed with the

SEC, some of which were unsettling. For example, Facebook revealed that around 40 or 50 million of its users were fake.<sup>28</sup> These documents also showed how much Facebook relied on Zynga, the maker of the most popular games on Facebook, such as *FarmVille*.<sup>29</sup> In fact, one out of every five dollars Facebook made the previous year had come from Zynga.<sup>30</sup> Facebook said that it could lose money if Zynga tried to take its players elsewhere,<sup>31</sup> which is exactly what happened just a month later when Zynga announced it was developing a platform to deliver its games independently.<sup>32</sup>

Facebook also warned investors that it made no meaningful revenue from mobile users and that it could spell trouble if their number increased.<sup>33</sup> Unfortunately, people were already spending more time on Facebook on their smartphones than on their computers, and this ratio was rising rapidly.<sup>34</sup> There were some other unpleasant surprises along the way, too, like General Motors saying Facebook ads were ineffective and pulling its \$10 million advertising budget just days before the IPO.<sup>35</sup> But none of these revelations was as shocking as how the CEO spent the company's money.

## INSTAGRAM

On April 9, 2012, less than six weeks before Facebook would go public, Zuckerberg announced that the company would buy the social photo-sharing startup Instagram.<sup>36</sup> Just a few days earlier, a journalist had explained:<sup>37</sup>

*For the uninitiated, Instagram is a simple app that lets you take photographs and apply filters that make the pictures look like old-fashioned-y Kodak or Polaroid snapshots. Neat-o, right?*

Instagram had been called “the Auto-Tune of photography” for its ability to hide the imperfections found in most photos taken with mobile devices.<sup>38</sup> Facebook needed a stronger mobile photo interface, so the acquisition made sense.<sup>39</sup> What raised eyebrows and dropped jaws was the price tag: \$1 billion.<sup>40</sup>

To put this in perspective, Zuckerberg decided to spend all of the previous year’s profits in one shot,<sup>41</sup> reportedly without even consulting the board of directors,<sup>42</sup> on an 18-month-old company that had about a dozen employees, zero revenue, and no real plans to make revenue.<sup>43</sup> Zuckerberg’s casual leadership style had been questioned ever since he turned down the first ten-figure offer to buy the company.<sup>44</sup> But when two guys in their twenties made the Instagram deal mostly on their own over a weekend, it led experienced investors to think Zuckerberg had no concept of the value of a dollar – or a billion of them. Others were left wondering if the company was led by a misunderstood genius or a kid who was in over his head.

They needn’t have worried. It was true that Facebook did not need Instagram’s software, since it was fairly simple and Facebook had already developed a similar app almost a year earlier.<sup>45</sup> Facebook did not need Instagram’s users, either. Considering how many of them were already on Facebook, the acquisition would probably not bring in a significant number of new people. However, while Instagram was not worth much to Facebook, if a competitor had bought it instead, the results could have been devastating. For example, Google had already spent a fortune developing its own social network and could have easily afforded another billion or more to give people a reason to check out *Google+*.

Zuckerberg knew how important photo sharing was to Facebook<sup>46</sup> – people were uploading more than 300 million photos there each day.<sup>47</sup> Instagram did not have any revenue, but it was cool and growing rapidly, and it could have touched off the kind of mass migration that had ended every social network that came before Facebook. Even if it did not add to the company's bottom line, paying twice the value investors had placed on Instagram just four days earlier<sup>48</sup> was nevertheless a shrewd move, if only to keep it from becoming a reason to share photos somewhere else.

## **THE CLAMOR AND THE CLANGING OF THE BELLS**

Zuckerberg had long been reluctant to take Facebook public.<sup>49</sup> In the months leading up to Facebook's IPO, he seemed distracted and had been skipping meetings with analysts and bankers.<sup>50</sup> Nevertheless, on May 18, 2012, he rang the Nasdaq opening bell wearing his trademark hoodie.

After a bungled start that prevented trading for half an hour, the freshly minted Facebook stock set a world record as 82 million shares were traded in the first 30 seconds alone.<sup>51</sup> After an intense day, it closed at almost exactly the same price at which it opened, which made some analysts say the stock had been fairly priced, but disappointed legions of investors hoping to make a quick profit.<sup>52</sup> Despite suddenly being worth about \$20 billion, Zuckerberg had more important matters on his mind.

The next day, fewer than a hundred people attended what they thought was going to be a graduation party for Zuckerberg's longtime girlfriend, Priscilla Chan, at their home in Palo Alto, California. Instead, guests were

surprised to find out that they had actually been invited to the young couple’s wedding.<sup>53</sup> True to form, Zuckerberg immediately changed his relationship status to “married” and posted a photo of his bride and himself to his Facebook Timeline. By the following day, nearly a million people had liked that status update. (By comparison, the previous update in which he had announced Facebook going public had received just over 500 “likes” by the same time.)<sup>54</sup>

Illustration: Mark Zuckerberg’s Timeline on April 20, 2012<sup>55</sup>



## A SHORT HONEYMOON

Soon Zuckerberg and Chan were enjoying a low-key visit to Italy,<sup>56</sup> but as far as Wall Street was concerned, Facebook’s honeymoon period was already over.

In the turbulent market of the early 2000s, fortunes often reversed quickly. Even well after the dot-com bubble, dozens of social media companies shot up into the stratosphere, then came crashing down to Earth just as swiftly.

In 2005, Google offered to buy Friendster for stock that would have been worth \$1 billion. Instead, it sold for a tenth of that value four years later.<sup>57</sup> Similarly, Digg was reportedly offered \$200 million from Google in 2008, but ended up selling the site for a quarter of a percent of that, again just four years later.<sup>58</sup> The moral of these stories (other than to think twice before turning down a check from Google) was that social media companies tended to have very short shelf lives.

In December 2011, Zynga went public to much fanfare, with some analysts even comparing it to Apple,<sup>59</sup> resulting in a \$9 billion valuation.<sup>60</sup> Eleven weeks later, Zynga stock was up almost 60 percent from the opening price, but by July 25, 2012, it had already fallen two-thirds from its peak. That day, it released a dismal quarterly report that revealed major losses and reduced its earnings outlook to a quarter of previous projections. The bad news lost it another 40 percent in after-hours trading and dragged Facebook's stock down almost 7 percent along with it.<sup>61</sup>

The next day, Facebook released its own quarterly report, the first since going public. The company met its own forecasts and beat analysts' predictions, but its stock still suffered its largest single-day loss to date.<sup>62</sup>

To reiterate, one social media company fell so short of its projections that it triggered a swarm of law firms to probe the company for federal securities violations, particularly

since Zynga executives had unloaded a half billion dollars' worth of stock just a few months earlier without notifying investors that its business might be in trouble.<sup>63</sup>

The other social media company did exactly as well as it said it would, which was better than analysts had predicted. Yet that wasn't good enough for Wall Street, which based on those same predictions had valued the company \$34 billion higher just ten weeks earlier. The same faulty market mechanics that hyped tech stocks into overinflated values also disproportionately beat them down when these unrealistic expectations were not met.

A litany of bad news came out around that time, with each batch pulling the stock down further. In America, where the company made most of its money,<sup>64</sup> Facebook usage and customer satisfaction were declining.<sup>65</sup> Updated calculations stated that the number of fake accounts was nearly double the company's estimates from a few months earlier, revealing that almost one out of ten "people" on Facebook were not who they said they were.<sup>66</sup> Some advertisers claimed that as many as 80 percent of clicks on Facebook ads were fake, too, made by bots instead of people.<sup>67</sup>

## **ZUCK VS. GOGLIATH**

Just two weeks after going public, Facebook had already lost almost 30 percent of its original value. Two months later, it had lost nearly half.<sup>68</sup> Yet even after this sharp plunge, Facebook stock was still over twice the price of Google's when compared to earnings.<sup>69</sup>

One could argue that Google's main service lent itself more naturally to advertising, since users went there looking to find something specific, whereas people visited Facebook

largely to pass time and be entertained.<sup>70</sup> However, these are the very same reasons people watched television, and that industry had no problems making money, even during a recession.<sup>71</sup> The fact was that both companies made the vast majority of their revenue from advertising, and Google did a better job of using what it knew about people to deliver ads more effectively. Even though people spent far more time on Facebook each day,<sup>72</sup> Google made six times as much revenue per user.<sup>73</sup>

Google stock was also expensive at its IPO, a price it only justified with years of meteoric growth. Facebook's even higher price was harder to swallow considering its own growth was slowing and revenues were actually slipping.<sup>74</sup> Its stock was falling fast, and to stop the bleeding, Facebook needed to multiply its profits by several times.

It could not accomplish this simply by getting even more people to use Facebook. Users from wealthier countries, North America in particular, brought in much more revenue than those in other areas.<sup>75</sup> Yet most adults in the United States were already using Facebook, including the vast majority of the 18-49 demographic coveted by advertisers.<sup>76</sup> No, if Facebook were to regain its former glory, it needed to figure out how to keep its existing users satisfied and improve its advertising model.<sup>77</sup>

A saying widely misattributed to Albert Einstein states that insanity is doing the same thing over and over again and expecting different results.<sup>78</sup> For years Facebook had stayed mostly the same, making only minor tweaks to its service. Fortunately, Zuckerberg had known for a while that small, incremental changes were not going to lead to the kind of explosive growth the company needed, and he still had a few aces up his sleeve he had yet to play.

## BADGES

On August 1, 2012, Zuckerberg announced Facebook's latest development: a new core application called *Badges*. Just as Facebook's other flagship apps like *Photos*, *Music*, and *Events* helped us share different parts of our lives with each other, *Badges* would let us commemorate and share our experiences through a system of digital awards. These would serve as virtual versions of physical objects such as trophies and medals that were used to recognize accomplishments. For example, when people bowled a perfect game, instead of adding their names to a plaque, a bowling alley could give these players badges on Facebook. The result would be just as permanent, but unlike a plaque, badges were free, instantaneous, and easily shared.

Illustration: Badge announcement



**Christina Redfield**

earned a new badge from **Midnight Lanes**



**300 Club**



Sports & Recreation

Earned by bowling a perfect game during regular league play.

June 15 at 10:50 pm [Like](#) · [Comment](#) · [View Badge](#)

7 people like this.

[View all 9 comments](#)



**Fred Linden** Congratulations to you Christy!

3 hours ago · [Like](#)



**Christina Redfield** Thank you! You're next!

1 hour ago · [Like](#)

*Badges* was completely open. Anyone on Facebook could create a badge and award it to anyone else for any reason. A wife could make a *Snuggling World Champion* badge and give it to her sweetheart on their anniversary, or a critic could award a *Complete Waste of Time* badge to a movie he hated. Recipients got to choose which badges they wanted to share with others, and the six they marked as a “Top Badge” would appear on their main Facebook profile page.

Illustration: Top badges of a high school sophomore



## FUN AND GAMES

Just as with every other advancement in social networking, most of the business world did not know how to fit badges into their strategy right away. However, one industry knew exactly what to do, because virtual awards had been a major component of video games for years.

In general, they were known as “achievements,” and they were given to players for reaching specific goals, such as attaining a certain score or completing a challenging task. Earning significant achievements gave players a sense of accomplishment and bragging rights among fellow gamers, and often unlocked new game content or features. Literally millions of different virtual awards already existed in the form of video game achievements. Practically every game had them. Even free mobile games designed to kill a few minutes at a time had dozens of achievements.

The games people already played on Facebook typically had more achievements than any other type of game, but this wasn’t necessarily a good thing. To developers of social games, each achievement was an opportunity to get players to share the news with their friends, thus giving the game free advertising, so they loaded their games with an obnoxious number of them. For the first year after *FarmVille* was released, for example, many users found their News Feeds flooded with messages about what their friends had been doing on their farms, and these types of announcements were frequently cited as one of the most annoying aspects of Facebook.<sup>79</sup>

Facebook had quietly made some changes in 2010 that hid most game notifications from people who did not play them,<sup>80</sup> so many people forgot about them. But then, two years later, they started showing up again, only this time as badges. The format for game notifications was so similar to badges that it only took a few lines of code to make the switch, which most Facebook game developers did within a day or two. The resulting deluge of badges gave this new application a bad first impression.

Soon, people who played Facebook games had extensive collections of badges for those games, but nothing else, while those who did not play had few badges, if any. Understandably, this left many with the idea that *Badges'* only purpose was to support games, and critics complained that badges were trivial and irrelevant. Zuckerberg addressed these concerns with a Facebook post:

*Facebook's mission is to make the world more open and connected. We believe Badges will help accomplish this goal by providing a unique way to define and strengthen the relationships we have with the people and interests that matter most to us.*

...

*We are very pleased that so many developers have already integrated Badges into the great games they make on the Facebook platform. I also understand how this has made Badges seem limited, so I would like to take this opportunity to reassure you that soon Badges will be about far more than just games.*

*Each day we hear of exciting new ways people are planning to use Badges to help Facebook users connect and share their experiences. Although Badges is free to use, it will still take time for organizations to assemble the infrastructure required to support these programs. Eventually there will be badges for practically everything that is important to us. In the meantime, I humbly ask for your patience.*

Coming from anyone else, claiming that “there will be badges for practically everything” may have sounded delusional. However, Zuckerberg had a long track record of accurately predicting online behavior ahead of the curve, delivering features users didn't know they couldn't live without until they tried them. Proving the skeptics wrong, more prestigious badges soon appeared, just as promised.

## BETTER BADGES

Harvard University, Zuckerberg's alma mater and the birthplace of Facebook, became the first institution of higher learning to give badges that served as digital diplomas. Soon after the *Harvard Graduate* badge, there was a rapid influx of other desirable badges, such as *Eagle Scout* from the Boy Scouts of America, *Bestselling Author* from The New York Times, and *Rhodes Scholar* from the University of Oxford.<sup>81</sup>

Building on the application's growing success, Facebook rapidly added new features to *Badges* throughout the next year. The first update, for example, let users visually arrange their badges into customizable collections like "Athletic Awards" and "Professional Achievements," then share those groups with different sets of Facebook friends.

On the back end, Facebook released *Motivate*, a suite of tools that helped companies make better use of the vast quantities of data generated by the badges they developed. Some tools were analytical, providing anonymous, aggregate information about the people who earned particular badges, while other tools helped them interact more effectively with individuals or create more sophisticated achievement systems. For instance, developers could use *Motivate* to assign point values to badges and define point totals that triggered other awards, or they could create visual achievement paths that illustrated how minor badges formed intermediate steps toward earning major badges.

For example, the band Manifesto Five had an active fan base who referred to themselves collectively as "The Renegade Army." The band formalized this by making sets

of badges for activities like attending concerts, buying albums, sharing songs with friends, or donating to the band’s favorite charity. As fans collected more badges, they were promoted to various military-style ranks.

Illustration: Achievement path from Manifesto Five<sup>82</sup>



Those who earned the top badge in all categories received the band's highest honor: the *Renegade Commander* badge. Other achievement paths were much harder to complete. For instance, the World Taekwondo Federation created a system of badges for the hierarchy of ranks traditionally awarded to practitioners of its martial art. These range from the relatively easy-to-obtain *White Belt (10th gup)* badge to the venerated *Grand Master (9th dan)*, which typically takes 40 or more years of constant training to obtain.<sup>83</sup>

## SYSTEM INTEGRATION

Facebook also soon introduced an interface for integrating *Badges* with other systems, which allowed awards stored elsewhere to be automatically converted into badges. Again, some of the first to take advantage of this new feature were video game developers. Microsoft's *Xbox Live* and Sony's *PlayStation Network* already had two of the most intricate achievement systems ever created. These kept track of every achievement players had ever earned in their console games, and both companies quickly made these available as Facebook badges. Other notable early adopters included Nike, whose innovative *Nike+* system gave awards for exercise based on data recorded by special wrist or shoe sensors,<sup>84</sup> and Foursquare, which collected information about people's whereabouts via their mobile phones and gave badges based on where they went.<sup>85</sup>

The newfound ease of integration created a massive influx of prestigious badges as organizations made entire databases of past awards available on Facebook. The Nobel Foundation, for example, created badges for all laureates since they awarded their first prizes in 1901. Guinness World Records gave a badge to everyone who had ever held

one of their records, and the International Olympic Committee made badges for all medalists since 1896.

With *Badges*, Facebook became a convenient way to display verified credentials. Following in Harvard's footsteps, virtually every college and university began offering badges to graduates. Professional organizations from the American College of Surgeons to The National Association of Realtors created badges for the certifications they bestow. *IMDb.com* made badges not only for entertainment award winners, but for nominees too, as well as every role in Hollywood. Everyone listed in the credits of any TV show or film throughout history got a badge. Other organizations provided badges for companies to display on their corporate Facebook pages and websites, such as the *Best Buy* badge from Consumer Reports, the *Car of the Year* badge from Motor Trend, or the *Excellence in Customer Service* badge from J.D. Power & Associates.

Zuckerberg was right. From placing second at a debate tournament to becoming a licensed chiropractor to winning a Grammy, everyone wanted to share their accomplishments. By the end of 2013, most institutions that gave awards or professional certifications had started a badge system.

## **FOCUSING ON THE FUTURE**

Despite being a new feature, at first badges were mostly used to share old news. In the beginning, people worried about getting credit for things they had already done, making sure their online profiles accurately reflected their past accomplishments. Since its release, the *Badges* panel that appeared on people's profiles showed the six badges they had selected as a "Top Badge." Most users chose to

highlight their crowning achievements, even if they had happened years ago, and these tended not to change often.

Helping people keep up-to-date was one of Facebook's primary goals, so the company made a small tweak to help nudge people forward. Along with the other changes, Facebook added several new views to the *Badges* panel. The "Top Badges" view already answered the question: "What are you most proud of?" However, new views like "Most Recent," "In Progress," and "Lifetime Goals" respectively answered other vital questions like "What have you been up to?," "What are you working on now?," and "What do you want to do with your life?" Facebook made "Most Recent" the default view, effectively shifting the focus from past accomplishments to current events, and in the next few weeks, *Badges* activity rose to a frenzy as people scrambled to acquire new awards.

Illustration: Lifetime Goals badges of a college senior<sup>86</sup>



## ACHIEVEMENT MARKETING

With constant media attention, badges were the hottest trend in social networking. Most companies had previously struggled to give customers a reason to connect with them on Facebook, but *Badges* changed the game. “Achievement marketing” was the business buzzword of the decade, and the new holy grail of branding was creating a badge that consumers wanted to earn and show off.<sup>87</sup>

When Apple released a new *iPhone* or *iPad* model, it gave an *Early Adopter* badge to customers who bought one within the first two weeks of its release, but other companies did not have such a strong following.<sup>88</sup> Even those with popular brands had to work harder to create desirable badges.

Gold’s Gym, whose tagline is “Know Your Own Strength,” offered badges in five-pound increments for a variety of lifts, a move that brought tens of thousands of bodybuilders and athletes in for a special session with a weight trainer to verify their capabilities. Also highly valued were their *Gym Rat* and *Gym Junkie* badges, which could only be displayed by people who had signed in to a Gold’s Gym at least four or eight times, respectively, in the previous month.

Expedia, the world’s largest online travel company,<sup>89</sup> created a free Facebook app called *World Traveler*, which combined the *Photos*, *Notes*, *Badges*, *Map*, and *Timeline* features to create detailed travel journals. By simply uploading photos from a GPS-enabled smartphone, *World Traveler* produced beautiful, well-organized blogs that chronicled entire trips, complete with interactive maps. The app also awarded badges to users based on their

travels, which one reviewer called “a worldwide scavenger hunt that’s kind of like geocaching, but easier.” For example, visiting five specified points of interest in Paris would earn the *City of Light* badge. Traveling to four cities in Spain gave the *Aficionado* badge. *European Visitor*, *European Traveler*, and *European Explorer* were earned by visiting one, then three, then seven countries in Europe. This continued all the way up to *World Explorer*, which was given only to those holding *Explorer* badges from six continents.

Facebook’s tools made it easy for businesses of all sizes to create badges that appealed to their customers. Soon, not only multinational companies were incorporating *Badges* into their marketing plans, but small businesses got in on the action as well. And due to the viral nature of the internet, many good ideas designed for local audiences blossomed into larger trends.

A climbing gym in Utah built such a good badge system for its members that the American Recreation Coalition used it as a model for a larger system for climbers worldwide. The Big Texan Steak Ranch in Amarillo, Texas offered *The Big Texan* badge to any diner who consumed its signature 72-ounce steak in one sitting.<sup>90</sup> This caused such a buzz that the Travel Channel created badges for every meal that Adam Richman had ever eaten while hosting the reality show *Man vs. Food*. Soon other famous foodies used badges to make lists of dishes to try, film critics identified the most essential movies to watch, and golf pros named the best courses to conquer, each one creating a bucket list that let fans emulate the people they admired.

KIIS FM, a Los Angeles radio station, created a *Music Lover* badge that listeners could earn by answering a few

trivia questions each month on the station's website. Each day, the station would call people who had earned that month's badge to award them a small prize just for playing, or a much more valuable prize if they had put *Music Lover* in their Top Badges collection. This provided an incentive for listeners to display the KIIS logo prominently in their profiles, a modern version of similar contests that required a radio station T-shirt or bumper sticker. The promotion was such a success that most of the other 850 radio stations owned by Clear Channel Communications soon offered their own *Music Lover* badges.<sup>91</sup>

These radio station promotions were some of the first examples of offering additional benefits for earning a badge. In the beginning, apart from a few loyalty programs, it was rare for badge recipients to gain anything apart from the badge itself. This changed when Facebook improved the *Badges* application again. Previously, the only people who could see a badge were the friends with whom the recipients chose to share them. After the update, though, other apps could ask users for permission to access their otherwise private badge collections to confirm that they had earned specific badges from third parties.

This change confused many users and caused alarm among privacy advocates, who claimed that no good could possibly come of various corporations having access to records of our personal experiences. What happened throughout the following year proved otherwise, however, as the American Red Cross taught the world a lesson about partnership by using Facebook *Badges* to revolutionize the way we think about online marketing, raising an army of new volunteers in the process.

## THE AMERICAN RED CROSS

Although the *Motivate* tools were designed for marketers, they also happened to be exactly what non-profit organizations needed to tackle some of their toughest problems, like recruiting and engaging supporters. Curiously enough, some of the largest advances in achievement marketing originated with a charity founded in the 1800s.<sup>92</sup> Nobody set more precedents or shaped the way badges were used more than the American Red Cross. Following are some of its most successful tactics, which are still in use today and have been copied by countless other organizations.

### THE RED CROSS SUPPORTER BADGES

To begin, the Red Cross developed an effective and motivating achievement system using a few basic badges with various point values. For instance, the *Blood Donor* badge, given to anyone donating a pint of blood, was worth 100 points. The *Red Cross Volunteer* series of badges were worth 50 points per hour, and the *Red Cross Donor* badges came in a set of colors that represented increasing amounts of money, with one point per dollar donated.

The Red Cross also awarded various *Supporter* badges based on the number of points people had earned. The basic *Red Cross Supporter* badge required 200 points; *Bronze Supporter* required 1,000; *Silver Supporter* required 5,000, and so on. Although these badges were based on lifetime totals, people had to keep earning at least a small number of points each year to maintain them.

Finally, the Red Cross formed partnerships with dozens of corporations to provide rewards to supporters while shopping online. By logging into their Facebook accounts

during a checkout process, those with *Supporter* badges gained access to exclusive benefits. A few companies provided flat discounts, but most offered perks in the form of free upgrades or reduced fees.

For example, anyone with a *Red Cross Supporter* badge got a dollar off convenience fees from Ticketmaster, and better badges offered even better rewards. Enterprise Rent-a-Car gave a free vehicle upgrade to those with a *Silver Supporter* badge, and United Airlines waived the first checked bag fee for domestic economy class tickets for holders of the *Gold Supporter* badge. Those who gave to the Red Cross effectively joined a worldwide discount club founded on the concept of giving special treatment to people who helped others, a fundamental practice reminiscent of the military discounts that were common in the 1900s, but later disappeared.

The basic achievement system the Red Cross designed was simple, but contained several important elements that explain why it was so widely emulated. Between the upgradable *Supporter* badges, their benefits, and the yearly minimum required to retain those benefits,<sup>93</sup> the system included many different incentives to keep giving. It also provided multiple ways to earn the same badges. The entry-level *Supporter* badge could be earned by donating blood twice, volunteering for four hours, donating \$200, or any mixture thereof. The Red Cross made this point by asking first-time blood donors if they wanted to donate \$100 to get their *Supporter* badge immediately. This flexibility not only neatly skirted privacy issues that some had regarding donating blood (or money, for that matter), but also appealed to a much broader

audience than narrower efforts that encouraged only one specific kind of giving.

Also, since the system awarded one point per dollar donated, badges had a clear cash value. This allowed savvy supporters to earn badges “worth” thousands of dollars purely through volunteering, which, in turn, increased the perceived value of those activities. The Red Cross enhanced this effect further with a bonus point system whereby successive donations of time or blood increased in value. For example, each pint of blood donated was worth 25 points more than the last. Similarly, while the first hour volunteered was worth 50 points, the second was worth 51, and so on. Continually increasing rewards created yet another incentive to keep giving and reflected the higher value of experienced volunteers and donors.

Bonus point systems like this gave loyal supporters with limited incomes access to the same honors as the wealthy. A person who volunteered eight hours a month for a year or gave blood every two months for four years earned 10,000 points and received the *Gold Supporter* badge – the very same award given to people who donated \$10,000. This leveled the playing field between socioeconomic groups, ensuring that their achievement system truly offered something for everyone.

Many volunteer organizations today still use achievement systems that are strikingly similar to this model. Several well-known non-profits have built systems that equate one point to a dollar, reward entry-level volunteer work with 50 points per hour, and provide tiered badges with rewards from retail partners, just like the Red Cross. Giving benefits to customers who have earned badges from charitable organizations encourages people to be generous

and reinforces a brand's connection to a good cause in the process. Achievement marketers call this "supporting the supporters," and today it is rare to shop anywhere without seeing perks that can only be gained through charity or public service.

Most retailers form partnerships with non-profit groups that complement their business. Petco, for instance, gives discounts to people with the *Animal Rescuer* badge from the American Society for the Prevention of Cruelty to Animals. Amazon similarly gives free shipping upgrades to school teachers and those with the *Reading Tutor* badge from the National Institute for Literacy. Before *Badges*, coordinated efforts between corporations and non-profits like these used to fall somewhere between expensive and impossible, since implementation costs outweighed the potential gains of either party. The Red Cross pioneered a dirt cheap, yet highly effective method of using Facebook to form mutually beneficial partnerships, which ultimately helped create the modern expectation that corporations should give special treatment to altruistic people.

### **THE INDONESIA RELIEF PROVIDER BADGES**

When natural disasters occur, the world relies on the Red Cross to provide food, shelter, medical care, and other humanitarian services. To accomplish this, they must quickly raise massive sums of money, with a large amount coming from people who do not regularly donate.

One tactic the Red Cross used to encourage casual contribution was collecting donations via mobile phones. In 2010, they set a record for the most successful mobile fundraising campaign, collecting over \$32 million within a month after a devastating earthquake struck Haiti.<sup>94</sup>

Encouraged by their success with this method of fundraising, the Red Cross aimed to top that record. Not knowing what the next disaster would be or when it would occur, they created a series of placeholder donation achievements. The Red Cross then formed partnerships with all major mobile service providers to allow them to award these badges immediately to customers who donated via text message.

Their preparation paid off. When a series of tsunamis struck Indonesia in 2014, the Red Cross was ready to spring into action. They quickly released bronze, silver, and gold *Indonesia Relief Provider* badges for donating \$5, \$10, and \$25. Within half an hour of the first giant waves hitting the Indonesian shores, the badges were available to the public. News organizations covering the disaster promoted the badges around the clock, urging anyone donating \$25 or less to do so via text message to help keep phone lines open.

Public response was overwhelming. The Red Cross shattered their previous record in just six days. The media, eager for a positive angle after reporting on the disaster for a week, began covering the mobile fundraising campaign itself. Many news outlets focused on how a trend of charity swept college campuses. Students, they said, represented the perfect blend of caring deeply about badges, being comfortable with donating via text message, and being motivated by peer pressure. Indeed, students raced to appear informed and socially conscious by being among the first in their social networks to display the *Indonesia Relief Provider* badges. An estimated 4 million college students donated in the United States via text messaging alone. However, as the movement spread virally, it became

obvious that not only college students were prone to being influenced by their peers, as similar effects were seen in nearly all social groups, particularly religious and service organizations.

With constant media attention fueling the fire, the Red Cross raised more than \$100 million via mobile donation in the first month – over triple their previous record. By offering a desirable reward, they turned impulse donating into impulse buying, providing a mechanism for spreading awareness along with a healthy dose of instant gratification. At the time, sending a text message and then receiving a badge on Facebook within seconds was a novel experience, even to social networking veterans.

The Red Cross clearly demonstrated the effectiveness of offering badges for small, one-time donations, and countless other organizations followed their example. Notably, the March of Dimes Foundation formed partnerships with large grocery store chains to offer instant badges through their point-of-sale payment systems, and the Muscular Dystrophy Association made similar partnerships with several banks to make their badges available through ATMs.

This trend led to some unexpected consequences. A group of sociology students in New York created an achievement system for a local homeless man and then gave him a smartphone and a Square mobile credit card reader, enabling him to sell the *I Gave a Dollar to Harry* badge to passersby while panhandling. Harry became a minor celebrity and could soon afford an apartment, thanks to the tourists who lined up at his corner near the Empire State Building to get their badges. Although the intent of the project was to deliver social commentary, it showed that

offering badges could increase any kind of generosity, but also suggested that people would soon expect rewards for even the smallest good deeds. The trends started by the Red Cross continued to the point where all requests for casual donations came with offers of instantly delivered badges, whether they were given via text messages, interactive television commercials, or tablet computers held by door-to-door solicitors.

### THE CPR CERTIFIED BADGE

In 2004, Blizzard Entertainment released *World of Warcraft*, an online computer game in which people assumed the roles of heroes traveling through a fantasy environment, battling monsters, completing quests, and interacting with other players. In 2010, over 12 million people paid monthly subscription fees to play *World of Warcraft*, making it the most popular game of its kind.<sup>95</sup>

To the Red Cross, these players were ideal candidates for CPR training. In general, gamers were not only young and had good hand-eye coordination, but they also valued virtual achievements. Furthermore, it would have been difficult to find an audience more motivated by such achievements than the *World of Warcraft* universe. Whereas most video games at the time had an average of about 40 achievements each, *World of Warcraft* had thousands,<sup>96</sup> many of which were obtainable only by large groups of skilled players working together for weeks or longer, and still many players strove to complete them all.

In 2014, the Red Cross worked with Blizzard to promote CPR within the *World of Warcraft* universe. To that end, Blizzard created the *Stayin' Alive* achievement, which they awarded to players who earned the Red Cross CPR

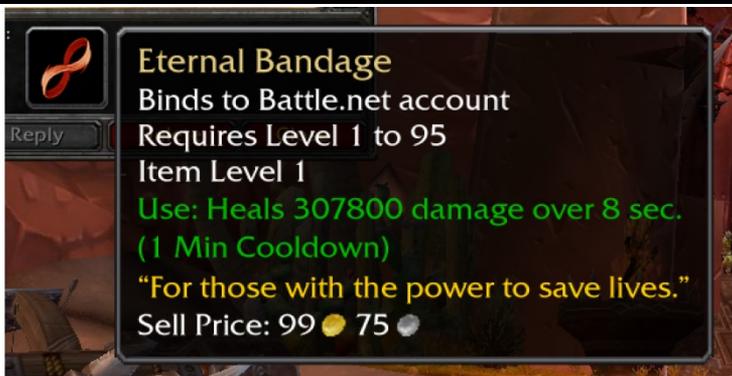
*Certified* badge. (The title was a reference to the Bee Gees’ 1977 disco hit, which is often used as a teaching aid since its catchy beat matches the ideal rhythm for CPR chest compressions.)<sup>97</sup>

Illustration: Stayin’ Alive achievement



In addition to the achievement, players also received three in-game rewards. The first was the “Rescued Dragonhawk” mount, a creature they could ride to fly around the world. The second was the “Tabard of the Savior,” a piece of virtual clothing emblazoned with a red cross that players could put on their avatars to alter their appearance. The final reward was the “Eternal Bandage,” which healed damage sustained in combat. Unlike regular bandages, it was reusable, saving players the hassle and expense of making single-use bandages out of valuable virtual cloth.

Illustration: In-game reward item



These rewards were highly desirable to *World of Warcraft* players, and within a year, nearly a million of them had

earned the *Stayin' Alive* achievement. This dwarfed the response to a previous charitable in-game promotion through which Blizzard sold about 220,000 virtual pets and split the proceeds with the Make-a-Wish Foundation.<sup>98</sup> Based on a study, the Red Cross estimated that at least 80 percent of players with the *Stayin' Alive* achievement learned CPR specifically to obtain the in-game rewards. One player they interviewed said, “Most of us who play *WoW* do a lot more for a lot less every day.” Said a Blizzard representative:

*We are very pleased with the result, especially considering how inexpensive this was. Any change we make to the game requires development and testing, of course, but the work involved was about one percent of one of our regular updates. The cost-to-benefit ratio was extremely favorable.*

As if that were not enough, later the *CPR Certified* badge played a starring role in another major video game. Since 1997, Rockstar Games had regularly published installments of *Grand Theft Auto*, a series of games in which players assumed the role of a violent criminal. Over time these games became increasingly realistic, and while they had a central storyline, players were free to explore and interact with incredibly detailed city environments. For example, a player could choose to ignore the crime-based plot and work as a taxi driver, carting people around the city for pay before unwinding with a friendly game of pool at a bar. However, more popular activities include mugging people on the street, stealing cars (as the title suggests), and getting in gunfights with the police. As a result, not only was the *Grand Theft Auto* franchise highly successful, selling well over 100 million copies by 2011,<sup>99</sup> but it was

also named the most controversial video game in history for its glorification of crime and violence.<sup>100</sup>

In 2015, Rockstar released *Grand Theft Auto VI*, which took place in Motor City, an urban setting based on Detroit. (Previous fictional locations in the series included Vice City, based on Miami, and Liberty City, based on New York.) Before its release, Rockstar developers coined the term “Reality-Augmented Virtual Environment” (RAVE) to describe Motor City. They touted RAVEs as the future of game design, saying that the environment would reflect reality and would be different for each player. Other than that, they were deliberately secretive and gave no other details, insisting that gamers would have a more satisfying experience discovering what that meant on their own.

Most critics dismissed this as hot air. One said:

*We’ve heard this before. Every new game claims some mind-blowing feature that will revolutionize gaming forever, and every time our minds remain unblown. It’s hard to see how a sequel in an aging franchise is going to be any different.*

If anything, though, Rockstar had been downplaying how advanced the game was, because the virtual world of *Grand Theft Auto VI* changed radically according to what players did in their actual lives. To begin, earning the *CPR Certified* badge unlocked a mini-game in which players could steal an ambulance and drive around town working as a paramedic, earning money by saving lives. (As a salute to Blizzard’s effort to support the same badge, all ambulance radios were set to the “Sounds of the ‘70s” radio station, on which “Stayin’ Alive” frequently played.) But that was just the tip of the iceberg. *Grand Theft Auto VI*

included hundreds of hidden elements that mirrored the player's accomplishments outside the video game world.

Some features could be unlocked in a variety of different ways. For example, players with one of eight different badges related to animal welfare got a pet German shepherd who helped during certain missions. Other content was unlocked by very specific actions. If a player donated five dollars to KaBOOM! – a charity famous for building playgrounds in a day – then within moments, a 20-minute interactive sequence would begin. Work crews would arrive at several vacant lots throughout Motor City, clean up debris, then build parks and playgrounds, permanently altering the city and opening up a series of optional side missions. Sending a text message and then seeing new characters show up in a game a few seconds later seemed a little like magic, even to young people who grew up with the internet and smartphones.

Not all reality-augmented features were related to charity, but most aimed to promote personal responsibility, positive behavior, and a healthy lifestyle. For example, players who earned any of about 50 popular physical fitness achievements were able to run faster and hold their breath longer underwater, both of which came in handy regularly throughout the game.

Each person who played the game had a unique experience that was personalized to his or her life story. The main plot alone contained 40 major events that occurred differently based on badges, which meant there were over a trillion possible storylines. Some differences were small, but others were profound. For those who earned the *Big Brother* or *Big Sister* badge from Big Brothers Big Sisters of America, rather than being an only child, the main

character instead had a younger sibling, who showed up in the final act of the game to offer much needed help.

Since the game was intended for adults only, Rockstar designed it under the assumption that most players would have at least a few badges that unlocked hidden features that made it easier. One reviewer called *Grand Theft Auto VI*:

*...a nearly perfect game, but frustratingly difficult ... next to impossible to complete without turning the game off, exiting your house and becoming a better person.*

Dan Houser, the game's writer,<sup>101</sup> addressed this comment in an interview, saying:

*Yes, the game is pretty brutal if you're a selfish person. But if you just go out and do some nice things, life gets a lot easier and more enjoyable. We feel this reflects reality.*

In the same interview, Houser attributed much of the credit for the game's new structure to the Red Cross:

*We looked at what they did with Indonesia and then what they did with Blizzard, and we asked, 'What can we do with this?'*

They soon learned the answer: Quite a lot. In the first two years, *Grand Theft Auto VI* sold over 25 million copies. According to Rockstar's estimates, which combined cash donations with volunteer hours, the average player unlocked about \$68 worth of charitable content. This meant that, as a whole, players of *Grand Theft Auto VI* gave about \$1.7 billion worth of time and money to charitable causes.

According to Houser:

*It's impossible to know how much people did just to unlock additional content and how much they would have done anyway, but what we do know is that every single charity we promoted got a bump after we released the game. We know we made a big difference – 400,000 players in three months didn't just happen to give five bucks each to build new playgrounds by pure coincidence.*

...

*We admire all the charities we promoted, but we knew from the start that none of them could be formally associated with the game because it's too controversial. We didn't even bother asking because we knew they'd have to decline.*

*That's the beauty of the Facebook model. We wanted to do something good, and we didn't have mountains of red tape stopping us. We didn't have to ask anyone for anything. We just did it on our own.*

*Nobody would have wanted to be our official partner, but nobody complained about all the money suddenly pouring in to their charities, either.*

...

*Actually, I think we set the bar pretty high. I mean, if a game about stealing cars and organized crime can have a positive impact on society, there's no reason every other game out there can't do the same.*

Designing games with optional downloadable content (DLC) was already one of the biggest trends in gaming, except previously the only way to unlock it was to pay extra money. This new model of awarding virtual goods based on real-life criteria became known as action-based content (ABC), and it added an exciting new dimension to gaming experiences by connecting the real and digital worlds.

Between *Badges* and advances in payment technology, developers began adding more optional content to their games than ever before. Much of it was still offered as paid DLC, as this was highly lucrative for game companies. However, the ABC model pioneered by Blizzard and Rockstar added a positive twist, a way to trade special features for good deeds, which had a pronounced effect on young people.

Back in the early 2000s, 97 percent of American teens played video games regularly<sup>102</sup> and many cared a great deal about what happened in them.<sup>103</sup> In fact, they already saw life as one big video game;<sup>104</sup> *Badges* merely formalized their worldview. To them, performing actions in real life to earn rewards in a video game made perfect sense.

In the coming years, the industry changed to follow the examples set by *World of Warcraft* and *Grand Theft Auto VI*. By the late 2010s, almost every major video game included features that were unlocked through Facebook badges earned for supporting non-profits, which meant that young people were bombarded daily with strong incentives to act charitably. As this population aged, they never stopped playing, which meant they also never stopped giving. With a single game able to make over a billion dollars' worth of impact, analysts estimate the value of time and money donated because of video games reaches well into the trillions annually.

## OUR LIVES IN OUR POCKETS

As with every advance in technology, badges became less and less novel over time, and eventually just another part of everyday life. While once a new concept, *Badges* turned into something far more mundane, but useful: a convenient way to share verified information. One journalist wrote:

*Whether you are checking out a new hire, an old flame, a political endorsement or a company's environmental record, badges are about the only things on the internet that you can know are true.*

Facebook wanted to capitalize on its new position as a source of trusted information. In 2014, it introduced another new application, Facebook *Identity*, which allowed users to store sensitive data with their online profiles, such as credit account numbers and contact information, as well as electronic versions of important documents like driver's licenses and passports.

At the same time, Facebook also began selling *Identity* keys. These were small, inexpensive keychain attachments that enabled people to connect to their Facebook accounts by waving the device near a sensor. With such high demand for badges, this would let people check in even faster and easier with companies who provided these sensors, and it would also enable more complicated transactions for users who shared more data. Biometric methods such as thumbprint or iris scans provided additional security, and when confirming someone's identity personally, instead of just a tiny a driver's license photo, the app also showed larger images or even video from Facebook.

Illustration: The original Facebook Identity key<sup>105</sup>

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The keys were cheap, easy-to-use, and more secure than any other method of identification. The tiny amount of power they required came from a battery that recharged with the kinetic energy generated by moving around. This meant that they would theoretically last a lifetime – certainly until advances in cryptography required them to be replaced with newer versions. As such, they were encased in tamper-proof blocks of solid acrylic which, when cut, broke an internal membrane that destroyed the chip inside. Plus, this chip did not store any personal information – just an encrypted ID number – all the sensitive data was locked away on Facebook’s secure servers. (Even that ID number was never shared. Instead, the chip used it to generate single-use security tokens.)

If an *Identity* key were lost or stolen, a host of safeguards made it practically useless to anyone but its rightful owner. It could not be surreptitiously scanned since it needed to be very close to a sensor to operate. If any misuse somehow occurred, fraud detection algorithms and crowdsourced monitoring would catch it almost immediately.

With *Identity*, Facebook had created the most advanced personal identification system in history. The only major downside was that it required sensors; however, the system was based on open standards that had been around for years, so a wide variety of inexpensive sensors were already available. Also, Facebook provided free software that could turn any modern smartphone or tablet into an *Identity* sensor.<sup>106</sup> Building on proven technology not only increased interoperability, but also saved Facebook the expense of inventing a proprietary system. In all, Facebook spent less than \$100 million on research and development for *Identity*.

Although they created an impressive product, it took time to catch on. The keys were an instant hit in some parts of the world, but the initial response in the United States was lukewarm. The American market was stuck in the frustrating situation all too familiar to emerging technologies: Companies did not want to invest in identification sensors without consumer demand, but consumers did not want to waste money on a keychain decoration that had no utility yet. Furthermore, many consumers were mistrustful or even fearful of *Identity*, even though it just stored information people already carried around in their wallets and purses, plus it kept it in a far more secure format.

This continued until 2015, when the Transportation Security Administration issued the results of a yearlong study exploring new methods of identification at airports. Their research showed that travelers could be processed faster and more accurately with *Identity* than with traditional methods. The report concluded that the keys

should not only be accepted at airports, but encouraged. At a press conference, a TSA spokesperson said:

*...[Facebook Identity] is the most secure method of identification available. Just because it was developed in the private sector doesn't mean we shouldn't adopt it. It's already out there, it's cheap, and it works. It's not perfect, but it is much harder to forge than a driver's license.*

Airports began installing *Identity* sensors, and just as the report predicted, the lines for travelers with keys moved much faster. What's more, the people waiting in the slower lanes took notice. As soon as word got around that *Identity* was a ticket to the fast lane through airports, the floodgates finally opened and key sales skyrocketed. This spike in distribution was the catalyst needed to get other industries to start adopting them as well.

Bay Area Rapid Transit, the San Francisco area subway system, was one of the first to integrate *Identity* by allowing riders to add travel funds to their Facebook accounts rather than to paper cards. The material cost and ecological savings BART reported from the first three months alone was enough to convince virtually every industry that used disposable tickets or magnetic swipe cards to start using *Identity*.

Over the next few years, digital versions of parking passes, hotel room key cards, and concert tickets started popping up everywhere. Companies started charging fees for their old-fashioned paper and plastic counterparts to offset the costs of buying sensors, which added yet another incentive for people to use *Identity*. Membership information for everything from gyms and libraries to insurance providers and grocery store discount clubs started being stored in

*Identity* rather than on cards. And after hotel rooms, *Identity* started replacing the keys to office buildings, gated communities, bike padlocks, and rental cars.

After Facebook licensed its technology, a bumper crop of *Identity*-enabled accessories sprang up, and soon we could use anything from a watch to a flashlight or even a wedding ring as a key. Eventually, mobile device makers started letting users unlock their phones and tablets via *Identity*, where they had already started keeping other useful information. This last group was slow to win over, because Facebook wasn't the only company trying to make wallets obsolete. In fact, legions of companies were working to digitize everything we used to carry around and store it as data in our phones instead.

Coupons and gift certificates were some of the first to go. Groupon was the largest in this category, but its business model was so simple that copycats sprang up like weeds, each with its own angle. For pet lovers, there was Coupawz. For the Kosher crowd, Jewpon. For brides about to be married in Austin, Texas, there was a site just for them, too.<sup>107</sup> Within a couple of years there were so many that aggregators ended up combining deals from 500 or more Groupon clones at a time.<sup>108</sup> After dipping its toe in the water with a brief pilot program in 2011,<sup>109</sup> Facebook didn't re-enter the daily deal arena until it had something new to offer, which came in the form of promotions custom-tailored using data from *Badges*.

But coupons were just a drop in the bucket. The real prize in the wallet was the credit card.

## THE BATTLE FOR OUR WALLETS

At one point it seemed inevitable that we would all soon be paying for everything with our phones instead of cash or swipe cards,<sup>110</sup> and whoever enabled this commerce would stand to make a fortune.<sup>111</sup> Banks and credit card companies had made billions annually with a near monopoly on transaction processing fees, but these new mobile payments were up for grabs.<sup>112</sup>

From a Nokia mobile phone running Microsoft software on AT&T's network, a customer could buy an LG refrigerator at Home Depot using PayPal, which in turn charged a Visa credit card issued by Wells Fargo. For a transaction like this there were eight different companies who each wanted to claim the customer as its own. When social networks, referral programs, and marketing affiliates were involved, that number could grow to over a dozen.

Trillions of dollars were on the table and everyone wanted a cut. In the early 2010s, along with some promising startups, almost every major credit card issuer, e-commerce company, wireless carrier, device manufacturer, retailer, and mobile software maker was working to develop its own payment system.

Most were based on near-field communication (NFC), a form of short-range wireless communication. Apple, Google, and Microsoft were each building virtual wallets that supported NFC directly into their mobile operating systems. Verizon, AT&T, and T-Mobile had teamed up to make a similar system called Isis. Unhappy with any of the options available, a group of retailers led by Wal-Mart and Target was building yet another one.<sup>113</sup> Although not NFC-

based, even Starbucks had its own mobile payment system.<sup>114</sup>

As opposed to many of the other companies Facebook had competed with in the past, these weren't young social media dotcoms with vague business plans and questionable revenue.<sup>115</sup> These were experienced heavyweights like Apple, Amazon, and American Express, multinational corporations with billions to lose. By the time Facebook showed up, these giants were already embroiled in an all-out war for our wallets.<sup>116</sup> Their fight for control got ugly, and we, the consumers, often ended up paying the price.<sup>117</sup>

For example, shortly after Google *Wallet* was released, the largest US wireless carrier, Verizon, blocked the app from being used on the only phone that could run it. Preventing customers from accessing their own bank accounts with the software of their choice raised a host of legal and ethical questions, especially since Verizon was developing two competing payment systems of its own.<sup>118</sup>

Roadblocks like this made it difficult for any one of the dozens of new payment systems to gain traction. A few types of mobile payment started showing up in national chains, but some of the corporate partnership agreements that got them there also precluded their competitors. For conglomerates who already spent hundreds of thousands of dollars per store to replace employees with sophisticated self-checkout machines, adding another payment option was business as usual. However, 99 percent of companies in America were small businesses,<sup>119</sup> and even after a few years, most were not jumping on board with mobile payments.

The new crop of phones and tablets were amazing, powerful devices, no doubt, but with their power and versatility came the potential for complications that didn't exist with simpler solutions. In a 2014 interview with *Fortune*, Jim Rockelson, the owner of a small chain of sandwich shops in Florida, explained why businesses like his were reluctant to adopt any of the new systems:

*My dad ran this shop for over 20 years before he even took credit cards. Whenever I asked him why not, he always said, "That's not the right question. You tell me why I should."*

*Most of the other guys around here are like my dad. What they have works fine and they see no reason to switch. Me, I thought I knew better. So I tried them all. At one point my counter had maybe nine different little payment gadgets that we almost never used.*

*Even when we did, it was a headache. They say they make everything faster and easier, but that's only when things go perfectly. I'll tell you why I went back to credit cards...*

*Customers don't hold up the line because they get a "really important" call on their credit card in the middle of a sale.*

*They also don't tell me to hang on while the software on their credit card updates itself.*

*I don't get customers who fiddle with their credit card for five minutes, trying to figure out why it isn't doing what they want, then blame me when it doesn't work right.*

*I don't get customers complaining that their credit cards don't get reception in my shop. Credit cards don't get viruses, and they don't run out of batteries because someone was watching TV on them.*

*Oh, and my favorite: I never have to wait while some guy reboots his credit card because it froze for whatever reason.*

*These problems happened all the time. People come to this complex for lunch because there are six restaurants right here. If my line gets too long, they just leave and go next door.*

*If I am going to risk my business on something, it can't cause delays like that. Any system that makes people pay with their own phones is going to run into these same problems.*

Jim brought up a great point: Every new payment system required people to use their own phones and tablets. But was this really necessary? If only one smart device was required to complete a smart transaction, couldn't a smart merchant provide it?

Put another way, which made more sense: Having a million customers bring a million different payment devices to a merchant? Or having that same merchant provide one reliable payment device for a million customers to use?

It was not surprising that the companies who made money from phones and tablets were pushing the option that required millions of devices. Facebook had been working on making its own phone, but pursuing this strategy could have been a costly mistake.<sup>120</sup> Rather than stepping into the middle of a war he couldn't win, Zuckerberg took a different route that circumvented the fight altogether. While the competition was busy designing a dozen different wallets, he built a giant locker in the cloud.

For all their bells and whistles, most phone-based digital wallets were still built on the very old concept of carrying our personal information around with us.<sup>121</sup> But as these

devices got more complex, they fell victim to the same flaws as personal computers. New vulnerabilities were discovered every day. Apple's best efforts at securing its *iPhones* were repeatedly foiled by a teenager.<sup>122</sup> They were powerful, but that didn't mean they were the right tools for the job.

Zuckerberg recognized that the best place to store sensitive information was on secure servers in the cloud. The only missing piece was a bulletproof way for customers to identify themselves, a problem he had solved with *Identity*. He also recognized that as other companies came to this same realization, which technology we chose to access our data would become irrelevant compared to which company we chose to store it. Accordingly, Zuckerberg worked to give us every reason to choose his company as it developed its own mobile payment system, Facebook *Commerce*.

## FACEBOOK COMMERCE

Facebook had the luxury of time to perfect *Commerce* because in the battle to replace credit cards, no one was winning.<sup>123</sup> In 2012, NFC had actually been around for almost a decade,<sup>124</sup> but lack of cooperation between the stakeholders kept it from taking off.<sup>125</sup>

There were already more active mobile phones in America than there were people.<sup>126</sup> Most mobile customers had smartphones, and most of those ran on the *Android* operating system.<sup>127</sup> Yet even a full year after Google introduced *Wallet*, it only worked for people with a MasterCard from Citibank, mobile service through Sprint or Virgin Mobile, and one of six specific phones with an NFC chip, which over 99 percent of phones lacked.<sup>128</sup> Those with any other credit card, bank, wireless carrier, or

mobile device were out of luck. For the few who met all the requirements, *Wallet* was still accepted only by select merchants who had NFC sensors connected to their point-of-sale systems. Even by the time Google added support for other credit cards,<sup>129</sup> it still meant that the payment method built in to the most popular mobile operating system only worked for a tiny fraction of a percent of its users.

Over the next few years, more customers became able to pay with their phones at select supermarkets and big-box retailers, but chances were that the local auto garages, veterinary clinics, and dry cleaners still only took cash and credit cards. Plus, as devices kept getting more powerful, they drained battery power even faster. People still needed to carry credit cards in case their phones ran out of juice or could not connect to a mobile or Wi-Fi network.

Also, people were wary of technology. Americans were more concerned about hackers and identity theft than they were about terrorists.<sup>130</sup> We were overly scared of mobile payments, while we never gave a second thought to using credit cards from companies who had been tracking our purchases and selling our consumer profiles for decades. Practically no one wanted their phones sharing information with retailers they visited, especially older people<sup>131</sup> – who also happened to be the ones with most of the money.<sup>132</sup> Indeed, by the time Facebook introduced *Commerce* in 2016, about three-quarters of Americans still were not using NFC-enabled devices to buy goods in stores.<sup>133</sup>

Despite billions spent trying to replace credit cards, people were not ditching their plastic anytime soon. The old model was proving difficult to replace, largely because it

still worked well despite its age. History has shown that convenience is king, and credit cards were very, very convenient. By comparison, paying with a mobile phone took a little more effort and did not offer many unique benefits. One detractor called NFC “a solution in search of a problem,” saying:<sup>134</sup>

*With NFC, you have to take your phone out of your pocket, unlock your phone, possibly enter another PIN, and then wait for it to beep. What’s the value proposition there?*

Credit cards, on the other hand, worked almost everywhere with one quick swipe. Anything that replaced them would have to be just as quick and easy for consumers, of course, but especially for merchants – the ones who would ultimately decide which payment methods would be accepted.

Part of the reason Facebook *Commerce* was so successful was that it didn’t try to fix anything that wasn’t broken. In fact, this revolutionary “new” system was actually just a slight update of the old credit card model, the tried and true method that had enabled smooth transactions with point-of-sale machines since the 1970s.

*Commerce* extended Facebook’s *Payments* system to allow customers to link almost any method of payment to their profiles, from traditional checking, credit, or debit card accounts to newer methods like PayPal and Amazon as well as gift cards, digital coupons, and vouchers.

After customers logged in with *Identity* at checkout, with one tap they could pay using the default rules they had defined (e.g., automatically apply coupons, use Visa for transactions under \$30). Alternatively, all their other

payment options were just a few taps away. No personal information was given to the merchant unless specifically requested by the customer.

Consumers liked *Commerce* because it was just as familiar as using a credit card, only easier, and it helped them save money. To customers, it shared many features with other virtual wallet apps, but for merchants, Facebook's system had many distinct advantages. Merchants liked how reliably *Commerce* worked because it did not rely on customer hardware and software to process transactions – instead, the whole system ran on tablets they controlled. Customers were already signing in with *Identity* to take advantage of deals at any merchant that promoted itself through Facebook (which most did), so paying through Facebook as well saved the whole step of taking out another form of payment. Plus, both customers and merchants liked that special offers like coupons and loyalty programs were not tied to a specific payment method, unlike those found in other digital wallets.

There was a lot to like, but what merchants really loved about *Commerce* was that it was free.

## THE ELUSIVE FREE LUNCH

Payment companies traditionally kept a small portion of each credit card sale as a fee for processing the transaction. Two percent may not sound like much, but for a business that operated on a 10 percent margin, that was a fifth of its profit. And all those little fees added up – to the tune of about \$40 billion a year in 2012 for US banks alone.<sup>135</sup> How could Facebook afford to provide this service for free?

The truth was that banks and credit card companies had enjoyed decades of easy profits by monopolistically fixing

prices to prevent competition and keep their fees artificially high.<sup>136</sup> But thanks to advances in technology, processing credit card transactions had become quite inexpensive. Facebook knew the cost of giving this service away for free would pale in comparison to the value of the data it would receive in return, data it could use to offer unprecedentedly effective marketing opportunities to its advertisers.<sup>137</sup> Overall, it was a small price to pay to become the central hub of the new digital economy.

Merchants were already unhappy about the inflated credit card fees they had been forced to pay. In fact, in 2005, a group of merchants sued Visa, MasterCard, and several large banks for their anticompetitive practices. Seven years later they reached a settlement which, in addition to a \$7 billion payout, gave merchants the right to pass credit card fees on to customers in the form of surcharges.<sup>138</sup> However, this settlement didn't change much, largely because it allowed credit card companies to keep setting fees as usual.<sup>139</sup> As for the surcharges, about 40 percent of the population lived in states with laws that prevented them,<sup>140</sup> and most other businesses didn't charge them anyway since the amount wasn't worth the risk of angering customers.

When a viable option came along that did away with these fees, merchants jumped at the opportunity. All businesses had to do to participate was provide relatively cheap tablets to run *Commerce* at the point-of-sale, which, again, most of them already did for *Identity* check-ins. Furthermore, Facebook did not limit payment options to a short list of approved partners. It just identified people and let retailers interact with them using any method of payment they wished.

Facebook's free service and enormous user base made businesses confident that this small investment would not be wasted. This rapid adoption by merchants let *Commerce* breeze past the other systems, which were held back by a four-way standoff in which customers, merchants, banks, and tech companies were all waiting for the others to pick a clear winner before committing.

Hordes of companies started offering small discounts or gifts to customers who paid with Facebook. After all, with no transaction fees, merchants could give a little extra to these customers and still make more profit. If there is one absolute truth about American consumers, it's that we hate missing out on free stuff. These incentives were just what we needed to shake us out of our credit card habit and reach for our *Identity* key instead.

The banks were not thrilled about losing their processing fees, but due to Facebook's enormous user base, none of them dared to blockade *Commerce*. Most Americans had more than one credit card,<sup>141</sup> and if another one was easier to use and offered special benefits, the bank could kiss that customer goodbye. On the upside, Facebook was giving their customers easy access to their credit and debit accounts without taking a cut, plus the added level of security reduced fraud. It also let banks waste less money manufacturing cards and mailing them to customers. Plus, since *Commerce* was safer and more convenient than cash, it made customers more likely to use their credit accounts for casual spending transactions at locations like vending machines, tollbooths, and fast food restaurants.

Besides, the banks were still making plenty of money from servicing accounts and collecting interest on debt. At least until Facebook started moving in on that business, too.

## BEATING THE BANKS

When Facebook entered the banking industry, the economy was still recovering from the Great Recession, the worst financial crisis of the last century.<sup>142</sup> Previously, in the early 2000s, investment firms were buying mortgages from banks as fast as they could, the riskier the better since they paid higher returns.<sup>143</sup> To feed Wall Street's insatiable appetite for these dodgy loans, the banks stopped caring about credit scores and loan-to-value ratios and started lending huge amounts to anyone with a pulse, because as soon as the loans sold, they became somebody else's problem. The actual details of these loans were so unimportant to banks that they hired "robo-signers" to sign mortgage documents as fast as possible without even reading them.<sup>144</sup>

People who would have never qualified for a mortgage a few years earlier could suddenly buy their dream home. Millions did, and some bought four or five. It is not as if these homebuyers were innocent victims. They too were greedy and irresponsible. Ultimately they were the ones who borrowed enormous sums they could not afford to pay back, which brought the whole system crashing down.

However, the industry professionals had not been doing their jobs. Lenders, regulators, ratings agencies, mortgage insurance providers – they were all supposed to prevent bad debt, but instead they looked the other way and rubber-stamped loans they knew would end in default. Easy credit and low interest rates fueled widespread speculation and rampant price inflation, the classic ingredients of an economic bubble.<sup>145</sup>

The meltdown began in 2007, which prompted an unpopular bank bailout under Pres. George W. Bush<sup>146</sup> and an even less popular stimulus under Pres. Barack Obama<sup>147</sup> which totaled about \$1.5 trillion of taxpayer funds. Later we learned that without telling Congress, the Federal Reserve Bank gave \$16 trillion in loans to international banks at next to no interest, which those banks then exploited to pocket even more profit behind the scenes.<sup>148</sup>

Despite widespread corruption and fraud that cost the global economy trillions, there was little investigation and no one in power was punished.<sup>149</sup> For all the damage they caused, banks went right back to their old habits. In fact, even while the economy was still tanking and unemployment doubled,<sup>150</sup> the same banks that were taking taxpayer bailouts and secret loans from the Fed were also paying higher salaries and bonuses than ever before.<sup>151</sup> And even though banks had promised to stop paying people to forge signatures and sign documents without reading them (both federal crimes), they kept right on doing so and almost no one was arrested.<sup>152</sup>

People were disgusted with the financial industry that had fleeced them and gotten away with it, but they felt powerless to do anything. After the bailouts, the banks that had been “too big to fail” ended up bigger than ever.<sup>153</sup> This not only seemed to reward them for destabilizing the economy, but also left consumers with even fewer options. The public had never trusted banks less or hated them more,<sup>154</sup> which meant that Zuckerberg’s decision to offer a new alternative could not have come at a better time.

## THE COST OF CONVENIENCE

In previous years, many consumers were uninterested in the differences between banks and credit unions, but after the Great Recession, people started paying closer attention to whom they trusted with their money. Credit unions are not traditional corporations, but rather not-for-profit cooperatives where every customer is a part-owner. Since they are not publicly traded, there is no pressure from Wall Street to make risky investments. Credit unions also have lower overhead than banks do. They are tax-exempt and pay comparatively small salaries to their executives,<sup>155</sup> so they are able to offer lower fees and more favorable rates.<sup>156</sup> For example, credit cards from credit unions charge an average of two to three percentage points lower interest than those from other lenders, which not only benefits customers, but keeps bank fees in check due to competition.<sup>157</sup>

However, savings like this usually came at a price. Historically, credit unions had been less convenient than big banks. Regional unions had few branches compared to national banks, and their lower operating budgets also meant they were slow to adopt new technology. For example, in the early 2000s, most credit unions did not offer online bill payment, a service provided by virtually every major bank at the time.<sup>158</sup> Later, they fell even further behind. In 2012, major banks were winning awards for their mobile banking apps,<sup>159</sup> while hardly any credit unions had even released one yet.<sup>160</sup> Nevertheless, after the turbulence of the Great Recession, people had started warming to these safe, no-frills institutions.<sup>161</sup>

## THE ZUCKERBANK

Then, in 2018, Zuckerberg teamed up with a group of investors to establish Facebook International Credit Union (FICU). FICU shook up the financial industry by offering the best of both worlds: It combined the convenience of a big bank with all the advantages of a local credit union, and then some.

Right from the start, FICU offered the lowest fees and best interest rates in the business thanks to its extremely low operating costs. Most of the savings came from its biggest difference: FICU had no physical branches. This is where Zuckerberg was truly ahead of the curve, because by this time, most customers had little reason to visit a bank in person. And unlike smaller credit unions, Facebook had the software development chops to roll out the slickest banking apps users had ever seen.

Back when paper checks still existed, people could snap a photo of them with their smartphones to deposit them instantly. With advanced voice recognition technology, customers could answer most questions and conduct most transactions easily by themselves, including functions like complex searches and automatic payment triggers that no banks even offered yet. If people still wanted to speak to a banker, within seconds they could video chat with a live representative. Face-to-face service on-demand with no driving or waiting in line made for a better customer experience than even the best banks could provide.

Just as all credit unions exist to serve a specific community, FICU was built for the Facebook community. Operating as a non-profit leaves little for most credit unions to spend on marketing or customer service, but

FICU’s close relationship with Facebook lets it stretch its dollars further. Conducting business purely online not only saves on real estate, equipment, payroll, security, insurance, printing, postage, and telecom, but also lets FICU advertise to prospective members and communicate with current customers efficiently.

Like other credit unions, FICU is democratically controlled by its members. Unlike other credit unions, though, shareholder meetings are conducted via Facebook, so they are more transparent and accessible to customers. Zuckerberg invested most of his personal fortune in FICU (leading to it becoming affectionately known as “The Zuckerbank”) and he remains its largest customer today. However, he is the first to point out that every new member gets the same voting power that he has.

Illustration: Facebook ad for FICU

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		<p>AT&amp;T services for under \$80/mo. for 12 mos.</p>
	<p>Damon Chandler likes AT&amp;T.</p>	
<p><b>anniversary</b> stop by for a n to SD but I i town! ;)</p>	<p><b>Facebook International Credit Union</b></p>  <p>Who owns your bank? At FICU, you do. Lower fees and better interest rates than any bank. Start saving today.</p>	
	<p>531,973,112 people like FICU.</p>	
<p>played games.</p>	<p><b>Pre-Owned Nissans</b></p>  <p>Check out our used car inventory! Rock bottom price &amp; 100,000 mile</p>	

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FICU is not without its limitations. For example, since its members have consistently voted to maintain conservative lending guidelines, people with low credit scores or high loan-to-value ratios are unable to get financing from FICU. Also, while individuals can put cash into their accounts at any participating retailer through Facebook *Commerce*,<sup>162</sup> the few businesses that still take in large volumes of bills and coins need a physical bank branch to make their daily deposits. Finally, there are some who still prefer an old-fashioned bank they can visit with representatives they can talk to in person, although as more industries move completely online, these are getting harder to find.

*Badges* had already turned Facebook into a bank of sorts, one where we stored the evidence of our life experience, the sum total of which was harder to replace than the contents of our checking accounts. And we already trusted the Facebook brand in the financial realm, since it felt like we were paying with Facebook whenever we used *Identity* and *Commerce* to access money we kept elsewhere.

While FICU wasn't for everyone, it made sense for many consumers. Some came for the better interest rates, some came for the convenient software interface, but none of those perks are what won over their hearts. Nor are they what sent crowds of young hipsters and retirees alike down to their banks to defiantly withdraw their life savings and close their accounts. Economists called this mass migration a market correction, while political scientists said it was a citizens' revolt, an expression of public outrage over the banking industry's misdeeds that had gone unpunished. Either way, the collective decision of millions of people to switch to FICU limited the power of the banks that had been exploiting customers and taxpayers for years.

On the other hand, FICU's non-profit structure and notion of customer ownership revived the concept of a bank as an institution that existed to benefit a large community, not a tiny group of corporate fat cats. And FICU's poster boy, despite his riches, was no stereotypical fat cat. Zuckerberg, who at 34 still wore hoodies to press conferences and constantly promoted openness, sometimes to a fault, was one of the only billionaires people felt they could trust to look out for their best interests. His casual manner made him relatable, his track record made him respectable, and staking so much of his wealth in a non-profit convinced many others to do the same.

Indeed, over the last two decades, hundreds of millions of individuals and small businesses around the globe have joined, making FICU not just the world's largest virtual banking service provider, but the world's largest financial institution, period. And while FICU does not profit Facebook directly, it is a vital part of the Facebook ecosystem of services that have benefited the company and our entire society so much over the years.

## BETTER LIVING THROUGH BADGES

The success of FICU gave rise to other conservative credit unions, which have together helped to stabilize the global economy. Because of Facebook, banks have had to change their ways to survive. They now offer more to customers, pay smaller salaries, and take fewer irresponsible risks, since they are no longer considered “too big to fail” and they know the taxpayers will not bail them out again. However, this is just a fraction of the ways Facebook has improved the world in the last 36 years.

For instance, we now waste less money and natural resources on objects that have little utility other than to collect dust. *Commerce* did away with paper receipts, *Identity* replaced plastic swipe cards, and *Badges* has taken the place of truckloads of items like trophies, plaques, stickers, pins, patches, medals, ribbons, diplomas, certificates, letters of appreciation, gift cards, and thank-you cards, to name a few. Data has proven to be more useful, convenient, inexpensive, and durable, and eliminating wasteful objects has helped many companies to become greener and more profitable at the same time.

These efficiencies have saved us time and made our lives more enjoyable. As businesses and government offices started using tablet computers instead of paper forms to collect information, *Identity* was there to fill in most of the blanks automatically. Similarly, Brunswick Corporation let bowlers log in to its scoring computers with *Identity*, which not only entered players’ names and awarded badges instantly, but also stored their lifetime stats and even added their photos to animations that played after each frame. Instead of asking people to sign petitions or join mailing lists, activists at malls and grocery stores started

asking people to wave their *Identity* keys to “like” the causes they supported.

Facebook’s advances have helped in more serious ways, too. For example, *Identity* has given us an easy way to store copies of our medical records. In the past, we either relied on our own memories or else we crossed our fingers and hoped that every hospital, emergency room, and specialist we had seen in our lives would communicate with each other. Neither of these strategies worked very well. Today we can give doctors our complete medical histories, leading to fewer unnecessary tests and preventable mistakes, a change that has saved an estimated \$130 billion and nearly 200,000 lives in the United States alone.<sup>163</sup> We can also store details about allergies, medications, injuries, and other conditions in the “Medical Info” section of *Identity*, which doctors and paramedics can access in an emergency. This gives anyone an expanded version of a medical alert bracelet, and for over 20 years the American Medical Association has encouraged adults to do this for themselves, their children, and elderly parents.

In fact, most industrialized countries now use *Identity* for personal identification and recordkeeping. It is important to recognize that this system was not forced upon us by a draconian government to monitor and control our behavior. Sure, we huffed and puffed about privacy when nothing was on the line, but when it came down to it, we gave up our secrecy for coupons, and we were happy with the trade.<sup>164</sup> Despite the dystopian predictions of past doomsayers, widespread use of personalized microchips did not plunge the world into an Orwellian nightmare.

Rather, our lives simply became a little more convenient and our identities a little more secure.

Future generations will probably chuckle at the ways we used to do things before Facebook, but to be fair, most of these changes were inevitable. We were already on a trajectory to digitize everything we could. Countless others had already tried to tackle these problems in the past. Facebook happened to be in the right place at the right time in history to make its solutions work. But if these had not succeeded, another similar idea soon would have.

What is most profound is not the way that Facebook improved technology, but rather the way it improved us, changing our society permanently and for the better. Back in 2012, psychologists were worried that Facebook was harmful,<sup>165</sup> turning us into lonely narcissists who did not know how to function in the real world. However, through the addition of some simple features, Facebook advanced our society in ways that extended far beyond the scope of social networking.

## **FACEBOOK HELPED CHARITIES DO MORE GOOD**

First, Facebook revolutionized the way non-profits work.

Right from the start, *Badges* gave them a new way to show appreciation to their supporters. Badges were cheaper than a tchotchke and lasted longer than a “thank you,” and were perceived as more valuable than either. Plus, badges provided an easy way to identify and reward a group’s most dedicated members. Many non-profits even turned badges into products themselves. The Girl Scouts of the USA, for example, offers the *I Support the Girl Scouts* badge as an optional upsell while taking cookie orders. For the same cost as another box of Thin Mints, donors get a badge they

can display on their Facebook profiles for a year. This badge instantly became a significant source of funding, and today it brings in as much revenue as the fourth most popular cookie variety. Since it has no material cost, though, all of the money goes straight to the Girl Scouts.

More important, Facebook helped non-profits manage their operations more effectively. Even in the 2010s, charitable groups were still notorious for being disorganized. This would not have been as large of an issue if they collaborated on Facebook, but hardly anyone really participated in charitable activities through social networking. One of the many groups to try to change this was *Causes*, an online philanthropic network that was co-founded by Facebook's first president, Sean Parker, and was heavily integrated with Facebook.<sup>166</sup> *Causes* was impressive, yet in the five years before *Badges* was released, it had still only raised less than a nickel per Facebook user in donations.<sup>167</sup> Even though it was one of the best options available and was free to use, many charities still found *Causes* wasn't worth their time.<sup>168</sup> Despite their best efforts, most groups had a devil of a time just getting supporters to hit the "Like" button, let alone interact in a more meaningful way.

*Badges* helped fix the problem by finally providing an incentive that convinced people to connect with non-profits on Facebook. Just getting all their supporters in one place helped immensely. Not only did this encourage discussion, which strengthened the bonds between volunteers and made the entire experience more rewarding, it also let organizations put the power of Facebook to better use. The site already let them register members, coordinate events, conduct online discussions,

share photos and videos, and distribute news. After helping them bring their audience together, Facebook's basic features took care of most organizations' communication needs.

Even better, when Facebook released *Motivate*, they gave these groups a host of powerful tools designed to help them engage their supporters and get the most out of their time. Furthermore, the more they used Facebook, the more their causes were rewarded. When Facebook introduced its revenue-sharing program in 2014, it let companies take a small cut of the proceeds from advertising delivered on their Facebook pages, which gave them an incentive to direct their audiences to Facebook over other social media applications. In addition, they received a small bonus if they took their share in the form of credit toward placing their own Facebook ads. Verified non-profits that took this route, on the other hand, got an enormous bonus that effectively tripled the value of their traffic. Even though the net impact to Facebook was negligible,<sup>169</sup> this gave charitable causes much-needed promotion that they otherwise could not have afforded.

Free promotion and organizational tools were welcome blessings, since charities have always had to keep operating costs low. Small non-profits generally had small budgets, and larger ones had to maintain favorable fundraising efficiency and administrative expense ratios. (Although imperfect measures,<sup>170</sup> these were some of the most frequently examined statistics when evaluating charities.) This meant that many of the most effective business strategies were too expensive for non-profits to use. *Motivate*, though, made it easy for anyone to execute complex initiatives – such as crowdsourced projects,

distributed grassroots marketing campaigns, and multi-stage fundraising programs – all at no charge. By providing this technology, Facebook empowered even the smallest groups to use sophisticated tactics that previously only the most well-funded charities could afford.

## **LOYALTY PROGRAMS**

This included one of most effective forms of modern marketing: loyalty programs. In general, these are the ways companies systematically reward customers for repeat business. They started with trading stamps, Betty Crocker boxtops, and the humble barber shop punch card, and later evolved into frequent flyer miles, supermarket discount clubs, and complicated credit card reward point schemes.

Loyalty programs work so well because they tap into some of our brains' most powerful psychological triggers, like loss aversion.<sup>171</sup> Since the programs offer benefits and cost nothing, there is no apparent downside and we don't hesitate to join.<sup>172</sup> After we have earned a few points, though, we really, really don't want to give them up.<sup>173</sup>

As human beings, we hate losing anything. We will go out of our way to avoid the feeling of loss, and under many circumstances this leads us to make irrational decisions.<sup>174</sup> Individually, we think we are too smart to act this way, but we all do it.<sup>175</sup> And when we need just a few more points to get the next perk, we will go out of our way to make sure the points we already have earned don't go to waste.<sup>176</sup>

Loyalty programs kept us coming back again and again, even when we otherwise wouldn't, and we loved them for it. There was no rule saying they could only promote buying things, though. They could also be used to reward donations and volunteer work. However, designing and

managing loyalty programs was both difficult and expensive – so much so that even the world’s largest corporations had a hard time making them profitable.<sup>177</sup>

Enter Facebook *Motivate*: A one-stop shop that let anyone create desirable badges as well as state-of-the-art reward programs and achievement systems, all for free. This helped the business world too, but it was not as transformational as it was for non-profits. Retailers already had loyalty programs; *Motivate* just made them better and cheaper. For charitable organizations, though, Facebook changed the game entirely.

### **CHARITY-FLAVORED COFFEE**

Over the years, businesses have used a variety of marketing strategies to align themselves with charitable organizations. The most popular technique used to be “cause marketing,” by which companies typically donated a portion of profits. Starting in 2008, for example, when customers bought certain products during the holiday season at Starbucks, five cents went to The Global Fund.<sup>178</sup> All those nickels added up, and over the next three years, the company donated almost \$10 million in order to help save lives in Africa.<sup>179</sup> Cause marketing campaigns like this gained popularity in the 1980s, and by the 2010s, store shelves were filled with products that triggered a small donation when purchased.<sup>180</sup>

Some watchdog organizations cried foul, saying these programs exploited causes to boost profits or distract customers from a company’s less savory business practices.<sup>181</sup> While the actual motives behind them were not necessarily unethical, it was no secret that these

programs were more about good branding than good deeds.<sup>182</sup>

This was nothing new, though. Before cause marketing, sponsorships were all the rage. Companies that sponsored the Olympic Games routinely spent many times more money advertising that they were an official sponsor than they paid to become a sponsor in the first place.<sup>183</sup> Some suggested that if businesses actually cared, they would skip the promotion and just donate all that money directly, but this was naïve. After all, if a company gave its entire advertising budget to charity, it wouldn't be in business very long. Companies had to spend money to generate publicity, so if they did it in a way that gave some to charity, that could only be a good thing, right?

Actually, no. Evidence showed that cause marketing was bad for society and could actually hurt the causes they were supposed to help,<sup>184</sup> and the explanation revolved around our basic human needs and motivations.

On a neurological level, donating to charity gives us a pleasurable feeling.<sup>185</sup> However, since there is a cost attached, we don't give at every opportunity. In general, we give enough so that we feel like we are good people. While the exact ratio varies between individuals, a certain amount of altruistic behavior feels right to each of us, and when we feel we have given too much or too little, we seek to restore that balance. For example, sometimes we act generously to alleviate our guilt for being greedy in the past, but the reverse is true as well – when we do a good deed, we give ourselves permission to be selfish later.<sup>186</sup>

This is why cause marketing could actually do harm.<sup>187</sup> Buying cause-related products made us feel like we had

done a good deed, when in reality, all we had done was go shopping.<sup>188</sup> If buying our groceries satisfied our need to feel charitable, then when an opportunity to do some actual good arose later, we were more likely to turn it down because we thought we had already done enough.<sup>189</sup>

The long-term effects were even worse. By giving young people that good feeling for doing nothing, cause marketing cheapened charity, turning it into a product feature instead of something that people did for each other.<sup>190</sup> For the generation that grew up with this trend, cause marketing taught them that charity was something that cost nothing and required no effort. One study of teenage and young adult Millennials (born between 1980 and 2000) found that about nine out of ten were likely to switch to a brand because it supported a cause, but only if the product were essentially identical to what they would have gotten otherwise, that is, only if they did not have to sacrifice anything.<sup>191</sup> Millennials were already insufferably self-involved and entitled compared to older generations.<sup>192</sup> Then, when the time came to help out, they felt that they had already done their part because they had chosen the right brand of soda.

## **AFFINITY MARKETING 2.0**

Fortunately, cause marketing fell out of favor and is no longer nearly as popular as it used to be, and another, more effective type of marketing has taken its place. Affinity marketing is a technique whereby a company caters to customers who are affiliated with a certain group by giving them special treatment. Far from new, the concept is almost as old as commerce itself. Merchants in ancient Greece used to give discounts to retired soldiers, and thousands of years later, auto insurance providers offered

lower rates to members of certain trade unions. Long before *Badges* ever existed, some businesses had already used affinity marketing strategies to reward people for doing good deeds. For example, through the “Give a Pint, Get a Pound” program, Dunkin’ Donuts gave free coffee to volunteers who donated blood to the American Red Cross.<sup>193</sup>

Affinity programs like this are superior to cause marketing because they can actually change our behavior. After all, the idea of a few cents being donated to someone else is not very persuasive. It was enough to occasionally convince us to choose a different brand of product we already planned to buy, but comparing minor feature differences is just a normal part of shopping. Affinity marketing, on the other hand, gives us tangible rewards that we can enjoy ourselves, which is enough of an incentive to get us to try new things. This effect is twofold: These special offers can get us to sample products and services we might otherwise not have tried, but only in return for performing actions that we might otherwise not have done.

For instance, it is unlikely that even a single individual was convinced to try Starbucks coffee because a nickel would be sent to Africa. On the other hand, some people had never tasted Dunkin’ Donuts coffee, and others had never given blood. But because of the “Give a Pint, Get a Pound” program, many were convinced to try one, or both, for the first time.

Affinity marketing programs like this were mutually beneficial arrangements: Charities got additional donations and volunteers while businesses got new potential customers (as well as a public relations boost for helping a good cause). Even better, these leads were more

qualified than those generated through other methods. Businesses already gave away samples to find new customers, but lots of people took them only because they were free, not because they were actually interested. On the other hand, anyone convinced to give blood by the Dunkin' Donuts offer was likely a coffee drinker. (For that matter, they probably also intended to give blood at some point, but just needed a little incentive to push them to stop putting it off.) Plus, regardless of their motivations, these people ended up with a better impression of the coffee than if they had bought it or been given it for free, because as human beings, we value products that we have to work for far more than those that require no money or effort.<sup>194</sup> Finally, volunteers came away from these experiences with the positive feeling that comes from truly helping others, which was associated not just with the charities they helped, but also the corporations that rewarded them for doing so.

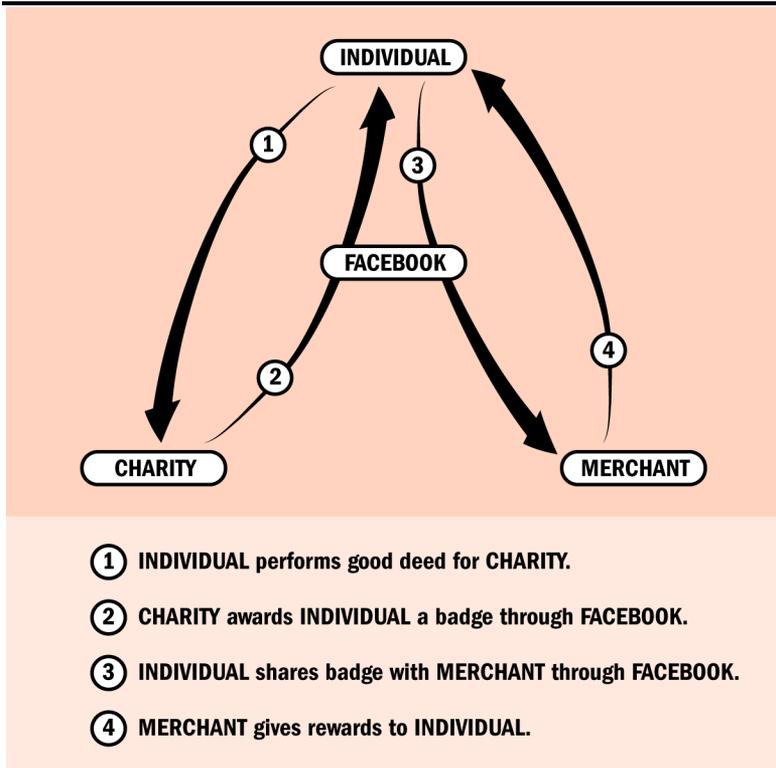
Affinity marketing provided far superior results, but before *Badges* and *Motivate*, overhead costs were so high that this didn't happen very often. It just wasn't feasible to work with a small non-profit or local business, so agreements typically existed only between the largest corporations and charities. Even then, partnerships were still rare, as administrative and legal expenses could easily outweigh any potential benefits.

Facebook eliminated this problem with their "frictionless affinity marketing" model. Once charities were able to systematically identify who had helped them, it became easy for businesses to reward these do-gooders. Using *Badges* as an intermediary makes these arrangements a snap, because no official partnerships are necessary. In

fact, charities and businesses don't even have to interact with each other at all.

For example, The Home Depot offers discounts to people who have helped build houses with Habitat for Humanity. This arrangement would have been prohibitively expensive years ago, but thanks to *Badges* it requires barely any effort. It takes Habitat for Humanity just a moment to award a badge, and the discounts at The Home Depot are given automatically when customers swipe their *Identity* keychains. As the following illustration shows, *Badges* makes everything work smoothly without any interaction between The Home Depot and Habitat for Humanity:

Illustration: Facebook's frictionless affinity marketing model



Enabling complex partnerships to be formed with no legal agreements and minimal management expenses caused a seismic shift. Today, instead of only huge corporations forming partnerships with the largest non-profits, companies of all sizes can easily align themselves with any charitable cause, local or international. Now even the tiniest businesses take advantage of affinity marketing strategies because Facebook lets them easily identify which customers should receive special treatment.

If you adopt a pet from your neighborhood shelter, for example, the badge that comes with it will get you a free checkup at thousands of independent veterinarians across the nation. Regional businesses can use similar strategies to show support for their communities. For instance, at any of their locations throughout Illinois, Indiana, and Wisconsin, the famous Chicago pizzeria Gino's East gives free delivery and breadsticks to customers who have earned the *Education Superstar* badge by volunteering at area schools.

Facebook also helps local businesses support national and international efforts. Many vendors at organic farmers' markets, for example, give discounts to people with the *Rainbow Warrior* badge from Greenpeace. Likewise, serving in the armed forces gets you the retail version of a hero's welcome, with benefits for life at small companies owned by fellow veterans around the world. And if you donate blood, now you get more than juice and cookies, or even coffee. You get a whole treasure trove of perks, like a free pass to a night club or a free bucket of balls at a driving range. In fact, it would take you a week to cash in on every benefit offered by all the local bakeries, hair salons, and

sushi restaurants that support the Red Cross in a typical American town.

Through Facebook, even a tiny business can create a promotion that helps people on the other side of the world. At her family's restaurant in Baltimore's busy financial district, Melat Habtamu serves cuisine from her parents' native country of Ethiopia. Here she tells how her family uses *Badges* to help the people there:

*My mom used to put out a collection box for a group called Ethiopia Reads, but everyone ignored it. I don't blame them. How did they know I wouldn't keep the money for myself? Besides, illiteracy just doesn't sound like a big problem. When people think of Ethiopia, they think of hungry children, but it's hard to fix that or anything else when most people there can't even read.<sup>195</sup> We gave what we could, but I felt helpless. I'm 7,000 miles away. What more can I do? Then my daughter took away the box and put up a sign that says, "Get free drinks for life when you donate \$20" and it has a symbol you can scan with your phone to bring you right to where you can donate.*

*Now, the people who come in here are mostly bankers. You can see the wheels turn in their heads as they amortize their "investment" over ten lunches. Lots of them go for it.*

*We had that collection box out for years and only got maybe 40 dollars, tops. I've lost count now, but hundreds of people have donated right from our restaurant. Do you know how much that helps over there? It changes lives! What does it cost me, some tea and lemonade?*

*Actually, and I swear my intentions were pure when I started this, but we even come out ahead, because after people get the badge, they come in a lot more often.*

It works the other way around, too. Huge, multinational corporations can use Facebook to help local non-profit organizations by rewarding the people who support them. Most affiliate themselves with causes that complement their core business. The Sports Authority, for example, gives a discount at any of its nationwide stores to people who have coached a youth sports team in the last two years. Amazon offers a similar deal to customers who have earned badges for reading to the blind. Along those lines, volunteers who deliver meals to seniors or drive them to medical appointments pay less for gasoline at 7-Eleven.

Other companies aim to help solve social problems related to their industries. For instance, McDonald's gives a free meal to those who earn badges from any of thousands of community litter cleanup groups. Several major banks waive fees for customers who volunteer at soup kitchens, food banks, and homeless shelters. And for members of local designated driver programs, drinks are on the house at their neighborhood Applebee's (non-alcoholic, of course).

## **REWARDS INTO PLOWSHARES**

*Badges* has the power to bond people together based on their common interests. Every badge essentially forms a worldwide club, complete with membership requirements (only those with the badge are admitted), seniority (based on when badges are earned), and ranks (higher for those with more advanced badges). Due to the versatility of *Motivate*, these groups can be directed toward charitable endeavors even when they were formed for completely non-charitable reasons. In fact, some of the largest volunteer efforts have evolved out of successful marketing campaigns.

By combining data about purchases, social interactions, and both online and offline activity, companies are able to create sophisticated promotions that foster mutually beneficial relationships with their most loyal customers. Some of these efforts are simple. For instance, many companies reward fans when their friends buy products they recommend on Facebook – programs like these essentially turn each of their customers into an affiliate marketing partner.<sup>196</sup> But others have created much deeper connections.

When Adam Silver became the commissioner of the NBA in 2017, one of his first initiatives was the “Prove It” campaign, which aimed to separate the fans from the superfans. Participants earned points through a wide variety of actions, including online behavior (like promoting games on Facebook, participating in sports discussion forums, or playing NBA video games), offline behavior (like attending games or playing basketball through a school or club), and purchase behavior (like buying NBA merchandise, subscribing to the *NBA League Pass* sports package, or even just patronizing restaurants that subscribed to it). While the various badges they earned were their own reward for many fans, the points could also be redeemed for perks. Before *Badges*, such a broad loyalty program would have been prohibitively expensive, if not impossible, but Facebook’s suite of applications made it simple and cost-effective.

Two years later, the campaign went further, asking fans to prove their love of the sport by helping with local after-school leagues or basketball camps. In addition to massive amounts of points, those who volunteered received special deals on game tickets and limited edition merchandise not

available elsewhere, as well as chances to win courtside seats, meet their favorite players, or even get a few seconds of fame on ESPN. At the end of the 2019-20 NBA season, Commissioner Silver shared why Facebook was his favorite marketing vehicle:<sup>197</sup>

*We had a very specific message, and because [Facebook] can target so well, we didn't have to waste money barking up the wrong trees. We got to talk right to our biggest fans.*

*We made our ad buy outlay several times over in marginal revenue, and that's just good business.*

*But we also got ten times what we spent in volunteer work. We got kids off the couch, off the streets, and onto the court. We got two generations more excited about basketball. This started out as just a promo, but we changed lives.*

*I love it. I can barely believe I made that happen. I mean, of course it was the fans and the players who did all the work, but I made the decision. I wrote the check. It's an almost addicting sense of power to be able to do that much good that easily. I cannot wait to see what we can do next season.*

Facing a steady decline in youth baseball,<sup>198</sup> the MLB followed a similar strategy the next year. These programs continue to flourish today and improve profitability, but as a side benefit, sports fans now act like members of loosely organized service organizations. All the old rivalries are still there, but *Badges* has given fans a socially beneficial way to express their loyalty. Last year, Yankees fans competed against Red Sox fans to see which group could get more new and used sporting equipment donated to underfunded public schools.

*Badges, Motivate, Identity, and Commerce* have made it so easy to set up beneficial programs that they are everywhere you look. In fact, so many different groups are interconnected now that it's easy to forget that Facebook's system is the glue that holds them all together. The social networking giant has become the universal conduit for all manners of partnerships, from those that exist purely for profit to completely charitable purposes, and everything in between.

Facebook has changed so many aspects of our day-to-day lives, but that's not the best measure of how much good it has done. Forget how Facebook has let you communicate with your friends and family; forget how *Identity* has made your life more convenient; forget how using *Badges* has helped you achieve your goals. Statistically, there's even a decent chance you met your spouse on Facebook, but for a moment, try to forget everything Facebook has done for you personally. To visualize the full magnitude of how much Facebook has improved the world, consider this:

By helping them run their operations better and creating new ways to motivate and reward their supporters, Facebook has helped charitable groups do even more good. How much more? Formal studies of large non-profits have concluded that by increasing participation, revenue, and spending efficiency, Facebook has led to improvements of a third or more. It has had an even bigger impact on smaller charities, where some estimate that *Motivate* has multiplied their effectiveness by several times, while others say that without Facebook, their group wouldn't even exist.

Practically every charity in the world today uses Facebook. For the sake of argument, let's say that Facebook helped these charities to do just 10 percent more. Try to imagine

what 10 percent of all the good deeds performed by all the charitable organizations in the world over the past 20 years looks like, and you will start to see just how much impact Mark Zuckerberg made by deciding to use his greatest strengths to improve the world around him.

## **FACEBOOK HELPED US BECOME BETTER PEOPLE**

Beyond helping charities do more good, Facebook also helped us become better people. This surprised many of us, because for all the ways the internet made our lives better, it also seemed to make our personalities worse, at least at first. In the beginning, the internet was constantly compared to the lawless Wild West.<sup>199</sup> It was a good metaphor: We could do almost anything we wanted online and get away with it. This complete lack of consequences combined with the anonymous nature of the internet brought out the worst in many of us.<sup>200</sup> We cheated,<sup>201</sup> we stole,<sup>202</sup> and we said awful things that we would never say in person.<sup>203</sup>

More than anything else, though, we lied.

## **THE TANGLED WEB WE WOVE**

People have always lied, of course, but the internet brought deception to new heights.<sup>204</sup> A cartoon in a 1993 issue of *The New Yorker* depicted a canine at a computer saying, “On the Internet, nobody knows you’re a dog.”<sup>205</sup> For the next two decades, this was all but true.

As the world moved online, we turned to the internet to get information about prospective mates, job applicants, and political candidates. These people could make any claims they could dream up, but unfortunately, there was no easy way to tell if the things they said were true. The source of

information we increasingly relied upon to make important decisions about people was not very trustworthy.

In the 2010s, dishonesty was routine when seeking a job: Most people lied about their work history or education on their résumés.<sup>206</sup> Dozens of online companies sold very convincing fake degrees, while those who were proficient with Adobe *Photoshop* could just make their own for free. A glowing reference from a former “employer” required nothing more than a cooperative friend and a mobile phone.

These fabrications went largely undetected. Jobs sometimes had hundreds of applicants, so it was impossible for human resources departments to check every detail. Some lies were not discovered until after people had become the leaders of Fortune 500 companies. The CEO of a major tech firm was fired after just four months when it became public that he did not have the degree in computer science that he had claimed.<sup>207</sup> The CEO of another company listed two false degrees on his résumé, a lie that was only caught after he called attention to himself by getting arrested for driving while intoxicated... for the third time.<sup>208</sup> Even when they lost their jobs for bending the truth, though, people felt they had done nothing wrong, that lying was necessary to compete because everyone did it.<sup>209</sup>

The lies about jobs grew even wilder on dating websites, where the temptation to appear more interesting or exotic was irresistible.<sup>210</sup> Many simply emulated what they saw on television. In 2009, over a thousand young women on one dating site alone listed their occupation as “forensic anthropologist,” an obscure profession glamorized by Dr. Temperance Brennan, a fictional character played by Emily

Deschanel in the popular TV show *Bones*. The American Board of Forensic Anthropology, though, had only certified about two dozen women in the past three decades.<sup>211</sup> To impress potential mates, even more men pretended to be like Brennan's partner Seeley Booth, an FBI special agent and former Army Ranger portrayed by actor David Boreanaz.<sup>212</sup> Claiming to be an elite soldier was a common lie. According to an actual FBI special agent – one tasked with investigating military imposters – out of every 300 men who claimed to be Navy SEALs, 299 were frauds.<sup>213</sup>

The dangers of this misinformation reached far beyond discovering that a date was not the champion-racecar-driver-turned-captain-of-industry he claimed to be. Some people conned their way into some very important jobs. For ten years at MIT, one of the most prestigious universities in the world, the dean of admissions, that is, the person in charge of the very department that checks applicants' qualifications, was someone who had made up her own academic credentials.<sup>214</sup>

Even worse lies put people in positions where they could hurt themselves or others. On Craigslist, handymen posed as licensed contractors and babysitters falsely claimed to have first aid training. Firefighters used fake degrees to get promotions within the Fire Department of New York.<sup>215</sup> The martial arts industry was completely unregulated. Anyone could make up a backstory, declare themselves a master, then set up shop convincing others they were capable of defending themselves in a life-threatening situation.<sup>216</sup> Unsurprisingly, injuries were common.<sup>217</sup>

It got even worse. After it was discovered that the deputy CIO of the US Homeland Security Department had bought all of her degrees online from a "university" that turned out

to be an old motel,<sup>218</sup> the US Government Accountability Office found that hundreds of people at high-level government positions, mostly in the Department of Defense, had purchased their credentials from similar diploma mills. This included managers at the National Nuclear Security Administration who had operations responsibilities and security clearances.<sup>219</sup>

## **BADGES TO THE RESCUE**

The internet was a mess of misinformation, but Facebook helped clean it up. It's not as if Mark Zuckerberg did this all by himself. There were already thousands of trustworthy institutions in the world; Facebook just made it easy to get data from them.

*Badges* proved to be a simple, consistent way to verify almost any piece of information. In the very beginning, badges were new and exciting, but the novelty wore off very quickly. After that, they became expected. We got badges automatically for just about everything we did. If someone claimed she was a certified massage therapist, why wouldn't she have the badges to prove it unless she were stretching the truth?

Almost overnight, *Badges* created a new standard of credibility for personal information that had never existed before. No longer could jobseekers reinvent themselves for each new application. No longer could people adopt a new persona to impress a date. No longer could politicians rewrite their life stories to match current opinion polls.

In addition to exposing outright lies, *Badges* shined much needed light on gray areas. For example, the academic badge collection of a dedicated student looks very different from that of another who barely passed, even if they both

have the same diploma. And a quick look at the activity badges of a guy who says he is “outdoorsy” on his dating profile will quickly let someone know if that means he takes a short hike once a year or that he braves Class VI rapids in a kayak every weekend.

Facebook also helped solve much larger issues. Years ago, unscrupulous medical practices scammed billions of dollars out of Medicare each year by charging for procedures on patients who did not receive them, or who didn't even exist.<sup>220</sup> Convicted sex offenders lied about their backgrounds to get hired at schools where they could abuse more children.<sup>221</sup> Even without fraudulent intent, a lack of good personal information could be harmful. Patients died in emergency rooms because doctors didn't know their medical history or which drugs they were allergic to. With Facebook, these types of problems largely went away with the wave of an *Identity* key.

Again, this kind of progress was probably inevitable. Improvements in technology made crucial information available in ways that prevented bad things from happening. Whether the solution we adopted came from Facebook, or another company, or the government, at some point a better personal identity system would have come along to prevent accidents and make it harder for people to lie or break the law.

Making a handful of people involuntarily commit fewer bad deeds benefited everyone, but it was not exactly social progress. The more remarkable change was how Facebook made so many of us voluntarily want to do more good.

## MAKING OUR DREAMS COME TRUE

Despite the overbearing amount of untruth that used to exist on the internet, it was not as though we were a world of pathological liars.<sup>222</sup> In a better light, we were a world of wishful thinkers.<sup>223</sup>

The carefree nature of the internet allowed us to create online versions of ourselves that represented how we wanted to be, or at the very least, how we wanted others to see us.<sup>224</sup> With *Badges*, though, Facebook provided an unprecedentedly clear view of what we had accomplished in our lives. Our education, our professional achievements, our volunteer work, our hobbies – there were badges for everything we did. This turned the blurry self-portraits we had painted into detailed photographs, and many of us were not thrilled with how we looked. We discovered that the internet had not just made it easy to lie to other people; it had also made it easy to lie to ourselves.

As human beings, it is natural, even healthy, to have high opinions of ourselves.<sup>225</sup> As a result, most of us think we are better than average. Now, it is mathematically impossible for this to be true, of course, since only half of any group can be above-average, but few people think of themselves as below-average. In one study, 94 percent of college professors rated themselves as above-average teachers.<sup>226</sup> In another, only 6 percent of students rated themselves as below-average in leadership ability.<sup>227</sup> This type of thinking extends to every aspect of our personalities, and most of us feel we are smarter, healthier, more ethical, more interesting, and more attractive than the average person.<sup>228</sup>

In the past, this included thinking we were also more charitable, and not because we thought too little of others, but rather because we thought too much of ourselves.<sup>229</sup> Part of this was because we knew about every charitable act we performed but were not aware of what others did, although that was not the only contributing factor.<sup>230</sup> We also knew about our own good intentions, and the perfectly justifiable reasons we fell short of them, and gave ourselves credit for those too.<sup>231</sup> Only when someone made us evaluate our actual behavior objectively did we not think so highly of ourselves.<sup>232</sup>

We had been using Facebook for years to preach how important it was to find a cure for breast cancer, or improve the education system for our children, or help the victims of the latest natural disaster. Yet when *Badges* showed us an accurate account of just how much – or, in many cases, just how little – we had actually done to further those causes, our soapboxes started to feel a little rickety.

We weren't just falling short when it came to helping others, though. We were failing ourselves. We read about a 100-year-old man who ran a marathon,<sup>233</sup> and we swore to ourselves that we would finish one, too, but with each day that passed, we were further from being in good enough shape to do it. We weren't restoring that old boat or finishing that novel like we had always talked about. We weren't learning to salsa dance, or play the piano, or scuba dive, or speak Italian. We weren't traveling with our families to see the amazing wonders this world has to offer. We put up a good front, but we were ignoring the most cherished aspects of our lives while we watched more television than we had ever realized.

Facebook dragged us into reality, forcing us to reconcile the discrepancies between what we thought we were like and who we actually were.<sup>234</sup> There was no quick fix. We could not keep fooling ourselves or anyone else with empty talk. On Facebook, we had to build our identities through meaningful action.<sup>235</sup>

A few of us gave up our fantasy versions of ourselves and quietly toned down our inflated egos. But many, many more of us rose to the challenge and worked to become the people we had always intended to be.<sup>236</sup> The badges on our Facebook Timelines were the stories of our lives, and we would be damned if we left any chapters uninteresting.

Fortunately, *Badges* did not just point out our shortcomings. On the contrary, it was designed specifically to help us overcome them. Decades of research have identified the best ways for people to accomplish their goals.<sup>237</sup> These techniques are remarkably effective, but most people find them difficult to put into practice. With that in mind, Facebook designed *Badges* around the methods that help people succeed in their lives. In fact, the application's most basic features reinforce an array of goal-oriented habits proven to aid in self-improvement.

To begin, *Badges* helped us choose good goals. When we choose goals that are unrealistic, we become discouraged; when we choose goals that are too easy, we don't take them seriously.<sup>238</sup> By showing us the accomplishments of our peers and the people in our lives whom we admired, *Badges* helped us set our sights on the right targets.

Once a goal is selected, three of the best ways to increase the chances of reaching it are to break down large objectives into a series of approachable tasks, to measure

and quantify progress, and to reward gradual change.<sup>239</sup> *Badges* did all of that for us. Major goals were represented by valuable badges at the end of achievement paths, which served as blueprints for attaining them. Each step along the way consisted of smaller badges with clear requirements for earning them, making it easy to see how far we had come and what to do next. This helped us visualize the process of working toward ambitious goals, which was vital to actually fulfilling them.<sup>240</sup>

Experts also advise writing goals down, looking at them often, and sharing them with friends and family. Merely adding a badge to our “Lifetime Goals” list accomplished all three of these actions at once. When we set a date by which we intended to earn a badge, Facebook intelligently assigned deadlines to every intermediate badge that led up to it, and taking the first step moved our ultimate goal into our “In Progress” list. *Badges* put our life’s goals right where we and everyone else would see them every day. No longer could days, weeks, or even years go by without us noticing if we’d made any progress. Facebook also showed us who else in our social network had already earned or was working toward the same badges, effortlessly forming a support system to help us achieve our goals.<sup>241</sup>

### **LIVING OUT IN THE OPEN**

Ultimately, sharing our collections of badges with our social networks like this led to a form of positive peer pressure that encouraged activities that we valued as a society.<sup>242</sup> One of the best examples of this phenomenon occurred in the months leading up to the 2016 United States presidential election. That year, the US government introduced the *I Voted* badge, a modern version of the stickers commonly given out at the polls on Election Day.

Technically, earning the badge only required people to register for an absentee ballot or visit a polling station, not actually vote,<sup>243</sup> but it was a vast improvement over previous years, when anyone could add an “I Voted” banner to their Facebook page with a single click without leaving their home.<sup>244</sup>

Controversial conservative talk radio host Rush Limbaugh called attention to the *I Voted* badge during one of his broadcasts:

*I'll tell you what I like best about this. After the election, when you hear one of these... these imbeciles, one of these liberal idiots who want your tax dollars to pay for everything – maybe one of your coworkers, it could be someone on the news, maybe one of these communist nutjobs in Hollywood – the next time you hear them running their mouths, I want you to look at their Facebook pages. Look at their badges. Forget about the tree-hugging awards from the drum circle championships... just see if they have the one that really matters. See if they have the one that says they voted.*

*I'm here to tell you folks: It won't be there. And I'll tell you why. These liberal snobs... Now let me make a distinction here. Some liberals are okay. They are just misinformed, so they are on the wrong side of the issues, but other than that, they are fine people. But these liberal elitists are too good to vote! They don't like democracy. They want socialism.*

*You know, it's worse than that. They don't love this country, and they actively hate those of us who do love our country.*

*So when they start crying about how they want more welfare or that the government should pay for their pot, you just cut them off. Cut them right off. You say,*

*“Uh-uh-uh, you had your chance to express your opinion. And you blew it.”*

*If you don't vote, you give up your right to complain. If you don't vote in this country, then your opinion doesn't matter. That goes for everyone. Me, you, everyone listening. I'll say it again: If you do not vote, your opinion does not matter.*

*I'll tell you this: If you don't vote, I don't want to talk to you. Why would I let you take up five minutes of everyone's time on the air, telling us the way things ought to be, if you can't take five minutes of your own time to vote.*

*For the next four years, if you don't have that badge – and we will check – don't bother calling in. This show is for patriots only. Patriots vote. If you have a professed and deep love for your country, prove it. Voting is how citizens participate in democracy. If you're an American, you vote. End of story.*

As had happened frequently in the past, Limbaugh's message spilled beyond his core audience and went viral on the internet, inspiring conservatives and offending liberals. The entertainment industry Limbaugh had criticized, on the other hand, took his words as a challenge and responded in kind. A few days later, actor Alec Baldwin released a video which began with him flaunting a copy of his voting record, which showed that he had voted 26 times in the past 25 years.<sup>245</sup> The camera then panned out to show he was sitting at the living room table in his New York apartment, surrounded by over 50 fellow actors and musicians who declared that they all voted every year and would be doing so again in the upcoming election.

Over the next week, half of Hollywood jumped on the bandwagon, with celebrity after celebrity promising to earn the badge and encouraging their fans to join them.

Heartthrob musician Justin Bieber went a step further, announcing that he would release his latest single in a live webcast the day after the election. The catch: It would be available only to people with the *I Voted* badge, which meant that parents nationwide received daily lectures on the grave importance of voting from their adolescent daughters. The comment Limbaugh made to motivate his conservative base incited action on both sides of the aisle: one half committed to proving him right; the other to proving him wrong.

Patriotic auto dealerships said they would extend their Election Day sales through the entire month of November, but only to customers who earned the badge. Pastors told churchgoers that it was their spiritual duty to make sure everyone in their congregation voted. College professors warned students that failing to vote could have negative consequences later in their careers, especially if they ever went into politics.

Word got around that this easy-to-obtain badge would be used to measure our social responsibility for years to come. Whether out of sincere civic duty or fear of being labeled a freeloader, voters turned out in droves. On Election Day, voter turnout topped 75 percent, a level not seen since the 1800s,<sup>246</sup> and it hasn't gone down since.

### **A NUDGE IN THE RIGHT DIRECTION**

Looking at it the worst way, *Badges* became the first real incarnation of the proverbial “permanent record” that had never been anything more than a bluff from school disciplinarians. It taught us that our actions have consequences that affect us for the rest of our lives, for

better or for worse, and that was a very good lesson to learn.

By using Facebook, we started to live our lives more publicly, and most of us didn't want to be associated with negative behavior. When she was Facebook's marketing director, Randi Zuckerberg said:

*I think anonymity on the Internet has to go away...  
People behave a lot better when they have their real  
names down.<sup>247</sup>*

Now, there are still plenty of legitimate reasons<sup>248</sup> to interact anonymously online, and there are still plenty of places to do so. But Randi was right: We did start behaving better when we saw our names next to what we were doing. For most of us, this has been a positive experience that goes beyond not wanting to get caught misbehaving. We do not just want to avoid bad marks on our records – we also want to fill those records with evidence of rich, meaningful lives.

*Badges* also gave us a clearer view into what others were doing, and in general, people turned out to be better than we had given them credit for. When we saw how many positive actions everyone else was taking, we stopped being so cynical.<sup>249</sup> And when we saw a record of our own actions, and knew that others could see it too, we started making better decisions.

The changes have been remarkable. Obesity rates are down. Post-secondary education is up. Donations and volunteering are at all-time highs. Almost any way you look at our lives, we now spend more time pursuing personal accomplishment and public service than we have in decades.

We are doing a lot more good these days, for ourselves and for each other, but Facebook has not made us do anything we did not already want to do. People do not get in shape just so they can put a new badge on their Facebook page. The same goes for affinity marketing freebies. No one adopts a baby just to earn a badge that saves them 10 percent on children's clothing at Target. These perks are nothing more than a nudge in the right direction.

Mark Zuckerberg deserves some of the credit, but he didn't fundamentally change us. We had always known we should vote, just as we had always known we should donate blood, exercise more often, and spend more quality time with our families. Facebook just helped us become the people we already wanted to be.<sup>250</sup> *Badges* made it easier by showing us exactly how we could improve ourselves and then showering us with incentives at every step along the way.<sup>251</sup>

Businesses small and large deserve some credit, too, for sweetening some of those incentives. Granted, companies have always given away free samples and promotional discounts. Today, they just give out more to people who are more deserving. One marketer calls it "karma enforcement" – a way for the corporate world to make sure kindness finds its way back to people who do good deeds.

Most of the credit, though, goes to us, the ones who did all the work. We had the intention; we had the ability; we just needed a little push. Previously, only a rarefied few unfailingly did what they knew they should, even when it was unseen and thankless, but the rest of us just weren't that saintly. Years of selfish choices had led us to shy away from hard work and altruistic actions, but after our achievements and contributions started being consistently recognized, this changed. The positive reinforcement

gradually conditioned us until eventually, when an opportunity arose to improve ourselves or help others, our kneejerk reaction shifted from “Not right now” to “Sure, why not?”<sup>252</sup>

We may have needed that push to get started, but once we got going, we kept going. We don't expect special treatment for nothing. We expect to have to work to get those perks, and we don't expect to be rewarded for every little thing we do. No, we do so much more now, for ourselves and for others, simply because we learned that doing the right thing feels good.

It turns out Mark Zuckerberg was correct when he said that privacy is no longer a social norm,<sup>253</sup> and this has been a good change overall.<sup>254</sup> Facebook helped us to live our lives a little more publicly and, as a result, hold our heads a little higher. This has gotten us into some very good habits, which, if current trends continue, will carry on long after the latest wave of social networking applications has been forgotten.

Thanks to Facebook, our future looks bright.

## AFTERWORD: HOW BADGES WON THE WAR

In the early 2010s, the social networking market was crowded with dozens of major players, each bent on global supremacy. However, one fact made them all equally vulnerable: Every app at the time offered a nearly identical set of features.

But *Badges* was a truly unique competitive advantage that gave people solid reasons to use Facebook instead of other social networks. By associating photos with badges, people were able to organize them better on Facebook than they could on Flickr. New badges announced accomplishments that required more than typing a short line of text, so they got more attention than Twitter posts. Verified professional achievements made Facebook a more trusted source of résumé information than rival social network LinkedIn.

Although Facebook later went on to create *Identity*, *Commerce*, and FICU, *Badges* is what secured Facebook's destiny. Ultimately, the social web boils down to where we choose to house our identity online, and the public chose Facebook. Today, thousands of third-party badge apps come and go each year, making the Facebook platform the center of the social cloud.

All of its predecessors had been replaced when the “next big thing” came along, but Facebook stopped this cycle of constant turnover, survived the social networking wars, and emerged victorious as the undisputed global leader. And *Badges* was the weapon that made the difference.

## BADGES FIT THE FACEBOOK GENERATION PERFECTLY

When studying populations, sociologists find it useful to categorize people according to when they were born, although they rarely agree on the precise years when these generations start and end.<sup>255</sup> One of the weaknesses of this approach is that it tends to oversimplify. Like astrology, it suggests that a person's birthdate determines his or her personality traits. Plus, it sorts people into even broader groups than a monthly horoscope or a yearly zodiac. Generations are typically about two decades long, so only five or so are alive at any given time. To say that all people born between two arbitrary dates are the same is, of course, a vast overgeneralization. There are not just five types of people, and every generation has its share of cynics and dreamers, heroes and deadbeats, saints and scoundrels.

Generations certainly appear different, though. When we are young, we find it hard to understand the behavior of older people. Later, as we age, at a certain point the latest crop of youngsters seems completely foreign to us. We conclude that our own generation was wildly different when we were their age. More specifically, we think our generation was better. In some ways, all generations hold similar views of each other. As one famous speaker reportedly said:

*The children now love luxury; they have bad manners, contempt for authority; they show disrespect for elders and love chatter in place of exercise. Children are now tyrants, not the servants of their households. They no longer rise when elders enter the room. They contradict their parents, chatter before company, gobble up dainties at the table, cross their legs, and tyrannize their teachers.*

While it sounds like it might have been said in the early 1900s, that quote is commonly attributed to Socrates, some two-and-a-half millennia ago.<sup>256</sup> In fact, much of any “generation gap” sensationalized throughout history can be explained by how our perspectives change as we age, which leads to conflicts between the young and old that have been around as long as humanity itself.<sup>257</sup>

These are known as “life cycle effects,” one of the three major explanations for differences in behavior between age groups. The second are “period” or “environmental effects,” which are universal events, like economic fluctuations and social trends, that affect various age groups differently. Particularly poignant events, like wars and major advances in technology, that occur while people are young can leave a lifelong impression on those who grow up together, which leads to the only true differences between generations, known as “generational” or “cohort effects.”<sup>258</sup>

At their worst, poor generational studies confuse these three types of effects and suggest that two trends that happened at the same time were related, even when no proof exists.<sup>259</sup> They are typically alarmist and predict the downfall of humanity at the hands of the youngest generation, reinforcing popular misconceptions among older people that things really were better in their day. Many of these supposed differences are imaginary, though, as our blurry memories rewrite idealized versions of history in which we tend to forget our shortcomings.<sup>260</sup> Some real differences do exist, though, and at their best, sociologists discover them by making valid comparisons between generations as they pass through the same stages of their lives. After all, we are products of our times, and

we tend to share many characteristics with others who have experienced similar events at similar ages.

Of the people alive in Western society when Facebook was founded,<sup>261</sup> the oldest were the G.I. Generation, later rebranded the Greatest Generation,<sup>262</sup> who grew up during the Great Depression. Next came the Silent Generation. Born during a two-decade gap in history which never produced an American president,<sup>263</sup> this group was largely made up of people who grew up during World War II.

The Baby Boom Generation began with the end of the war and ended with the beginning of the birth control pill. Baby Boomers grew up with Beatlemania, Woodstock, the civil rights movement, and the first moon landing. Later, they enjoyed longer lifespans and the greatest concentration of wealth in history. To Boomers, life looked like it would never stop getting better.<sup>264</sup>

Then came Generation X, who were born in the 1960s and 1970s. During that same period, divorce rates in America doubled to all-time highs<sup>265</sup> and the children paid the price, creating a bumper crop of latchkey kids with low self-esteem.<sup>266</sup> Expressing themselves with ripped clothing and grunge music, the Gen Xers grew to become known as a group of jaded, self-absorbed slackers.<sup>267</sup>

Finally, after Generation X came Generation Y, also known as the Millennial Generation, a catchall name for those born in the 1980s, 1990s, and early 2000s.<sup>268</sup> Millennials were the first to grow up with personal computers and mobile phones, which made their lifestyles dramatically different from those of earlier generations.<sup>269</sup> Instead of baseball,<sup>270</sup> they played video games.<sup>271</sup> Many had never checked a book out from a library; everything they ever

needed to know was online.<sup>272</sup> Even their dangers were digital: They worried about cyberbullying<sup>273</sup> and were warned how texting and driving could be worse than drinking and driving.<sup>274</sup> They weren't jaded, and they weren't slackers, but not to be outdone by the Gen Xers, they nevertheless managed to take self-absorption to new heights.

## RAISED BY HELICOPTERS

Since the dawn of television, each American generation has, during their formative years, watched as a national tragedy unfolded, leaving a permanent mark on their memories and forever changing their worldview. For Baby Boomers, it was the assassination of President John F. Kennedy. For many Gen Xers, it was the *Challenger* space shuttle explosion. The Millennials, though, watched the Columbine High School massacre and the 9/11 terrorist attacks.

Boomers and Gen Xers were warned about the Cold War, but the worst thing to come from it was a huge deficit from military spending. When both of these generations were young, one of their biggest fears was conforming and ending up with a boring life in the suburbs. Millennials, on the other hand, were scared that someone – a complete stranger, or even one of their classmates – might murder them and their friends at any moment, for incomprehensible reasons.<sup>275</sup>

Whereas earlier generations grew up thinking that America was invulnerable, Millennials had their sense of security shattered. Fortunately, their parents were there to comfort them. Compared to previous generations, Millennials got

along very well with their parents and received plenty of attention from them – perhaps too much, in fact.<sup>276</sup>

In their efforts to make the world a less scary place for their children, the parents of Millennials went overboard. They covered their toddlers in protective padding and kept them on short leashes, both metaphorically and some even literally. If their children were allergic to peanuts, instead of packing them lunches or just teaching them what was safe to eat, parents petitioned the school board to ban all nuts for everyone. As Nancy Gibbs wrote in *Time* in 2009:

*The insanity crept up on us slowly; we just wanted what was best for our kids. We bought macrobiotic cupcakes and hypoallergenic socks, hired tutors to correct a 5-year-old's "pencil-holding deficiency," hooked up broadband connections in the treehouse but took down the swing set after the second skinned knee. We hovered over every school, playground and practice field – "helicopter parents," teachers christened us, a phenomenon that spread to parents of all ages, races and regions.<sup>277</sup>*

Not every parent went to these extremes, but the times had certainly changed. When Baby Boomers were young and misbehaved in school, they were likely to receive a spanking at home, or perhaps one from the principal.<sup>278</sup> Gen Xers in the same situation may have received a stern lecture about the importance of education, if they were lucky enough to have parents who were paying attention.<sup>279</sup> When Millennials acted out, though, they were not scolded, because that might have hurt their feelings. Instead, teachers gently suggested they express themselves another way. Then their parents blamed their teachers for not challenging them enough. At the same time, these teachers were banned from using red ink to grade papers, for fear

that the cruel color might upset students.<sup>280</sup> Constant praise pervaded the school system, where awards were handed out so often that they became meaningless. Grades were continually inflated to the mathematically impossible point where almost everyone was above average.<sup>281</sup> For the few who did get bad grades, parents just kept complaining until teachers raised them.<sup>282</sup>

Parents blamed shortcomings on anything and everything except themselves or their miniature versions of themselves: their trophy children.<sup>283</sup> Poor performance in school couldn't possibly be due to poor parenting. After all, they bought their children personal computers and had been playing Mozart to them since they were still in the womb.<sup>284</sup>

Instead, they told themselves that their children were just too advanced to benefit from standard education.<sup>285</sup> Or they blamed whichever developmental disorders were trendy,<sup>286</sup> then they blamed those disorders not on themselves or even just bad fortune, but instead on vaccines. (Thus perpetuating a completely debunked<sup>287</sup> rumor started in 1998 by one shoddy study<sup>288</sup> conducted by a crooked doctor who was later stripped of his license for serious professional misconduct.)<sup>289</sup>

It was unfathomable to think that their children might not outshine their peers in every subject, or might just be a little young for their grade,<sup>290</sup> or that a healthy 8-year-old might prefer to play rather than pay attention in school. For parents with good insurance, it was easier to medicate their children,<sup>291</sup> and millions of Millennials<sup>292</sup> were unnecessarily strung out on powerful amphetamines<sup>293</sup> before they were old enough to drive.<sup>294</sup>

Helicopter parents didn't stop when their children left high school. They followed their kids to college, where they chose their classes, did their laundry, helped with homework, and, of course, argued with professors over grades.<sup>295</sup> In the early 2010s, it was not uncommon for parents of Millennials to call prospective employers or even accompany their children to job interviews and participate in salary negotiations, behavior unheard of a decade earlier.<sup>296</sup>

Overzealous parents did everything in their power to solve all their children's problems and keep them from ever experiencing failure. Many Millennials grew up inside a bubble where they were amazing at everything they did and nothing was ever their fault. Shielding them from the harsh realities of the world may have spared them some bruised feelings, but all that coddling did them no favors when it came time to exit the protective cocoon their parents had constructed. When they got their first jobs, for example, Millennials found it difficult to fit in because they were so different from earlier generations, and nowhere was this more apparent than the workplace.

## **THE DELUSIONNIALS**

To put it bluntly, Millennials annoyed the daylight out of their employers, and it was not just because they covered their bodies with tattoos and piercings.<sup>297</sup> They repeatedly ignored instructions, insisting that their own methods were better. They called and texted their friends on company time regardless of what they were supposed to be doing. In fact, they expected their employers to buy them smartphones and saw no problem with using them for personal purposes, both at work and at home. They handled criticism poorly, acting as though they had never

been reprimanded in their lives – which, unfortunately, was sometimes the truth. They complained constantly: when their jobs interfered with their social lives; when managers bossed them around; when work just wasn't fun enough. They expected employers to cater to their needs and demanded special treatment, like being allowed to work from home, bring pets to the office, or take time off to pursue their hobbies. If they didn't get everything they wanted, they threatened to quit.

The way Millennials behaved at work dumbfounded older generations. Just a decade or two earlier, employees acting like this simply would have been fired. But turnover costs were high, and it seemed like the next wheel in the Millennial job pool was just as squeaky. This led to shelves of books devoted to helping companies manage this new wave of employees with oversized senses of entitlement.<sup>298</sup> To older generations, Millennials came off as obnoxiously arrogant and cocky. They had been told for so long that they were special and talented that the idea of an entry-level position seemed utterly beneath them. They thought they should start at the top, with salaries and perks normally reserved for veterans with decades of experience. They felt they deserved the best, and were dissatisfied with anything less.

Millennials were overconfident without having done much to deserve it, although it was easy to see how they got that way. They had grown up showered with praise, from parents who told them they were great at everything, teachers who gave them high grades for mediocre work, and coaches who awarded everyone trophies just for showing up.<sup>299</sup> Employers, though, depended on profits and could not afford to continue babysitting them. After

the Great Recession, almost 40 percent of the Millennials of working age were unemployed, and a disproportionately large share of them moved back home with their parents (or had never left the nest in the first place).<sup>300</sup>

## GAZING AT REFLECTIONS

When teens in the 1950s were asked, “Are you an important person?” about one in ten said yes. In the 1990s, eight of ten teenagers said they considered themselves to be important people.<sup>301</sup> In nature, traits that parents share are often amplified in their offspring.<sup>302</sup> The Baby Boomers, who were commonly called the most selfish generation,<sup>303</sup> had, as an extension of themselves,<sup>304</sup> bred a generation of super-selfish narcissists.<sup>305</sup> By objective measures, Millennials had the largest egos in recorded history.<sup>306</sup> The Millennials were distinctly different from all previous generations. However, those differences were not all bad, and those huge egos were not completely undeserved.

Confident and knowledgeable, they questioned authority not for the sake of rebellion, but because they thought they knew better, and often they did. In America, Millennials were the most well-educated generation ever.<sup>307</sup> They were the first to grow up in the modern computer era, which had a profound effect on their personalities. Technology advanced rapidly and they constantly adapted to it, making them quick learners who were unafraid of change. They grew up knowing that the answer to any question was only seconds away, making them excellent critical thinkers who were incredibly savvy and hard to fool. Plus, the collaborative nature of the internet made them great team players.<sup>308</sup>

Millennials also cared deeply about others. In fact, many scholars called them the most civic-minded group of young people since the Greatest Generation.<sup>309</sup> Self-assured, upbeat, and uninhibited, they were eager to solve all the world's problems.<sup>310</sup> Between their senses of self-importance and their passion for social causes, Millennials saw themselves as the people with the ability and responsibility to clean up the messes made by the generations that came before.<sup>311</sup> Raised on a steady diet of affirmation and self-esteem boosting, Millennials believed they were destined for greatness. They were half-right: They had the potential, but they weren't living up to it.

Millennials were overwhelmingly liberal, more so than their predecessors were at their age. They enthusiastically accepted people regardless of race, gender, sexual orientation, or socioeconomic background.<sup>312</sup> They were also the least religious<sup>313</sup> and the least Republican<sup>314</sup> generation. In 2008, American Millennials voted for Barack Obama over John McCain by a ratio of more than 2-to-1, the largest gap between older and younger voters ever recorded.<sup>315</sup> But while liberals felt that they were the ones that cared the most about helping others, in reality, they did the least. To be fair, compared to the 2030s, most people in the 2010s did little to improve the world around them, but of those who did, liberals fell behind moderates, and especially conservatives, who donated the most money and time.<sup>316</sup>

Millennials said they cared about ending poverty, but they gave to charity less frequently than previous generations did at their age. Millennials said they cared about the environment, but they were far less likely than Boomers and Gen Xers to have done anything to reduce their energy

consumption. Millennials said they cared about social injustice, but they were less likely to have participated in the political process by communicating with public officials, taking part in demonstrations, voting, or even just keeping themselves informed about political issues.<sup>317</sup>

Overall, Millennials volunteered less than their parents did, despite having little responsibility and copious free time.<sup>318</sup> Youth service organizations were dying. By 2010, the Boy Scouts of America had shrunk by at least half since the 1970s,<sup>319</sup> and the Girls Scouts also faced sharp declines.<sup>320</sup> One of the only measures that showed any improvement was that Millennial students performed more community service than their predecessors had when they were in high school.<sup>317</sup> For a short period, the media congratulated them for being better than those slacker Gen Xers and self-absorbed Boomers,<sup>321</sup> but when more details emerged, the story changed.<sup>322</sup> As it turned out, service-learning programs had become common in public schools in the space of just a few years, while they were practically unheard of when previous generations went to school.<sup>323</sup> Most students “volunteered” in these programs because they were required to.<sup>324</sup> This caused a brief spike that accounted for the uptick, but created no long-term effect, since students who performed service to fulfill a requirement usually stopped shortly after they got what they needed.<sup>325</sup> Like the Boomers, they wanted to change the world, but unlike the Boomers, they weren’t making much progress on their own.

## **GROWING UP ONLINE**

That’s where Facebook came in. Originally, the site was created by Millennials, for Millennials,<sup>326</sup> and it fit them perfectly. Since they grew up with the internet, they had no

idea what life was like without it. To them, technology was neither new nor novel like it was to their parents. Millennials did not view online services and smartphones as modern conveniences: To them, these were basic necessities.<sup>327</sup>

Almost every last one of them grew up attached to a device that kept them constantly connected to the digital world.<sup>328</sup> Without them, they felt uncomfortable, incomplete, cut off from society.<sup>329</sup> Their lives revolved around these gadgets.<sup>330</sup> In the early 2010s, older Millennials communicated via text message over a hundred times each day, on average.<sup>331</sup> Younger Millennials texted even more frequently<sup>332</sup> and were more likely to own a mobile phone than a book.<sup>333</sup> As opposed to older generations, who mostly used their powerful smartphones only for voice calls, text messages, and photos, Millennials used them to view websites, send email, play games, listen to music, and make videos.<sup>334</sup> In fact, the vast majority of their online activity was social,<sup>335</sup> and the king of social networking was Facebook.<sup>336</sup>

Millennials loved Facebook, and it was easy to see why. Compared to other generations, Millennials were obsessed with fame,<sup>317</sup> and Facebook was a symbiotic ecosystem fueled by narcissism.<sup>337</sup> For Millennials, it was normal and rewarding to tell everyone they knew what they were doing,<sup>338</sup> from where they were vacationing down to minor details like where they were eating, what they were buying, even which song they were listening to at the moment.<sup>339</sup>

Millennials were the most active social networkers.<sup>340</sup> With an average of about 700 Facebook friends each,<sup>341</sup> they could always find people interested in the minutia of their lives, letting them all feel like minor celebrities. Millennials

felt excited when their friends agreed with them about how they decided to spend their time and money.<sup>342</sup> As they grew up, Facebook took over their parents' former role of providing a constant stream of affirmation. And they didn't just like the high they got from social networking: They needed it. In fact, when they were deprived of Facebook, some Millennials showed symptoms of withdrawal similar to those caused by drug addiction.<sup>343</sup> In one survey of older, educated Millennials, most said they could not live without the internet. Four out of five either said it was just as important as water, food, air, and shelter, or else said that it was "pretty close."<sup>344</sup> When college students from 14 countries were given the choice, they preferred internet access over a car 2-to-1, and only those from France said dating was more important to them.<sup>345</sup> The internet was the center of the Millennials' universe, which was a problem because it distorted their perception, making what they did online seem far more important than it really was.

## MILLENNIAL SLACKTIVISM

Case in point: Just five months before Facebook introduced *Badges*, a non-profit group released *Kony 2012*, a film about Joseph Kony, the leader of the Lord's Resistance Army, a violent guerilla group in Africa.<sup>346</sup> It became the most viral video ever, reaching over 100 million views in six days.<sup>347</sup> At the peak of the Kony craze, the video was viewed most often by American teenagers<sup>348</sup> and was spread primarily through social media,<sup>349</sup> Facebook specifically.<sup>350</sup>

This film was immediately ripped to shreds by critics. Despite being half an hour long, it did not contain much information, and what little it did was misleading. So misleading, in fact, that angry Ugandans protested it.<sup>351</sup>

Amama Mbabazi, the Ugandan Prime Minister, said, “It is as if Kony is still in Uganda, as if Uganda is still at conflict and yet of course we all know this is not true.”<sup>352</sup> Indeed, the video spoke almost exclusively about Uganda, even though Kony had left the country six years earlier. Through careful wording and slick graphics, the video also gave the impression that Kony commanded an army of tens of thousands when he actually had only a few hundred soldiers.<sup>353</sup>

As controversy mounted, even more criticisms were leveled against Invisible Children, the non-profit that made the film. For instance, the group advocated supporting the Ugandan government,<sup>354</sup> even though it was one of the most corrupt in the world<sup>355</sup> and was guilty of the same types of atrocities as Kony, including using child soldiers.<sup>356</sup> Others said that the film would make the LRA even more dangerous and put the people who were already working to stop them at risk. One expert on Africa from a well-known Washington public policy group said, “If you want to catch Kony, I can’t think of a dumber thing to do.”<sup>357</sup>

Invisible Children’s financial practices were also called into question since charity rating services gave it poor scores for accountability and transparency,<sup>358</sup> it accepted significant funding from groups that promoted discrimination,<sup>359</sup> and only a third of donations made it to Africa.<sup>360</sup> Later, a video surfaced that showed one of Invisible Children’s leaders joking about keeping \$900,000 of a million-dollar grant from a contest among charities on Facebook<sup>361</sup> – a contest they were accused of winning through fraud in the first place.<sup>362</sup>

Dozens of critics called the entire effort a cash grab. Make no mistake, they said, Joseph Kony was a terrible person, but Invisible Children was recycling outdated news using footage they shot nearly a decade earlier in order to benefit themselves.<sup>363</sup> After all, their organization helped children in Uganda, where Kony was long gone. A former director of the Uganda National NGO Forum said:<sup>364</sup>

*Six or ten years ago, this would have been a really effective campaign strategy to get international campaigning. But today, years after Kony has moved away from Uganda, I think campaigning that appeals to these emotions ... I'm not sure that's effective for now.*

Journalist John Vidal was less forgiving:<sup>365</sup>

*They call themselves “a movement” seeking to end the conflict in Uganda and stop the abduction of children for use as child soldiers, but behind the slick website and the touchy-feely talk about “changing the course of human history”, there’s a hard-nosed money-making operation led by US filmmakers and accountants, communication experts, lobbyists and salespeople.*

With its edgy visuals, hip music, and over-the-top emotional appeals, the video looked nothing like a documentary; it felt like an ad. In truth, the format it used – as any advertising professional could recognize – was that of a highly targeted infomercial<sup>366</sup> for the merchandise it featured prominently throughout the film: t-shirts, stickers, and posters; bracelets which, at \$10 each, they called “the ultimate accessory;” or the handy “action kit” that contained “everything you need” to make people “think you’re an advocate of awesome” for just \$30, plus shipping and handling.<sup>367</sup>

Regardless of whether the true purpose of the film was to raise awareness of Joseph Kony or to line the filmmakers' pockets, no one could argue that it wasn't effective. For better or for worse, Invisible Children knew how to deliver a message that resonated with Millennials. They got young people to watch a half-hour film that contained no foul language or nudity, then share it with their friends, while other marketers had a hard time holding their attention for five seconds. They made an obscure African warlord a household name overnight,<sup>368</sup> and they soon saw evidence of increased support in Washington.<sup>369</sup> In fact, despite all of the video's glaring flaws, it is likely that more than a few of its harshest critics were merely jealous of its success.<sup>370</sup> The filmmakers' genius was richly rewarded, as they made over \$15 million just from selling action kits in the first four days alone, not counting other merchandise and donations.<sup>371</sup>

Their film, however, had vastly oversimplified a complex situation. Joseph Kony operated in an area where every government was rife with corruption and violence,<sup>372</sup> yet the video made it seem as though he were the only one committing human rights violations in Africa. In his part of the world, Kony was a tiny part of a gigantic problem that catching him would not solve, if he could be caught at all. It took the most powerful military in the world ten years and billions of dollars to find Osama bin Laden, who was living in a house in a residential area. Kony, on the other hand, had been hiding in the vast jungles of Africa for over 25 years, all the while escaping the efforts of four governments trying to catch him. (For that matter, the US had already sent troops the previous year to Uganda to help, but since Kony wasn't in Uganda, locals thought the Americans' presence might have more to do with the vast

oil reserves recently discovered in the area.)<sup>373</sup> Finally, any action against Kony would almost surely result in bloodshed and the loss of more innocent lives, even if it were successful. If not, Kony would likely take revenge by slaughtering civilians, as he had done on several occasions,<sup>374</sup> including the Christmas Massacres a few years earlier.<sup>375</sup> The *Kony 2012* video, though, mentioned none of these details. It just made the case that Joseph Kony was evil and left it at that.

Invisible Children could not have predicted the film would get so much attention. They had been producing videos for years and had never attracted a sizable audience before.<sup>376</sup> By the time *Kony 2012* was released, another film they put on YouTube five months earlier, *Who is the LRA?*, had only been viewed about 10,000 times.<sup>377</sup> *Kony 2012* was only scrutinized so deeply because it became so popular; how many other groups have presented information in a certain way to persuade people to support them?

Plus, to their credit, Invisible Children released another film a month later, entitled *Kony 2012: Part II - Beyond Famous*. It was shorter, but heavier on details and closer to following a documentary format, correcting many of the misconceptions caused by the original film. It said that Kony was not in Uganda and that his army was small. It even mentioned that a recent capture attempt had resulted in retribution and talked about peaceful approaches.<sup>378</sup>

However, by the time they released it, the Millennials were gone. *Kony 2012* had reached 100 million people in six days. In that same timeframe, the follow-up film only reached 1.5 million people on YouTube, and it wasn't nearly as popular with younger viewers.<sup>379</sup> Of the Millennials who had made Kony famous, perhaps one out

of a hundred had stuck around to hear the facts. The cornerstone of both videos was an event called “Cover the Night,” in which supporters were supposed to blanket “every city, on every block” with the posters and stickers they had bought, but by most accounts, it was a colossal failure.<sup>380</sup> As one tweet said, “Kony is so last month.”<sup>381</sup> By this time, any remaining conversation surrounding Invisible Children had shifted to how its co-founder, the host of the original *Kony 2012* film, had stripped naked on a San Diego street corner,<sup>382</sup> where he was detained by police for allegedly masturbating in public and vandalizing cars.<sup>383</sup> In October 2012 Invisible Children released *Move*, their next half-hour film, which explained how their project was about to “reach its peak.” However, the attention it received was about one-thousandth the amount that *Kony 2012* had received its first week.<sup>384</sup>

The *Kony 2012* campaign became a shining example of what was wrong with Millennial activism, but that wasn’t the fault of the filmmakers. The problem was the Millennials. The situation contained far more nuance than could fit in a tweet or a Facebook post, so most of it was lost on the them.<sup>385</sup> They bought action kits without having any way of knowing how their money would be spent. They shared the video without thinking of the consequences of a highly publicized military campaign. They wore t-shirts and bracelets without learning anything about the real problems that the people of Uganda were facing, nor did they do anything significant to help them. Worst of all, though, is that they acted as if catching Joseph Kony were of the utmost importance, then, a month later, they had forgotten about it. The action kit had turned a cause into a product that they bought on impulse, quickly got bored with, then threw away.

## THE MILLENNIAL RENAISSANCE

In the end, though, Millennials being focused on themselves and thinking that Facebook was so important was not such a bad thing. Part of the reason Millennials felt so entitled was that they thought they were doing more good than they actually were.<sup>386</sup> They posted a link on Facebook and felt as if they had done something substantial to end violence and suffering in Africa. And who could blame them? *Kony 2012* specifically said that the most important thing they could do was share the video,<sup>387</sup> and they did just that. To Baby Boomers, being part of a movement meant learning everything there was to know about the cause, joining an organization, regularly attending events, meeting with others to work together – meaningful activities that took more than a few minutes and required leaving the house. Before *Badges* came along, Millennials felt like updating their Facebook status was enough to make them part of a movement.<sup>388</sup>

In fact, young people had been using Facebook for years to tell everyone how passionate they were about promoting animal rights, or ending poverty, or helping the victims of natural disasters. A news outlet would release a story about a company's carbon footprint, someone would suggest a boycott, and that comment would be copied and rebroadcast verbatim by millions. Movements spread across the internet like wildfire, but burned out as quickly as they started.

After *Badges* was introduced, though, people started thinking more critically about what they saw online. Just two clicks away from a post urging people to boycott was a Facebook Timeline page that showed every badge the commenter had ever earned for helping environmental

causes. It became immediately obvious whether he or she had been an activist for years or had just recently jumped on the bandwagon.

This forced people to ask themselves some uncomfortable questions before parroting talking points about the latest trendy cause, questions like “Have I ever done anything to help solve this problem?” and “Do I have any idea what I am talking about?” Millennials saw themselves as talented, knowledgeable, and compassionate, but all too frequently, the answer to both of these questions was “No, not really.”

Facebook shined a bright light on our lives by measuring them in terms of our accomplishments. After we started using *Badges*, we could no longer ignore the gap between our inflated self-images and reality, between what we said was important to us and what we actually had done about it. As the generation with the biggest egos and the least life experience, this gap was the widest for the Millennials. Their shortcomings in public service gave them a rude awakening, and that was only the tip of the iceberg. In all other areas of their lives – their hobbies, their health, their dreams and professional aspirations, the very ideals for which they prided themselves and around which they had built their identities – young people were not living up to their own expectations.

Their achievements looked especially unimpressive when they compared themselves to older people. Despite their self-absorption, Millennials had quite a bit of respect for their elders, particularly their morals and their work ethic.<sup>389</sup> More than any previous generation, Millennials saw their parents as friends,<sup>390</sup> but this was part of the reason their expectations were so unreasonably high. Viewing older people as peers skewed their perspective,

and after a lifetime of instant gratification<sup>391</sup> and self-esteem boosting, Millennials had assumed they would already be experts at skills they hadn't even been alive long enough to master yet.<sup>392</sup>

Even when looking at their own age group, Millennials still got the wrong idea. When previous generations were young, they were limited to interacting with a comparatively tiny number of people from their local area. Through this experience, they learned the valuable lesson that most people are average at most things, and they were fortunate to witness even a handful of extraordinarily talented peers growing up. The Millennials, though, saw thousands of them, because they grew up in an internet-shrunken world in which every one-in-a-million person had a YouTube channel. The Millennials barely understood the concept of "average." When older people watched a video of a teenager playing the guitar at a professional level, they were amazed that someone so young could possess such talent. But Millennials just saw a person their own age doing something they liked and thought, "I can do that." Just as television desensitized Generation X, making them hard to shock by overloading them on violence and profanity, the internet desensitized the Millennials, making them hard to impress by delivering a constant stream of world-class excellence.

Millennials held themselves in very high regard, but when *Badges* put their achievements side-by-side with the people they wanted to be like, it finally sunk in that they weren't quite as amazing as they had thought. Their collective burst bubble had a bright silver lining, though. *Badges* knocked them down off their pedestals, but at the same time, it also showed them how to climb back up.

YouTube didn't show the years of daily practice, the gradual progress, the frustration and the failure that led up to an impressive guitar solo. It only showed a three-minute clip of the results. However, one click away was a badge collection that detailed the lifetime of dedication and hard work that made an amazing performance seem effortless. Aspiring guitarists could trace a line of badges back from these grand accomplishments to their own more modest ones to see exactly what they needed to do in order to become that good themselves.

Facebook gave the Millennials a constructive way to emulate their idols. No matter what people wanted to become – a chef, a DJ, a veterinarian, a graphic designer, a senator, a yoga instructor, a NASCAR driver, or the CEO of their own tech company – *Badges* could help. Every life goal imaginable was at the end of a path of badges that formed a clear plan for achieving it, and every path began with simple actions that could be taken immediately. Facebook gave the Millennials the direction they needed to start living up to their lofty expectations as well as the affirmation they craved for each little step they took along the way. *Badges* gave them personal rewards as well as public recognition, which elicited even more encouragement and congratulations from friends.

Facebook helped us all, but it had a particularly pronounced effect on the Millennials. They had been prepared for greatness. They were the most well-educated generation in history with unprecedented resources at their disposal. With their wildly inflated egos, they also had the most to prove, and the most room to improve. *Badges* incentivized and reinforced meaningful behavior, leading

an entire generation to adopt habits that helped them reach more of their potential.

Their lives already revolved around Facebook when *Badges* came along. In what historians are beginning to call the Millennial Renaissance, soon young people were making music, playing sports, writing software, and volunteering more than ever before. With Facebook, they developed the skills they needed to get the jobs of their dreams. They made plans to get in shape and they stuck with them. They learned how to make real progress for social causes, not just sign online petitions. *Badges* even improved their love lives by giving them an accurate idea of what prospective mates were really like, helping them spend less time searching for a good match and more time sharing their lives with one.

With massive debt and a weak economy, the Millennials were predicted to be the first generation in a century to end up worse off than their parents.<sup>393</sup> Comparatively though, Millennials today enjoy longer life expectancy, higher salaries, and more post-secondary education, along with lower rates of divorce, substance abuse, and suicide. By nearly any objective measure, Millennials are doing better than ever. Because *Badges* has facilitated so many of these improvements, it is little wonder why the Millennials never moved on to another social network, but instead have kept Facebook at the center of their richer, more balanced lifestyles for over 30 years.

## BADGES TURNED LIFE INTO A VIDEO GAME

Another reason Facebook was so successful was that it harnessed the power of game mechanics and put them to work in a way that benefited everyone. *Badges* turned life into a giant game, a feat more difficult and more important than such modest words suggest.

## THE SERIOUS BUSINESS OF GAMES

Video games used to be simple.

In the very beginning, we dropped coins into machines at arcades and played until the dreaded words “GAME OVER” appeared. Later, with the rise of video game consoles and personal computers, we bought games to play at home. These games existed entirely on a cartridge or disc, which made them simple products. Like books or movies, we could learn a little about a game from advertising or reviews, but generally the only way to find out if we really liked it was to buy it. When we did, we paid one flat fee upfront, which for new releases was fairly expensive. Finally, just like books, games did not change after they were purchased, which gave us little reason to play them after we had completed them. Since we owned the games, though, when we were finished we could loan them to a friend or sell them.

All this changed around the turn of the millennium when residential broadband service became common.<sup>394</sup> As technology progressed, developers were able to keep people playing longer by using the internet to deliver games in new and interesting ways.

No longer did people have to be in the same room to play a console game like *Halo* or *Madden NFL* together. Online

services like Microsoft's *Xbox Live* and Sony's *PlayStation Network* allowed gamers to play with friends anywhere in the world from the comfort of their own living rooms. They also let game developers augment what shipped on game discs with downloadable content (DLC). DLC breathed new life into games players had already completed by adding new levels or another chapter to the storyline.<sup>395</sup>

Good DLC was a win-win: Players got to enjoy their favorite games again, typically for a fraction of their original price, and new content could bring attention back to a game that had been released a long time ago, stimulating more sales – not to mention the fact that DLC helped combat used game sales and piracy.<sup>396</sup> Some developers released tools that let users expand their games by making and sharing their own content. In one instance, a free DLC package made by a fan turned an obscure, aging game into a best seller,<sup>397</sup> generating over \$10 million in new sales<sup>398</sup> for the company without any marketing, promotion, or development costs.

Massively multiplayer online role-playing games (MMORPGs) like Sony's *EverQuest* and Blizzard's *World of Warcraft* went even further, letting millions of computer gamers embark on adventures together. Customers could download a demo that let them play free of charge for a limited time, long enough to meet a few people and get a feel for the game. Playing further required buying the game as well as a monthly subscription fee, which millions of customers paid continuously for years,<sup>399</sup> because unlike previous games, MMORPGs had no ending. Developers continually expanded these virtual worlds, creating new lands to explore and new opponents to conquer.

These more sophisticated business models helped game companies start making serious revenue. Although digital games did not surpass television to become the largest entertainment industry until 2028,<sup>400</sup> the game industry had already overtaken Hollywood shortly after the turn of the millennium.<sup>401</sup>

In 2009, Rockstar's *Grand Theft Auto IV* had the most successful entertainment release to date, making over \$300 million the first day, which was around as much as the largest book release at that time, J. K. Rowling's *Harry Potter and the Deathly Hallows*, and the largest opening day for a movie, Sam Raimi's *Spider-Man 3*, combined.<sup>402</sup> Two years later, Activision's first-person shooter *Call of Duty: Modern Warfare 3* made \$1 billion in 16 days, faster than James Cameron's worldwide blockbuster *Avatar*.<sup>403</sup> In 2010, Jesse Eisenberg played the role of Mark Zuckerberg in *The Social Network*, and by any measure, the film was a hit. It received nearly perfect reviews,<sup>404</sup> was nominated for eight Oscars,<sup>405</sup> and won more Golden Globes than any other film that year, including best drama.<sup>406</sup> The film was very profitable as well, bringing in \$225 million in ticket sales.<sup>407</sup> That same year, though, *World of Warcraft* alone made about \$1.5 billion, and it was seven years old at the time.<sup>408</sup> In fact, the worldwide video game industry made about \$56 billion in 2010, which was more than sales of books, magazines, DVDs, or movie tickets, and more than twice as much as recorded music.<sup>409</sup>

## THE HIGH COST OF FREE GAMES

Around this time, a radically new model was emerging that shook up the entire entertainment industry, one which did away with the concept of selling games altogether. This

model was called “freemium,” a portmanteau of “free” and “premium” that meant that the basic game was free to play, but premium options cost extra. Freemium games were typically played in a web browser or on a mobile device and were not just demos: People could play them indefinitely for free. Instead, developers made their profit by upselling players into buying virtual goods and additional content, which they could purchase right within the game.

Since freemium games cost nothing up front, people did not hesitate to try them.<sup>410</sup> To draw in casual players, these games were typically quick and easy, at least in the beginning. Later, they gradually became less enjoyable, and this too was by design. For example, what players could do in many games was limited by some form of virtual currency, like gold coins. Basic actions in the game might cost a few coins, while larger amounts could be spent on a wide variety of tempting virtual goods, such as equipment that gave players special powers, limited edition outfits for their avatars, or mystery boxes, each of which might contain a rare or valuable item. New players received some coins for free, but after these were spent, they could get more in one of two ways. Players could earn coins slowly, usually by performing boring, repetitive tasks that often involved a lot of waiting. Alternatively, they could buy as many coins as they wanted, instantly, with a credit card.

When they first started playing, the idea of spending real money on virtual gold in a free game seemed absurd to most people. For a while, earning coins provided the satisfying feeling of working to accomplish a goal, but as the game progressed, advancement required more and more coins. Over time, the game became less about playing

and more about working and waiting. Yet even though the game was less fun, people did not want to quit because that would mean giving up what they had earned so far, especially those who had invested a significant amount of time and effort. At a certain point, players wanted to spend more coins than they had, and that's when they reached for their wallets.

As freemium games became more popular, many developers switched from focusing on making their games fun to making them as addictive as possible.<sup>411</sup> This practice was widely scorned by players, who complained that they ended up spending more on “free” games than on more entertaining games they had bought in the past.<sup>412</sup> Markus Persson, one of the most influential minds in game development, said about the freemium model:

*You get your players hooked on your game, and then you try to monetize them. The idea is to find a model where there basically is no cap on how much the player can spend, then try to encourage players to spend more and more money. Various psychological traps like abusing the sense of sunk costs get exploited, and eventually you end up with a game that's designed more like a slot machine than Half-Life 2.<sup>413</sup>*

Nevertheless, the freemium model turned out to be incredibly profitable. Soon, virtual goods were making real money, as people spent a fortune on free games. Between 2008 and 2010, the amount spent on social games increased 20-fold,<sup>414</sup> and by mid-2011, freemium games were making more than all other kinds of applications in Apple's App Store.<sup>415</sup> In early 2012, the most-played PC game was still *World of Warcraft*, but by July, it lost the number one spot to *League of Legends*, a freemium game.<sup>416</sup> Around the same time, the most popular mobile

game was another freemium app, *Draw Something Free*, which at over 17 million players brought in more people than *World of Warcraft* and *League of Legends* combined.<sup>417</sup> However, this still paled in comparison to the largest source of freemium games: Facebook.

Games were an enormous part of Facebook's business. At first, Facebook made all its money from advertising, but in 2009 and 2010, the share of non-advertising revenue roughly tripled each year.<sup>418</sup> Essentially all of this came from third-party social games, particularly those from Zynga,<sup>419</sup> which was the source of about one-fifth of Facebook's revenue in 2011.<sup>420</sup>

With billions at stake,<sup>421</sup> game developers stopped at nothing to make their games more successful. Zynga's founder said at a Q&A session in 2009:

*...I knew I needed revenues right f-cking now. Like I needed the revenues now. So I funded the company myself but I did every horrible thing in the book to just get revenues right away...We did anything possible to just get revenues...<sup>422</sup>*

What kinds of "horrible things" could Zynga have done? After all, the company just made casual Facebook games. One of its most popular titles involved planting seeds and harvesting vegetables on a virtual farm. These games seemed harmless, not evil, and Zynga even regularly held special in-game events to raise money for charities.<sup>423</sup>

Nevertheless, Zynga received more than its share of criticism. It was accused of exposing its players to scammers,<sup>424</sup> treating its employees unfairly,<sup>425</sup> and systematically<sup>426</sup> stealing games from smaller developers,<sup>427</sup> but these practices were hardly unique

within the game industry,<sup>428</sup> let alone the business world. Perhaps Zynga's worst crime was excelling at exactly what every game maker at the time was trying to do, and that was to make incredibly addictive games.

## STRUNG OUT ON ENTERTAINMENT

Just how addictive were social video games? Although game addiction was not yet an officially recognized disorder, many scientists compared it to drug addiction.<sup>429</sup> Freemium games were like the savvy crack dealers who gave away samples to new customers, just enough to make sure they would come back for more. The first hit was free and very rewarding, but soon users needed more and the costs quickly increased. In the worst cases, it cost people their savings, their families, even their lives.

In 2011, an American woman pleaded guilty to embezzling over \$166,000 to spend primarily on two Facebook games: *Mafia Wars* and *YoVille*.<sup>430</sup> The previous year, another woman in the UK had her three children taken away when child protective services discovered that she had been so engrossed in an online game that she had stopped taking care of her family, leaving her kids to eat cold beans from a can.<sup>431</sup> Earlier that year, a couple in South Korea spent so much time playing an online game in which they cared for a virtual child that they allowed their real infant daughter to die of starvation.<sup>432</sup> These games could be so consuming that some people ignored not just others, but also their own safety, literally playing themselves to death. In the early 2000s, several people died after marathon gaming sessions,<sup>433</sup> sometimes playing 50 hours at a stretch.<sup>434</sup> These were rare extremes, but they illustrated the extent of the addictive power of games. Left unchecked, they could have damaging effects.<sup>435</sup>

Most of us never experienced such serious problems, but social games nevertheless wormed their way into our lives. In 2011, playing an online social game was a daily habit for more than 80 million people in the US and UK, and about 50 million played multiple times each day. About half the time players visited Facebook, they did so specifically to play a game, which they typically did for between 15 minutes to two hours at a time, and these were just the casual players.<sup>436</sup> The media had long perpetuated the idea that video game players were pasty, socially awkward young males,<sup>437</sup> but in reality, the average player was a 39-year-old woman who had been playing for at least a year, if not longer. In fact, close to half the population regularly played social games, and the amount we played was rising rapidly in practically every way it could be measured.<sup>438</sup>

Ever since Atari released *Pong* in 1972,<sup>439</sup> video games have only grown in popularity, but before the turn of the millennium, rarely had we heard of games ruining lives, or of middle-aged women playing them for that matter. Electronic games had always been an amusing way to relax and unwind, and entertainment continued to be a primary reason people played them, at least at first.<sup>440</sup> However, more modern online games had specific features that convinced a broad audience not just to try them, but furthermore to keep playing long after the novelty had worn off.

Most notably, games had evolved from solitary into social activities. Constant interaction with other people turned games into a source of conversation and companionship. Real friendships formed in these virtual worlds. A survey of *World of Warcraft* players found that over half had made

friends through the game whom they later met in person, and one in eight had met a romantic partner.<sup>441</sup>

Social interaction explained why people played in general, but not necessarily why they spent so much time with the same games. Soon it became clear that the most addictive element in these games were their achievement systems, which could drive people to keep playing long after the game ceased to be entertaining or even enjoyable, at least in a traditional sense, and became more work than play.

In the late 1990s, Troy Stolle, an Illinois construction worker, toiled relentlessly to earn the rank of “Grandmaster Blacksmith” in the first true MMORPG, *Ultima Online*. Writer Julian Dibbell described Stolle’s efforts in *Wired*:

*To reach that level, Stolle spent six months doing nothing but smithing: He clicked on hillsides to mine ore, headed to a forge to click the ore into ingots, clicked again to turn the ingots into weapons and armor, and then headed back to the hills to start all over again, each time raising [his avatar’s] skill level some tiny fraction of a percentage point, inching him closer to the distant goal of 100 points and the illustrious title of Grandmaster Blacksmith.*

*Take a moment now to pause, step back, and consider just what was going on here: Every day, month after month, a man was coming home from a full day of bone-jarringly repetitive work with hammer and nails to put in a full night of finger-numbingly repetitive work with “hammer” and “anvil” - and paying \$9.95 per month for the privilege.<sup>442</sup>*

Stolle’s dedication was not unique. A decade later, multiple studies found that the typical *World of Warcraft* player spent so many hours per week in the virtual world of

Azeroth that the game essentially took the place of a part-time job.<sup>443</sup>

## AZEROTHIAN ECONOMICS

The more people played *World of Warcraft*, the more they were motivated by the game's achievement system,<sup>444</sup> which to this day is one of the largest and most intricate ever created. It consisted of thousands of challenges,<sup>445</sup> each with various point values assigned to them. These achievements ranged from the very easy, which a single player could complete in a few minutes, to the nearly impossible, which required large groups of skilled players to work together for weeks or even months to defeat powerful opponents while imposing frustrating handicaps upon themselves, all for the sake of earning a few points.

Completing these challenges was entirely optional. What's more, these points did not affect gameplay whatsoever. More points did not make a character more powerful, nor could points be redeemed for virtual goods. Despite their lack of utility, players found themselves going out of their way to collect these points for all sorts of reasons.

All players earned a few achievements naturally throughout the course of the game, leaving them with a long to-do list with only a few items crossed out. A sense of duty compelled some players to finish what they had started. Others just could not stand leaving a list like that incomplete. Either way, they happily traveled around Azeroth performing the tasks they had been assigned for the satisfaction that came from steadily checking them off the list. Others earned achievements out of pride, completing as many as possible to see how many points

they could rack up, or conquering particularly difficult challenges just to prove that they could.

Still others completed achievements to boost their online identity. For instance, a handful of achievements offered honorary titles for completing them. Traveling to every major area in Azeroth would allow a character named Grabthar to be called “Grabthar the Explorer.” Nearly half of all players completed this challenge,<sup>446</sup> but others that were harder to obtain conferred some level of social status. For example, being called “Arena Master Grabthar” would let everyone know that the player had reached the highest ranks of the game’s gladiator-style combat tournament,<sup>447</sup> while “Grabthar the Insane” would indicate that the player had spent literally hundreds of hours performing unbelievably repetitive tasks for the sole purpose of earning that title.<sup>448</sup>

A small segment of players took the role-playing aspect of the game very seriously, acting as if Azeroth were a real place, so they sought titles befitting their mighty warrior and warlock alter-egos. The vast majority, though, saw *World of Warcraft* as just a game and never confused themselves with their avatars, but they still worked hard to make their image more impressive. In a world where 10 million players all shared the same 26 basic 3-D character models, people strove to differentiate themselves, and the achievement system provided a clear way to do that. Accomplishments shaped the way players were seen and treated by the thousands of real people they interacted with in the game, which meant achievements gave social benefits as well.

When people evaluated each other – to decide whom to play with or just to determine who was the better player –

they typically looked at two criteria: their equipment and their achievements. In other words, players judged each other by what they had obtained and what they had accomplished, the very same criteria people have used to judge each other throughout all of history. In *World of Warcraft*, however, these measures were much more easily quantified and compared.

The value of a player's equipment was typically reduced to a single number, known as a "gear score," which measured how powerful characters were based on the armor and weapons they had acquired.<sup>449</sup> This number served as a sort of credit rating since people with higher scores generally tended to perform better. When choosing a team for a quick activity, casual players made snap decisions and picked the people with the best equipment.

More serious players gathered together in large groups, known as guilds, who played together for several hours at a time, multiple times each week. During many activities, one wrong move by a single player could cause the entire group to fail, so guilds needed to know a player was competent before they invited him or her to join their ranks. Top guilds had hundreds of applicants for each opening on their team, so they needed a reliable way to sort through them. They too looked at gear scores, but this number was just a benchmark of how well players could perform in theory. How much of that potential they reached was based on their skill level, and a gear score said nothing about that. Just as wearing a wetsuit did not make someone a professional diver, powerful armor did not necessarily mean a person was a good player. Plus, as the game progressed, it became easier for people with little experience to obtain good gear, which made achievements

matter more than ever.<sup>450</sup> Achievement point totals gave a rough measure of how much a person had played the game, and the right individual achievements could show that a player had the kind of experience the guild was looking for. In fact, it was common for guilds to state on their applications that only players who had earned certain specific achievements would be considered.

## LIFE, GAMIFIED

Beyond entertainment, achievements in *World of Warcraft* gave players a sense of self-worth, purpose, and direction. Achievements guided people's behavior and pushed them to accomplish great feats. Achievements defined people's identities and let them quickly sift through mountains of information to learn reliable facts about others so they could make informed decisions. And everything that Blizzard's achievement system did for the denizens of Azeroth, *Badges* did for the inhabitants of the real world.

Facebook turned life itself into a game, the largest massively multiplayer social game ever. For practically every activity imaginable, *Badges* had a collection of achievement paths, which were all mini-games themselves complete with their own point systems, leaderboards, and prizes.

We didn't even have to go out of our way to play. In fact, most of us started playing without realizing it. Listening to a song, going to the gym, taking a class – nearly everything we did got us closer to earning some badge or another. The resulting flood of awards would have been overwhelming if not for Facebook's combination of personal preferences, crowdsourced ranking, and predictive filtering that made

the most important badges bubble up to the top, where the badges we cared about most became trophies we showed off to the world.

Of all the similarities to video game achievement systems, though, the most meaningful was that *Badges* motivated us to pursue goals we had never considered before, and furthermore to keep working toward them long after we would have otherwise given up. By turning life into a game, *Badges* got us to work harder and to enjoy ourselves while doing so. Earning points was gratifying. We liked receiving badges, and we especially liked the perks that came along with them. We also appreciated how Facebook showed our friends what we had accomplished, since it let them know without making us seem like we were bragging. Most of all, though, we loved how these game mechanics made us feel – which was surprisingly good.

## POSITIVELY ADDICTED

For decades, video games revolved around conquering opponents. Each game had a distinct winner: the player who earned the highest score, crossed the finish line first, or survived the longest. Gameplay consisted of clear, simple actions, like collecting coins or shooting aliens. Such tasks gave us a rush of dopamine,<sup>451</sup> which is one of the brain's most powerful “feel-good” chemicals and is linked to pleasure, motivation, and addiction.<sup>452</sup> In general, though, these primitive games pushed buttons that the male brain found more rewarding,<sup>453</sup> which helps explain why fewer women played.

As games became more social, though, they became less about winning and more about interacting with others. In *FarmVille*, for example, players planted seeds, harvested

vegetables, and built barns. They could visit their friends' farms to water their crops or leave messages for them. However, they could not defeat their friends, or even "win" the game for that matter. Even games built around violent combat became less adversarial and more about cooperation. In *World of Warcraft*, slaying the largest dragons required a group of people to work together toward a common goal. Players needed to communicate effectively and support each other to have any hope of success. These more mature games appealed to women, and by 2012, of those playing computer and video games, adult females outnumbered young males three to one.<sup>454</sup>

At the same time, Pinterest was taking the internet by storm, growing faster than any other website in history, by some measures.<sup>455</sup> Pinterest was not a game, per se, but another form of online entertainment: a virtual pin board on which users could organize photos – not their own photos, usually, but ones they found elsewhere – into collections, similar to scrapbooking. It was so addictive to females that one journalist called it "digital crack for women,"<sup>456</sup> but just as women thought early video games were pointless, men did not "get" Pinterest. In fact, in the beginning, 98 percent of the people who liked Pinterest on Facebook were female.<sup>457</sup>

This behavior can also be explained on a chemical level. Many women were using Pinterest to create vision boards, collages of images that showed what they valued and desired in their lives. As it turns out, sharing personal information also activates the brain's dopamine system just like shooting aliens does.<sup>458</sup> In men however, the promise of a social reward typically activates only a small portion of this system, compared to a much larger portion

for tangible rewards. With nothing concrete to be gained and no clear action to take, many men found Pinterest pointless. On the other hand, female brains typically value both kinds of rewards equally, and value social rewards far more than men do,<sup>459</sup> making Pinterest a very pleasurable application.

When Facebook introduced the “Lifetime Goals” feature to *Badges*, it allowed people to add any badges they hoped to earn someday, which let them create a collection of their hopes and dreams, much like Pinterest, which appealed to women. However, along with each badge came a checklist full of tasks to complete and badges to earn, which made the exercise seem much more useful to men.<sup>460</sup>

Making such a list is a crucial step toward actually achieving a goal, one that we used to frequently skip because it was so laborious. With *Badges*, one click gives us a complete roadmap. What’s more, most achievement paths are designed by leading professionals in their field, or at least people who know exactly how to accomplish a goal because they have already done so themselves. *Badges* rewards us for milestones and helps us set deadlines, maintain realistic expectations, and measure our progress – all hallmarks of good planning that are hard to put into practice on our own. With expert advice and social support, Facebook sets us up for success. And each task we check off, every milestone we reach, every badge we earn comes with yet another hit of dopamine, making us feel happier, more productive, and less depressed, reinforcing the entire experience.

As time went on, more of the badges we earned were for helping other people, which can also be explained with neurochemistry, at least in part. Along with dopamine,

using Facebook also elevates levels of oxytocin,<sup>461</sup> another feel-good brain chemical linked to empathy, love, and trust.<sup>462</sup> Oxytocin makes people more charitable<sup>463</sup> and counterbalances testosterone, which is associated with selfish and cruel behavior.<sup>464</sup> This feeling of generosity made us more receptive to the idea of volunteering, including those of us who had never done so before.

For many, *Badges* simply gave us the direction we needed to start working for a cause we cared about, although others began doing good for less noble reasons. To some, *Badges* felt less like a game and more like a public record of our decisions, which was unwelcome to those who voiced their opinions loudly but did little to back them up. The first few times these people volunteered was the result of social pressure, since we tend to be on our best behavior when we are being watched. Others began volunteering purely to get rewards, like promotional discounts from retail partners.

This was especially true for young people who gave their time to get special features in video games that could not be obtained any other way. Millennials were used to getting whatever wanted with little effort, but in the case of action-based content, there was no way to buy, cheat, hack, or pirate their way around it. For many in this generation, the first time they volunteered was to unlock something they desired in their favorite game.

Regardless of what initially motivated us, *Badges* got us to volunteer more, and while some of us may not have started for the best of reasons, once we got going, we were hooked. We got out of the house, made new friends, tried new activities,<sup>465</sup> and enjoyed the natural high that comes from helping other people. Driven by doing good things for

ourselves and others, all that dopamine and oxytocin created a self-sustaining loop of positive reinforcement which only intensified our Facebook habit.

For many, social media applications were already harder to resist than cigarettes or alcohol, and many people found the urge to use them almost as strong as the need for sleep or sex.<sup>466</sup> Some psychiatrists even suggested that “Facebook addiction” might be considered a clinical disorder.<sup>467</sup>

Adding *Badges* made Facebook even more addictive, but at the same time, it appealed to a wide spectrum of human needs, including everything from our primal urges to hunt and gather to our more refined needs for self-actualization and acceptance within a community. All of these created a cocktail of pleasurable chemicals that got us hooked for life.

Every aspect of *Badges* was addictive by design. Achievement paths drew us in by offering immediate benefits that were easy to earn, then showing us how the next step offered an even better reward and required only a little more effort to reach. The more we put in, the bigger the rewards, and after we invested enough, psychological phenomena like loss aversion and the sunk cost fallacy compelled us to keep going, eventually putting in more time and effort than we ever would have dreamed.

If this all sounds familiar, it should, because these very same mechanics are not only what make freemium games so addictive, but also the loyalty marketing programs discussed earlier, which are essentially games themselves. Spend some money, get some points. Earn enough points and you get a prize. Yet instead of influencing us to become

loyal to a particular brand, Facebook helped us to become loyal to ourselves and our communities. To dedicate our time to doing more and becoming better people. To get addicted to improving ourselves and making the world around us a better place. And just like with loyalty programs, we didn't feel coerced by Mark Zuckerberg or resent him for affecting our lives this way; in fact, we loved him for it.

## BADGES IMPROVED FACEBOOK'S CORE BUSINESS

Even before *Badges* turned life into a game, there was already strong evidence that games could be used for productive purposes, and could even advance our society.<sup>468</sup> For example, games had already gotten people to contribute to scientific research in ways they never thought they could have. One such game let ordinary citizens search images of space, leading to the discovery of two planets.<sup>469</sup> Another game let players help researchers at UCLA diagnose malaria with about the same accuracy as an infectious disease expert.<sup>470</sup> Similarly, another game enabled people to analyze images of tuberculosis cells for the Harvard School of Public Health. By turning it into a game, a thousand people accomplished in two days what would have taken researchers months or even years to complete.<sup>471</sup>

Games were also great for teaching new skills. The US military used games to train special agents;<sup>472</sup> in fact, it had been using video games to create better soldiers since the early 1980s.<sup>473</sup> In 2008, a civilian was able to provide proper care to victims of a highway accident using first aid knowledge he learned playing *America's Army*, a game developed as a recruiting tool.<sup>474</sup> Video games helped save

many more lives as well, since virtual reality simulations became a regular part of training<sup>475</sup> that significantly improved surgeons' performance in the operating room.<sup>476</sup>

## CADILLAC, THE FACEBOOK OF CARS

When companies started mixing beneficial games with social networking, though, they increased the number of potential players and introduced an important aspect: social competition. Mobile apps like *Fitocracy*, *Nexercise*, and *RunKeeper*, for instance, let users earn points and awards by working out, which they could compare against those of fellow exercise enthusiasts.<sup>477</sup> These games created online communities based around common interests, some of which were very narrow. For example, *Opower* let people compete against their neighbors to see who could lower their monthly energy usage the most.<sup>478</sup> On their own, games like these only reached fairly small groups of likeminded people. Facebook, on the other hand, had an audience of nearly a billion people who were, collectively, interested in everything imaginable.

Facebook's massive user base was the envy of the tech world. The social media landscape was littered with hundreds of companies trying to become the next Facebook of something. *LinkedIn*, *Jive*, *Yammer*, and *Chatter* were all trying to become the "Facebook of Business."<sup>479</sup> *RunKeeper*, for that matter, was trying to become the "Facebook of Fitness."<sup>480</sup> But Facebook was already, well, Facebook. The undisputed king of social networking. The place everyone went to interact with friends and share information about their lives.

Game developers were trying to create their own social networks,<sup>481</sup> but if Facebook had seen this as a threat and

responded in kind by trying to make its own games, it would have failed. Instead, it embraced this trend and built a system that let anyone make social games, which ended up being the key to its success.

Other companies that built achievement systems also designed all the achievements, and this is where they went wrong, because retaining such tight control severely limited their audience and their growth.<sup>482</sup> Facebook, on the other hand, built the most massive achievement system ever without making or awarding a single badge itself. The company knew that it couldn't possibly create meaningful badges and achievement paths for everything its users cared about. Facebook also recognized that badges would be more valuable if they were awarded by third parties. If we read on Facebook that someone had been a wrestling and water polo champion at Stanford, where he then graduated *summa cum laude*, we might suspect him of stretching the truth. If those details came straight from Stanford, though, they would carry considerably more weight.

For every kind of information imaginable, there were already sources we trusted, and Facebook did not try to replace them. Instead, Facebook stuck to its strength, which was connecting people. With *Badges*, Facebook created a simple interface through which any organization could interact with individuals and display the valuable information they had about them in a useful, consistent manner.

The ability to show verified data instantly made Facebook the authoritative source for all kinds of personal information, and soon companies were tripping over themselves to become the “official” provider of such data.

As a result, Facebook became the world's most trusted source of information about people without having to collect or verify any of that information itself.

When Facebook turned life into a game, it wisely did not try to control that game. Facebook won because it was satisfied just to keep score.

## LIFE'S SCOREBOARD

*Badges* gave us new ways to express and define ourselves that appealed to some of our strongest psychological needs. Curating our badge collections let us share what was most important to us: our greatest accomplishments, our lifelong ambitions, and what we were working on at the moment. Millennials in particular were desperate for ways to express themselves and appear unique. They were six times as likely as older adults to have a non-traditional body piercing, and before turning 30, nearly four in ten had a tattoo.<sup>483</sup> But on Facebook, everyone decorated themselves with badges.

Our collections served as trophy cases, résumés, bumper stickers, printed t-shirts, and status updates in a concise, graphical format. *Badges* turned experiences into icons, and we expressed ourselves through our choices of imagery and symbols. The visual mix of our top badges became our logos, modern versions of medieval coats of arms that branded us by communicating what made up our unique identities.

Consolidating all our accomplishments in one place like this turned *Badges* into the scoreboard for our lives. Years ago, people who wanted to see what old friends had been up to looked at their Facebook Timeline pages. On the other hand, managers typically went right to the work and

education section when reviewing profiles of job applicants. Likewise, when checking out potential dating partners, the first thing men viewed were photos, while women would most often look at relationship status before anything else.

Today, though, everyone skips straight to the scoreboard. In 2015, researchers found that the first area almost all people looked at when viewing a Facebook profile was their badge collection, regardless of the reason for their visit. Whether they were looking to see what their friends were doing or find out what set a prospective employee out from the crowd, all the information was in one place. Later that year, *Men's Health* published an article called "How to Look Good on Facebook," which gave the following advice:

*Share what you like with your close friends, but the badges you make public are the first details someone stalking you on Facebook learns about you. That person could become your next girlfriend or boss, so if you want to get laid or get paid, you need to make a good first impression. Your badges are more than a report card. They are a distilled version of you. Most people form an immediate opinion of you based on the first badges they see on your main profile page, a.k.a. your Top Six. Ideally, these should show that you...*

- 1) *...are successful*
- 2) *...are physically fit*
- 3) *...are smart*
- 4) *...are talented*
- 5) *...have a good sense of humor*
- 6) *...have good taste*
- 7) *...are fun to be around*
- 8) *...are generous*
- 9) *...are interesting and unique*

*You need to communicate nine qualities with six badges, so you will need some that serve double duty,*

*like one for running in a charity marathon, which shows you are both fit and generous. Keep your collection current. Nothing reeks of desperation like a guy with a bald spot who still has a high school football championship badge in his Top Six. If you don't have badges that can display everything on this list, stop reading right now, and get out there and earn some.*

Cosmopolitan offered some similar advice about charity in a feature titled “What Badges Say About Him... and You.” An excerpt:

*Sure, bad boys get our attention, but what really drives us wild is finding out that the hot guy who races motorcycles also volunteers at an animal shelter. Did you know that “generous” is code for “good in bed?” That goes for you too, ladies, so make sure to show off at least one do-gooder badge of your own. Looking like all you care about is yourself is a total turnoff.*

These articles highlighted how *Badges*, by design, revolved around what was important to all of us as Facebook users: ourselves, and what other people thought about us<sup>484</sup> – even when talking about charity. Although this approach may seem shallow, it is another reason why Facebook succeeded and ended up making us all more generous in the process.

Even before *Badges*, our good deeds could have appeared in our Facebook posts or timelines, but *Badges* put charitable contributions front and center in our profiles, right alongside all our other accomplishments. This seemingly minor visual detail elevated charity's importance by making it part of the scoreboard we used to define and measure ourselves. We all knew the unwritten rule that said we should have at least one recent badge for donating some time or money on our profile. When none were there,

the absence was conspicuous and prompted gentle ribbing from friends, or, in the case of public figures, angry complaints from critics.

But the reasons why *Badges* convinced us to become more generous ran deeper than just peer pressure. In fact, many other attempts at using social media to convince people to do good turned people off, largely because many worthy causes are simply not that compelling to the average person.<sup>485</sup>

*Badges*, on the other hand, was not about charity. It was about us as individuals and our accomplishments, and about leading a full, rich life. No matter what was important to us, there were badges for everything imaginable. Constantly looking at our scoreboards got us to work to improve our ranking, which sometimes also meant becoming more charitable. For example, *Badges* encouraged us to be more social, watch less television,<sup>486</sup> and become more active in our religious communities,<sup>487</sup> all of which are also associated with volunteering.

Facebook made us receptive to charitable opportunities by presenting them not as chores, but as ways to enrich and enjoy our lives. *Badges* piled on the incentives, but most of us didn't need more than a nudge. Since we had always thought of ourselves as charitable people, the scoreboard just reminded us to actually do something about it.<sup>488</sup> Even starting with one small kind deed made us more likely to perform larger ones later – a widely-observed phenomenon known as the “foot-in-the-door” effect.<sup>489</sup> Facebook was already the center of our online identities and social lives, and *Badges* made charity a part of them.

## ZUCKERBERG'S LAW

Old guard business analysts criticized Facebook for not producing anything, but that wasn't entirely accurate. Facebook was a factory, and its core product was the status update. We, the workers, cranked out nearly half a billion of them each day in 2011, along with over 3 billion "likes" and comments,<sup>490</sup> and it looked like these numbers would never stop increasing. In 2008, Zuckerberg himself predicted that the amount of information we share would double each year, and he wasn't far off.<sup>491</sup> However, our lives were not getting twice as interesting each year, which meant that we just kept sharing more and more mundane details of our lives. Our free time and attention spans were not doubling, either, so the more everyone said, the less anyone heard.

For years, Facebook had already been deciding which news to show us based on what its algorithms thought we would find interesting.<sup>492</sup> In fact, by 2012, our average Facebook posts never reached almost 90 percent of our friends.<sup>493</sup> This made our news feeds more manageable, but it also meant that much of what we thought we were sharing was actually unseen, and it could even make some of our friends disappear without us realizing.<sup>494</sup>

*Badges*, on the other hand, included information that let Facebook's filters make more intelligent decisions. A badge's significance could be gauged by its global ratings, which meant that landmark achievements like graduating from college were shown to everyone. Facebook also compared users' badge collections to show announcements more often to people with similar interests. Meanwhile, socially irrelevant badges, like most from retailers or video games, were rarely shared with anyone by default.

Posts with photos already got more feedback than text-only updates, or even those with video,<sup>495</sup> but *Badges* created an entirely new breed of status update. Meaningful badges required some kind of real achievement to earn, so badge announcements were less common and more interesting than regular posts, which led them to be many times more popular, too. This trend was self-perpetuating. As badge posts received more attention and others received even less, people learned that if they wanted to get our attention, they would have to earn it.

## SAYING MORE WITH LESS

Many of the people who had been filling Facebook with whatever was on their minds at the moment found their audiences diminished. For those who remained, *Badges* helped further by improving the quality of the conversation.

Since the dawn of the internet, online discussions had been infamously useless, with everyone tossing in their two cents. With *Badges*, though, credentials could be instantly verified, showing who knew what they were talking about. Thanks to some simple badges, it didn't require a Master's degree to put a little authority behind one's words, nor to raise the level of online discourse.

In 2012, a battle was raging in America over the Patient Protection and Affordable Care Act, better known as Obamacare. After a controversial Supreme Court decision that was so complex that two of the top three news channels initially reported it wrong,<sup>496</sup> millions of people without law degrees headed to Facebook to give their not-quite-expert opinions about this 193-page ruling.<sup>497</sup> This quickly devolved into a brawl because people were too

uninformed to have a productive discussion. Despite being the most closely followed story of the month, only about half of Americans knew even the first detail about the decision, but most everyone had an opinion about it.<sup>498</sup>

When *Badges* was introduced about a month later, a new nonpartisan service called *CheckYour.info* quickly released a short quiz designed to dispel misconceptions about the legislation – the five myths most popular among Democrats as well the five most popular among Republicans. Answering all ten questions correctly earned the *Obamacare Basics* badge. As arguments ensued in the coming months, some users began posting the badge when they refuted particularly misinformed statements, telling people to get the basic facts right before lecturing others about topics they didn't understand. The trend spread rapidly across Facebook and within a week, over 30 million people had earned the badge.

This was an amazing phenomenon. An enormous chunk of voters suddenly became better informed about an important issue right before a presidential election. Through social pressure and fear of public embarrassment, people actually started checking facts before voicing their opinion – a practice rarely seen before. Many of the most flawed arguments on both sides disappeared as people either deleted their erroneous comments or refrained from making them in the first place. With all that racket gone, the pointless shouting match shifted toward a real debate.

Over the years, *CheckYour.info* has made tens of thousands of quizzes, and its balanced top ten format has made it more popular than Wikipedia for many of the topics it covers. One of its dreaded *TripleChecked* badges is the last thing we want to see in a reply to one of our

arguments, since people only post them when we are wrong about a fundamental fact. This is why it is still common today to take a *CheckYour.info* quiz before making a comment about controversial issues.

Illustration: Facebook conversation



**Kirk Threadlew**

If you love your kids then tell Senator Graham to support the gas tax so the Earth won't be ruined by cars.

Like · Comment · 5 hours ago near Las Vegas, NV



**Dani Taylin** #1) Evidence shows that raising gas a dime will have almost no effect on consumption. #2) The proceeds from the tax don't go to any environmental cause. Seriously, CheckYour.info. ;)



**TripleChecked: Alternative Fuels**

CheckYour.info

Like · Comment · View Badge · 1 hour ago via mobile

👍 6 people like this.

## THE FALL OF PINK OCTOBER

*Badges* did similar wonders for other social causes, too. People started checking their facts before promoting a movement they just heard about, and a quick look at someone's badge collection showed others just how long they had been an advocate. People could earn a badge for sharing a video or donating a few dollars, but easy tasks like these were just the first steps in longer achievement paths which guided people toward more meaningful action.

For example, back in 1985, October was declared National Breast Cancer Awareness Month by the American Cancer Society and a pharmaceutical company that makes cancer drugs. This campaign to promote mammograms helped increase diagnoses in the mid-1990s, but after that, it had

little such effect,<sup>499</sup> and doctors later said it had outlived its usefulness.<sup>500</sup>

Nevertheless, the movement continued to pick up steam, although all the hype surrounding breast cancer did little to help women. Obsessed with youth and beauty, the media focused on patients who were diagnosed early in life, which was relatively rare,<sup>501</sup> and women, particularly younger women,<sup>502</sup> became terrified of breast cancer.<sup>503</sup> One study of women under 50 found they thought they were over 20 times more likely to die of breast cancer within ten years than they actually were.<sup>504</sup> Fear created demand, and each year more and more articles were written about breast cancer instead of more dangerous diseases.<sup>505</sup>

These distortions helped make breast cancer women's top concern, even though they were far more likely to die from lung cancer and over ten times as likely to die from heart disease<sup>506</sup> – both of which women could have been doing more to prevent because doctors already had proven strategies for avoiding them.<sup>507</sup> However, even by the 2010s, despite decades of generous funding, medical science was only beginning to understand how breast cancer works and had barely made a dent in incidence or mortality rates.<sup>508</sup>

Breast cancer awareness, on the other hand, had grown into a multi-billion dollar business, although woefully little of that money ever went to fight cancer. Instead, it went to telemarketers, scammers, and companies who turned their products pink to associate themselves with the cause without actually doing much to further it.<sup>509</sup>

Each October, from shopping bags to windbreakers to footballs to the front of the White House, it was hard to

find anything that wasn't covered with pink ribbons. And every year, Facebook got a similar treatment as millions of users did their part to spread awareness in the best way they knew how: by updating their status. At first, some posted statistics, some promoted fundraisers, some shared links to stories about cancer survivors or talked about people close to them who had been affected by the disease. At the end of 2009, though, many women began forwarding chain letters that instructed female friends to state their bra color in their Facebook status and to not tell any men what it meant.<sup>510</sup> These messages said the point was to raise awareness for breast cancer research, although they didn't mention how this would be accomplished. Over time, this meme became even more cryptic and moved further away from having anything to do with breasts, let alone cancer research. Chain letters in October 2010 told women to say in a sexually suggestive way where they liked to keep their purses. A year later, women were asked to use the numbers in their birthdate to construct a bizarre message that implied they were experiencing pregnancy cravings.<sup>511</sup> These posts were ineffective at best, and people actually affected by the disease found their shallowness offensive.

Part of the problem was that most popular campaigns were centered around finding a cure, even though medical experts said they should focus on prevention.<sup>512</sup> In fact, their pink-themed approach may have been counterproductive by actually making women less likely to get screened.<sup>513</sup> Despite the fortune poured into the breast cancer awareness industry, most women were not even following the most basic recommendation – to get mammograms yearly after age 40 – even if they had insurance.<sup>514</sup>

Awareness was not enough. The real goal was to get people to take action, which is exactly what *Badges* was great at measuring. With *Badges*, people couldn't spend ten seconds updating their Facebook status and fool themselves into thinking they had somehow joined the fight against cancer. They had to actually do something.

## WALKING THE WALK

In October 2016, the American Cancer Society released two badges that bypassed the retail purveyors of pink overload and were awarded directly to individuals. The *Talking the Talk* badge required people to pass a quiz on breast cancer, then participate in an act of advocacy, like making a small donation, participating in a fundraiser, or sending a letter to Congress about cancer research. The *Walking the Walk* badge, on the other hand, required people to earn a third-party badge for regular exercise, plus sign a public pledge to maintain a healthy weight and limit alcohol consumption. Furthermore, women over 40 also had to have a badge for receiving a mammogram within the last 14 months.<sup>515</sup>

The Deputy Chief Medical Officer of the American Cancer Society, Dr. J. Leonard Lichtenfeld, explained the reasoning behind the badges on his blog:<sup>516</sup>

*These two badges were carefully designed to communicate two specific ideas.*

*Breast cancer already gets enormous amounts of attention, but much of what is said about it is misleading or flat out wrong. With the first badge, Talking the Talk, we want to say to people who want to be advocates, "We'd love to have your enthusiasm, but you need to be informed."*

*As for the second badge, calling it “Walking the Walk” caused a bit of a stir, but we did that to get people talking. With how many walk-a-thons we have organized in the last 25 years, people would think they’d get the badge for participating in one, but that’s not what “walking the walk” means, at least not when it comes to breast cancer.*

*What we know is far from complete – but right now the best strategy is to maintain a healthy weight, get regular exercise, limit alcohol consumption, and for women over 40 to get yearly mammograms.*

*First and foremost, even more than coming out and raising funds for us, we want women to “walk the walk” by taking care of their own health. If we can get more people to do that, then this intervention can be considered successful.*

Of course, National Breast Cancer Awareness Month is now a thing of the past. As medical research progressed, it became clear that mammograms were no magic bullet in the fight against breast cancer, especially for younger women.<sup>517</sup> In fact, most of the advice that the American Cancer Society could offer women amounted to adopting to a healthy lifestyle – one which had an even greater chance of lowering their risk for diabetes, heart disease, stroke, and other types of cancer – which resulted in several other major groups trying to deliver almost identical messages.<sup>518</sup>

Once activists were able to move past general awareness to measure individual action, they realized they could help women more by focusing less on one specific disease and more on overall health. Since National Breast Cancer Awareness Month was already firmly established and linked to a health issue associated with women,<sup>519</sup> it made little sense to abandon it or even compete with it. Instead, in 2019 the American Cancer Society joined forces with the

American Heart Association, the American Diabetes Association, and nine other organizations to launch a collaborative campaign to rebrand October as Women's Health Month.<sup>520</sup> Based on its success, the next year they established March as Men's Health Month as well.<sup>521</sup>

At the same time, they changed their massively popular badges to tailor them to individuals based on key personal data. Today, the *Talking the Talk* badge is still fairly easy to obtain. It requires us to pass just a few quizzes about diet, exercise, and major health risks, and now we have our choice of hundreds of advocacy efforts.

As we have shared more information about our lives over the years, though, the coveted *Walking the Walk* badge has become harder to earn. Since so many health risks are related to obesity, we need to have badges that show we get regular exercise and have a healthy body fat ratio. Furthermore, any badges that indicate smoking, heavy drinking, harmful drug use, or consistently unhealthy eating habits disqualify us. Finally, we also need to get regular checkups and body scans that meet general medical recommendations for our age and genetic profile.<sup>522</sup> Those of us who don't follow these rigorous requirements for our health do it for the money, because this badge entitles us to huge discounts on health and life insurance.<sup>523</sup>

One of the largest October campaigns today asks women to take care of themselves before the rush of the holiday season. Through this program, participants pledge to friends and family members to earn the *Walking the Walk* badge, who in return promise to provide support and encouragement throughout the next year. The most popular March campaign pits small groups of men against each other, challenging them to see who can improve their

health the most and tracking their progress. (This spring cleaning for the body purposefully coincides with the popular NCAA Men's Division I Basketball Championship.)

One approach is more collaborative, the other more competitive, but both have let people use Facebook to see who in their social network could use a helping hand (or a friendly push). Neither has trivialized a cause by letting someone think he or she has actually done something to combat cancer just by sharing her bra color or posting a picture of his moustache.<sup>524</sup> Instead, campaigns built around these badges let people who really care about health use Facebook to lead by example.

It is by connecting intention with concrete action like this that *Badges* has made communication on Facebook more meaningful. In the beginning, the internet was a level playing field where everyone's opinion carried equal weight, but this did not reflect reality. *Badges* put verified proof of knowledge and experience right next to messages to help us find the ones worth listening to.

Even easy badges like *Talking the Talk* or those from *CheckYour.info* quizzes helped cut down on the mindless babbling that used to fill Facebook. When people started questioning how much individuals actually knew about what they were saying, uninformed opinions stopped getting applauded and instead were met with silence – or worse, backlash. On the other hand, opinions accompanied by relevant badges were well received. This combination of positive and negative reinforcement conditioned people to think before they spoke. Before they promoted a charity, told us how to vote, signed a petition, or even “liked” a band or a TV show, many took a moment to check if they had any evidence to show they had some idea what they

were talking about. If not, they either put in a little effort to get some, or if they didn't care enough, they kept quiet and moved on.

Either way, being a little more careful about what we said online made a huge difference. Researchers estimate it reduced the volume of social media chatter by 40 percent or more,<sup>525</sup> but that actually ended up helping Facebook, not hurting it. We may have said less overall, but each word meant more. As the signal-to-noise ratio of communication on Facebook improved, so did the perceived value of its primary product: the status update, which finally started reaching more of our friends again.

## THE RETURN OF (ACTUAL) SOCIAL NETWORKING

Furthermore, if Facebook's core product was the status update, then its core services were connecting people and providing information about them, both to users as well as advertisers. *Badges* made these services more valuable by increasing the quality of this data. The most obvious improvement that *Badges* introduced was third-party verification, which turned Facebook into the world's central clearinghouse for authentic personal information. Given the choice between verified and unverified data when looking for information about people, everyone naturally chose the former. Facebook became the best place to keep our online identities, which left us with few reasons to use competing social media services.

The company's biggest asset had always been its vast database, but before *Badges*, it had only reached a tiny fraction of its potential value. It's not as if this database lacked information. In fact, it was already filled with an unimaginable amount of personal data that we had

willingly shared about ourselves. However, this information was not very useful because it was highly disorganized.

For example, back in 2012, if Chloe were trying to decide whether or not to spend the next year studying abroad in Japan, she might have shared this in a status update, which would have only reached a fraction of her friends. If by chance her friend Liam read this, he probably would have skimmed right past to the next item on the page if he did not know anyone offhand who could help her make that decision. Alternatively, he could have asked his own social network if anyone knew someone who had studied in Japan, again via a status update that most people would never see. Or, given enough time and persistence, he could have meticulously combed through every one of his friends' Facebook pages until he happened upon a set of photos taken by Sofia, a work colleague, when she spent two semesters at Keio University in Tokyo ten years earlier.

Compare that to now, when Facebook's *New Connections* service notifies us when one of our friends wants to earn a badge that another of our friends has already earned. If the previous situation occurred today, Chloe would most likely add the *Study in Japan* badge to one of her collections of unearned badges, like "Under Consideration" or "Lifetime Goals." Liam would then get a notification that informs him that Sofia's *Keio University Exchange Student* badge suggests she has experience that could help Chloe. If Liam wants to introduce these two friends, he can send them a preformatted message with a tap of his finger, or he can write his own if he wants to be more involved.

Illustration: Default New Connection message

**New Connection**

To:

Message: I would like to introduce you to my friend, **Sofia Vogel**. Sofia earned the **Keio University Exchange Student** badge on May 25, 2029 and may be able to help you earn the **Study in Japan** badge.

Even before *Badges*, almost everything we could ever want to know about a person was right there on Facebook. It was just locked away in trillions of comments, status updates, and photo captions, which were too unwieldy to be very useful. But *Badges* fixed this by giving us a way to store the details of our lives in a more structured format.

Achievements made our personal experiences easy to verify, quantify, share, and compare. At first blush, it sounds like this merely turned us into a bunch of numbers for marketing purposes. While Facebook did make a fortune from this data by using it to deliver the most highly personalized promotions in the history of business, its profit did not come at our expense.

By default, Facebook's advertising system kept our data completely anonymous from advertisers. Plus, enabling companies to target their messages better let them make more sales while bothering us with fewer advertisements. Lower marketing expenses translated into not just higher profit margins for them, but also lower prices for us. The

net result for consumers was that we saw fewer irrelevant ads and received more special offers for goods and services we actually wanted.

But delivering better ads just scratched the surface of what Facebook was able to do with this treasure trove of data. Rather than dehumanizing us, *Badges* connected people in new ways, allowing us to share even more of our lives with each other.

The *New Connections* service, for example, steered our friends to introduce us to people who could help us, which was a fundamental goal of social networking long before we started using Facebook, or even computers for that matter. When we shared what we were working toward, from everyday badges like *Basic Knitting Skills* or *Fitness Boot Camp Cadet* to more serious goals like *30 Days Meth-Free* or *Living with Multiple Sclerosis*, Facebook told our friends if they knew someone that might be able to help without us ever having to ask. Even if we kept these details private, Facebook also let us join discussions among people with relevant badges, or else seek out people who volunteered to let others talk with them anonymously about their life experiences. Through a combination of friends-of-friends and helpful strangers, *Badges* turned Facebook into a universal support group that can provide assistance with everything that is important to us.<sup>526</sup>

## YARDSTICKS AND SUNGLASSES

Other companies have made applications that let us analyze our lives in unique and interesting ways using our badge collections. Some of the most famous apps that do this have been around for decades.

In 2016, *Glamour* teased a story with the cover line: “Is He Good in Bed? Find Out on Facebook!” Inside, sex experts presented a lengthy list of qualities that suggested a man would be a satisfying lover. Along with the article, the magazine also released *LoveScore*, a companion Facebook app that estimated a man’s lovemaking ability based on his badge collection, assigning one of five ratings ranging from “poor” to “excellent.”

When it was first introduced, *LoveScore* only worked on men and based its ratings on approximately 3,000 of the most popular badges. Shortly thereafter, *Glamour* expanded the system to rate women as well, and today it considers nearly 2 million different badges when it calculates a score. *Glamour* keeps its exact formula secret, but according to the most recent documentation:

*LoveScore searches a Facebook badge collection for evidence of physical strength, endurance, flexibility, dexterity, a sense of rhythm, a healthy diet, intelligence, a sense of humor, creativity, passion, patience, generosity, sensitivity, confidence, and strong communication skills.*

Those with low scores today often grumble, complaining that *LoveScore* is no more scientific than the antique love meters we saw at carnivals last century, but research has shown that members of both sexes find the system to be fairly precise when rating other people. However, even those who qualify for the *Excellent Lover* badge rarely display it, preferring instead to let interested parties hunt down the score on their own.

In fact, while *LoveScore* consistently ranks as one of the most popular Facebook apps, most users claim not to know or care about their own rating. Yet every time *Glamour*

tweaks its algorithms, there is a public outcry from the poor souls who get downgraded – although some take it in stride.

Illustration: Tweets in reaction to LoveScore algorithm update



Internal data shows people care more than they admit, because the vast majority of usage comes from people (mostly men) checking up on their own scores. This has made *LoveScore* particularly beneficial in the realm of disease prevention, because without a recent badge from an STD testing service like *im.tested.ru*, the app will not even issue a rating and will instead show a warning. This calls attention to vital information for people who are evaluating a potential sexual partner and gives those who are looking for a new partner a strong incentive to get tested frequently.<sup>527</sup> Over the years, dozens of copycat services like *D8R8R.com* have sprung up, but *LoveType* remains the original and one of the most popular. In fact, there is only one similar application that surpasses it.

In 2017, rival women's magazine *Cosmopolitan* published a feature titled "What's Your Type?" in which the editors listed two dozen male archetypes with names like The Musician, The Stockbroker, The Athlete, and The Casanova. Each description came with a list of badges that

this kind of man might have as well as examples of celebrities who fit the bill. The interactive version of the feature included a Facebook app called *Cosmo Sunglasses* that let “readers view the world through the eyes of *Cosmo*.” By using this app, users could see which archetypes their friends most closely matched based on their badge collections.

*Sunglasses* was a hit, but users complained that it wasn’t very accurate because the information the editors compiled was so limited. Swamped with thousands of suggestions, *Cosmo* decided to open the system up and let their readers decide how *Sunglasses* worked. From then on, any reader could propose new archetypes or vote on which were the most attractive, leading to new types like The Superdad, The Brooding Artist, The Adorable Geek, and The Handsome Older Gentleman.

Readers also determined how these types were defined. For example, anyone could add the *National Collegiate Table Tennis Champion* badge to The Athlete archetype, but how much it counted compared to, say, the *Minor League Baseball Triple-A All-Star* badge was determined by reader feedback gathered through voting, rating, and *Cosmo* quizzes. Men who were rated as an 80 percent match or higher for a particular archetype could earn a badge, but again, hardly any of them actually displayed it on their profiles. Just as with *LoveScore*, guys wanted to look good through *Sunglasses* without appearing to look like they were trying.

In 2018, *Cosmo* asked the men with the highest scores in America for each of the most popular archetypes to participate in a nationwide contest, and candidates’ profiles were published in a special feature article called

“Real, Sexy Men.” Readers then voted for their favorites, and the winner in each category received a badge and title like *Mr. Outdoors 2018*. The contest was a huge success and has since become an annual event that is now localized to over 100 different countries. In 2020, *Cosmo* editor-in-chief Kate White had this to say about *Sunglasses*:

*At first it was just a fun angle on men... no deeper than the advice you'd get from a talk show. What it has become, though, is so much more exciting. Now, Sunglasses is a data-driven model of the female collective consciousness. It represents our shared beliefs and values, and these go far beyond just what we think is sexy.*

*It is also refreshing to be able to give men positive role models who are not celebrities and show women that there are great guys all around them, well within their reach.*

Former editor-in-chief Helen Gurley Brown added:

*Women have suffered through the same old beauty pageants for decades in which our most treasured ability was wearing a swimsuit.*

*Now that we have banded together to come up with a pageant of our own, is it any surprise that it is smarter and asks for a little more substance?*

Although the applications that revolve around sex and dating are the most popular, companies have made plenty of other useful tools. Brokerage firm Charles Schwab, for example, created *uFolio*, a free Facebook app that lets us analyze our lives using information gleaned from our badges. These are presented in the style of corporate annual reports, but in place of earnings and losses, we choose data points based on our interests and activities.

*uFolio* was designed with an open architecture that allows third parties to create modules that we can add to our reports. Golf enthusiasts might include a table designed by Callaway Golf with line items like “Number of courses played, by year” or “Lifetime birdies.” The ecologically conscious might put in graphs from the Sierra Club that compare their activity to national averages, like the total miles traveled by bicycle or the pounds of aluminum recycled annually. Topline reports that show how many hours we spend exercising, watching TV, or volunteering have helped us learn more about what we are doing with our lives. Even seemingly inconsequential data like the number of new restaurants we have tried in the last year become more profound when the total is zero, since we often do not notice subtle changes in our own behavior.

Along those lines, referral service 1-800-DENTIST made an application called *Find Your Smile* that analyzes our interests as well as past and current behavior patterns to make educated guesses at what will make us happy. If we have several old literary badges but have not earned any lately, for instance, it might suggest reading a new book. *Find Your Smile* may not dig deep into our psyches, but it nevertheless helps us identify ruts before we fall into them.

## **BEYOND SOCIAL NETWORKING**

Some save us time, some save us money, some help us meet new people, and some help us make our dreams come true. Our lives have been enhanced by countless useful applications made possible because *Badges* gave us a way to share verified personal information in a structured format. Storing our data with Facebook made it more valuable, which was a good thing for the company because

there was no shortage of other competitors trying to take its place.

When *Badges* was introduced, some of our photos were on Facebook, but we also shared others on Flickr and Twitter. And Instagram. And Tumblr. And Snapfish, Shutterfly, Imgur, Photobucket, deviantART, and Picasa. Like Facebook, each of these services offered free media storage along with varying degrees of social functions. The same went for our videos and YouTube. (And Vimeo, DailyMotion, Blip, Veoh, SocialCam, Viddy...)

Our digital selves were scattered across the internet. Our professional history was on LinkedIn while our hobbies were on Pinterest. Our tastes in books, music, movies, and food were on Amazon, Spotify, Netflix, and Yelp, respectively.

Many had already tried to become the center of the digital universe long before Facebook came along. Microsoft alone made five major attempts in the 1990s and 2000s to create a global online identification system, but none of their efforts really caught on.<sup>528</sup> Facebook's first step in this direction was very similar: By lending out its registration system,<sup>529</sup> it let people log in to other websites with their Facebook accounts.

Facebook expanded this concept when it made *Identity*, which kept our personal data secure and let us quickly access it by logging in anywhere, not just online. Later it released *Commerce*, which gave us the same level of control over our financial information as well. These radical new developments solved serious problems, however they were viable only after *Badges* gave us good reasons to route just about everything we did through

Facebook. And each new feature further secured Facebook's future because they all improved the company's primary business.

At each step of the way, Facebook earned our permission to learn more about us by using what we shared to make our lives more enjoyable and convenient. With enough data, when we visited a restaurant, a dozen or more Facebook apps might have sprung into action automatically, notifying the chef of our food allergies listed in *Identity*, highlighting which dishes on the menu screen would help us reach the health goals we were working toward in *Badges*, or drawing data from *Commerce* to let us know that the pinot grigio we enjoyed so much at that Tuscan café three years earlier just happened to be on the wine list.

Of course, all this information helped Facebook's bottom line, too. The more Facebook knew about us, the better it could deliver advertising, which was actually good for everyone. Companies did not want to waste their money delivering irrelevant messages any more than we wanted to waste our time listening to them. Other commerce systems delivered ads based just on our web browsing history and past purchases, and could not even tell what we bought for ourselves and what we bought for others. But Facebook revolved around us as individuals, and to its system, financial transactions were just one of many types of personal data. Instead of leeching off them, it added them to information that would never show up in a purchase history, like that we knew sign language, or participated in community theater, or dreamed of visiting the Galápagos Islands. Plus, unlike so many data clearinghouses of the past, Facebook never shared our personal information without our consent. Despite the worst fears of privacy

advocates, marketers' most nefarious plans for this information typically consisted of checking to make sure we would want to hear from them, then making special offers that interested us. Eventually, advertising through Facebook transformed from an annoying, yet necessary evil into messages that don't really bother us, and that we actually frequently welcome.

*Badges*, and later *Identity* and *Commerce*, enhanced our connections with the people, activities, and companies that were important to us, giving us more reasons to share our everyday interactions with Facebook. Starting with *Badges*, Facebook stopped just making minor tweaks to what it was already doing. Instead, it acted like the market leader it was by developing radically new features that extended Facebook far beyond its original scope, and each one significantly improved its primary source of revenue: advertising. Forging ahead like this is why Facebook is still around today, unlike so many other social media companies, all but forgotten to history after they crumbled just as quickly as they grew.

## **AUTHOR'S NOTE: THANK YOU**

Thank you very much for taking the time to read this book; I hope you enjoyed it. If you did, you may want to read other books in the *Tales from 2040* series:

*Tales from 2040 #001: How Apple helped the Tea Party and Occupy movements fix politics*

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You are also invited to discuss your vision of a brighter future on the 2040 Network forum:

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There, the 2040 Network is forming to discuss these books and develop new strategies for charitable capitalism. I hope to see you there, and I welcome your questions, comments, criticism, and creative ideas.

## FUTURE TALES FROM 2040

The working titles for the next books planned in the *Tales from 2040* series are:

*How Google revolutionized the food industry*

*How Amazon made manufacturing greener*

*How Wal-Mart saved American health care*

*How Microsoft fought poverty and made us all smarter*

If you feel the *Tales from 2040* series is socially beneficial, find out how you can contribute to new books and help us create a brighter future by visiting:

<http://2040.net>



### ABOUT THE AUTHOR

Born in 1979, Christopher Cardinal grew up in rural Nevada and now lives in San Diego, where he works at a marketing and technology consulting firm he started in 1993.

## ENDNOTES

1. This assumes that after the release of Identity, Facebook lifted the requirement that users be 13 years of age and introduced parental controls over communication.
2. In this poll, when people were asked if Facebook would continue to be successful, the most popular answer was that it would “fade away as new things come along.” Even a majority of young adults felt this way, even though they held other positive views of the company.  
AP/CNBC. (2012) “AP-CNBC Facebook IPO Poll — Complete Results & Analysis.” CNBC. May 15, 2012. [Link](#)
3. Danah Boyd, Nicole Ellison. (2007) “Social Network Sites: Definition, History, and Scholarship.” *Journal of Computer-Mediated Communication*. Vol. 13, No. 1, pp. 210-230.
4. comScore. (2008) “Social Networking Explodes Worldwide as Sites Increase Their Focus on Cultural Relevance.” Reuters. Aug. 12, 2008. [Link](#)
5. Jason Hiner. (2012) “Let’s Be Honest, Facebook Is a Badly Overpriced Photo-Sharing and Gaming Site.” TechRepublic. Feb. 2, 2012. [Link](#)
6. To clarify, Facebook announced that it was cash-flow positive the previous year, making 2010 its first fully profitable year.  
Jessica Vascellaro. (2009) “Facebook Cites Rapid Growth in Users, Cash Flow.” *The Wall Street Journal*. Sep. 16, 2009. [Link](#)
7. Julianne Pepitone. (2010) “Facebook Hits 500 Million Users.” CNN. Jul. 21, 2010. [Link](#)
8. Ylan Mui, Peter Whoriskey. (2011) “Facebook Passes Google as Most Popular Site on the Internet, Two Measures Show.” *The Washington Post*. Dec. 31, 2010. [Link](#)
9. Lev Grossman. (2010) “Person of the Year 2010.” *Time*. Dec. 15, 2010. [Link](#)
10. Staff Reporter. (2010) “The Vanity Fair 100.” *Vanity Fair*. Oct. 2010.
11. The Academy of Motion Picture Arts and Sciences. (2011) “Winners and Nominees for the 83rd Academy Awards.” Feb. 28, 2011. [Link](#)  
Caroline McCarthy. (2011) “‘The Social Network’ Nominated for Eight Oscars.” CNET. Jan. 25, 2011. [Link](#)
12. Peter Pachal. (2011) “Why Facebook Is Losing U.S. Users.” *PC Magazine*. Jun. 14, 2011. [Link](#)
13. Shea Bennett. (2011) “Twitter Beats Facebook (and Everyone Else) As the Most Popular Social Network of 2011.” *Mediabistro*. Dec. 27, 2011. [Link](#)
14. Kickstarter. (2010) “Decentralize the Web with Diaspora.” Jun. 1, 2010. [Link](#)  
For a detailed look at what happened to Diaspora, read:

- Alec Liu. (2012) “What Happened to the Facebook Killer? It’s Complicated.” Motherboard. Oct. 2, 2012. [Link](#)
15. Steven Musil. (2012) “App.net Hits \$500K Funding Goal Nearly Two Days Early.” CNET. Aug. 12, 2012. [Link](#)
  16. John Letzing. (2012) “LinkedIn Sets Tone for Social Networks.” The Wall Street Journal. Feb. 10, 2012. [Link](#)
  17. Michael Arrington. (2010) “Google Secretly Invested \$100+ Million in Zynga, Preparing to Launch Google Games.” TechCrunch. Jul. 10, 2010. [Link](#)
  18. While this data can be confirmed in multiple sources, the following map combines all the data at the time discussed:  
Ria Novosti. (2011) “The World Map of Social Networks.” Feb. 28, 2011. [Link](#)
  19. This marked the end of a contract between the two companies, which they chose not to renew.  
Danny Sullivan. (2011) “As Deal with Twitter Expires, Google Realtime Search Goes Offline.” Search Engine Land. Jul. 4, 2011. [Link](#)
  20. Emil Protalinski. (2011) “Facebook Blocks Google Chrome Extension for Exporting Friends.” ZDNet. Jul. 5, 2011. [Link](#)
  21. Mark Zuckerberg. (2010) “Mark Zuckerberg.” Facebook. Aug. 18, 2010. [Link](#)  
Jose Antonio Vargas. (2010) “The Face of Facebook.” The New Yorker. Sep. 20, 2010. [Link](#)
  22. Charles Babcock. (2011) “Facebook Challenges with Green, Open Source Data Center.” InformationWeek. Apr. 8, 2011. [Link](#)  
Matt Asay. (2011) “Facebook’s Data Center Play Sidelines Google, Apple.” The Register. Apr. 8, 2011. [Link](#)
  23. Shayndi Raice. (2012) “Facebook Sets Historic IPO.” The Wall Street Journal. Feb. 2, 2012. [Link](#)
  24. The Nielsen Company. (2012) “State of the Media: The Social Media Report Q3 2011.” The Nielsen Company. New York, NY.
  25. Roger Cheng. (2012) “Facebook Files to Go Public, Plans to Raise \$5B.” CNET. Feb. 1, 2012. [Link](#)
  26. Lars Backstrom, Paolo Boldi, Marco Rosa, Johan Ugander, Sebastiano Vigna. (2012) “Four Degrees of Separation.” Proceedings of the 3rd Annual ACM Web Science Conference, Jun. 22-24, 2012. pp. 45-54.
  27. Facebook. (2012) “Facebook, Inc.: Amendment No. 4 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Apr. 23, 2012.
  28. “We had 845 million monthly active users (MAUs) as of December 31, 2011 ... We estimate that false or duplicate accounts may have represented approximately 5-6% of our MAUs as of December 31, 2011.”

Facebook. (2012) “Facebook, Inc.: Amendment No. 2 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Mar. 7, 2012.

29. FarmVille was the most popular game on Facebook between August 2009 and December 2010.

Appdata. (2011) Custom report generated at: [Link](#)

Adam Hadhazy. (2011) “CityVille Surpasses FarmVille as Most Popular Game on Facebook.” TechNewsDaily via MSNBC. Mar. 14, 2011. [Link](#)

30. “In 2011 and the first quarter of 2012, Zynga directly accounted for approximately 12% and 11%, respectively, of our revenue, which was comprised of revenue derived from Payments processing fees related to Zynga’s sales of virtual goods and from direct advertising purchased by Zynga. Additionally, Zynga’s apps generate pages on which we display ads from other advertisers; for 2011 and the first quarter of 2012, we estimate that an additional approximately 7% and 4%, respectively, of our revenue was generated from the display of these ads.”

Facebook. (2012) “Facebook, Inc.: Amendment No. 4 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Apr. 23, 2012.

Brittany Darwell. (2012) “Facebook Estimates 4 Percent of Q1 Revenue Came from Ads on Zynga App Pages, 11 Percent from Zynga Directly.”

InsideFacebook. Apr. 23, 2012. [Link](#)

31. Facebook. (2012) “Facebook, Inc.: Form S-1.” United States Securities and Exchange Commission. Washington, DC. Feb. 1, 2012.
32. Zynga. (2012) “Zynga Unveils New Platform for Play.” Press Release. Mar. 2, 2012. [Link](#)
33. “Growth in use of Facebook through our mobile products, where our ability to monetize is unproven, as a substitute for use on personal computers may negatively affect our revenue and financial results...Our advertising revenue could be adversely affected by a number of other factors, including...increased user access to and engagement with Facebook through our mobile products, where we do not currently directly generate meaningful revenue, particularly to the extent that mobile engagement is substituted for engagement with Facebook on personal computers where we monetize usage by displaying ads and other commercial content;”

Facebook. (2012) “Facebook, Inc.: Amendment No. 2 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Mar. 7, 2012.

34. Alexandra Chang. (2012) “Report: Smartphones, Not Computers, Drive Most Facebook Use.” CNN. May 8, 2012. [Link](#)
35. Sharon Terlep, Suzanne Vranica, Shayndi Raice. (2012) “GM Says Facebook Ads Don’t Pay Off.” The Wall Street Journal. May 16, 2012. [Link](#)
36. Mark Zuckerberg. (2012) Untitled post. Facebook. Apr. 9, 2012. [Link](#)
37. Dan Lyons. (2012) “Instagram App Deepens Class Warfare Between Apple and Android Smartphones.” The Daily Beast. Apr. 6, 2012. [Link](#)

38. Amanda Petrusich. (2012) “Instagram, the Nostalgia of Now and Reckoning the Future.” BuzzFeed. Apr. 24, 2012. [Link](#)
39. Nicole Carter. (2012) “3 Simple Reasons Instagram Is Worth \$1 Billion to Facebook.” Inc. Apr. 10, 2012. [Link](#)
40. The price at the time the deal was made. By the time it was finalized, the value of the stock portion of the purchase agreement had fallen, resulting in an actual price of approximately \$715 million.
- Addy Dugdale. (2012) “Facebook Reveals Final Price for Instagram.” Fast Company. Oct. 25, 2012. [Link](#)
41. Facebook made exactly \$1.000 billion in profit in 2011.
- Facebook. (2012) “Facebook, Inc.: Amendment No. 4 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Apr. 23, 2012.
42. Steven Musil. (2012) “Zuckerberg Did \$1 Billion Instagram Deal on His Own.” CNET. Apr. 17, 2012. [Link](#)
43. Shayndi Raice, Spencer Ante, Emily Glazer. (2012) “In Facebook Deal, Board Was All but Out of Picture.” The Wall Street Journal. Apr. 18, 2012. [Link](#)
44. Ellen McGirt. (2007) “Facebook’s Mark Zuckerberg: Hacker. Dropout. CEO.” Fast Company. May 1, 2007. [Link](#)
45. MG Siegler. (2011) “Behold: Facebook’s Secret Photo Sharing App.” TechCrunch. Jun. 15, 2011. [Link](#)
46. In his post announcing the acquisition, Zuckerberg said, “...providing the best photo sharing experience is one reason why so many people love Facebook and we knew it would be worth bringing these two companies together.”
- Mark Zuckerberg. (2012) Untitled post. Facebook. Apr. 9, 2012. [Link](#)
47. “On average more than 300 million photos per day were uploaded to Facebook in the three months ended March 31, 2012.”
- Facebook. (2012) “Facebook, Inc.: Amendment No. 4 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Apr. 23, 2012.
48. Shayndi Raice, Spencer Ante, Emily Glazer. (2012) “In Facebook Deal, Board Was All But Out of Picture.” The Wall Street Journal. Apr. 18, 2012. [Link](#)
49. Jessica Vascellaro. (2010) “Facebook CEO in No Rush To ‘Friend’ Wall Street.” The Wall Street Journal. Mar. 3, 2010. [Link](#)
50. Randall Smith, Shayndi Raice. (2012) “Facebook’s Zuckerberg Skips Analyst Meeting.” The Wall Street Journal. Mar. 20, 2012. [Link](#)
- Some were even concerned that Zuckerberg’s involvement in the Instagram purchase could delay the IPO.
- Kate Kelly. (2012) “Facebook IPO Could Be Delayed by Deals, Distractions.” CNBC. Apr. 24, 2012. [Link](#)

51. Jeff Cox. (2012) “Facebook IPO: Big Volume, but Little to Show for It.” CNBC. May 18, 2012. [Link](#)
52. Shayndi Raice, Ryan DeZember, Jacob Bunge. (2012) “Facebook’s IPO Sputters.” The Wall Street Journal. May 18, 2012. [Link](#)
53. Sarah McBride, Mary Slosson. (2012) “Zuckerberg Weds Longtime Girlfriend, No Word on Prenup.” Reuters. May 20, 2012. [Link](#)
54. Mark Zuckerberg. (2012) “Mark Zuckerberg.” Facebook. May 20, 2012. [Link](#)
55. Photo Credit: Noah Kalina.  
Although this photo was seen by millions and published in numerous articles, the photographer was all but uncredited.  
Noreen Malone. (2012) “Meet Noah Kalina, the Zuckerberg Wedding Photographer and Former Viral-Video Sensation.” New York. May 22, 2012. [Link](#)
56. Possibly the most reported piece of gossip from Zuckerberg and Chan’s honeymoon was that Zuckerberg did not leave a tip at an Italian restaurant. This article is one of the few to note that, as opposed to America, tipping is not expected in Italy.  
Salvador Rodriguez. (2012) “Facebook’s Mark Zuckerberg Skips Tip on Italy Honeymoon, Reports Say.” Los Angeles Times. May 30, 2012. [Link](#)
57. Max Chafkin. (2009) “Friendster Sells for \$100 Million.” Inc. Dec. 10, 2009. [Link](#)
58. Joseph Walker, Spencer Ante. (2012) “Once a Social Media Star, Digg Sells for \$500,000.” The Wall Street Journal. Jul. 13, 2012. [Link](#)
59. Erik Sherman. (2011) “Will Zynga’s IPO Produce Another Apple?” CBS News. Dec. 13, 2011. [Link](#)
60. Mark Mills. (2011) “The Good News behind the Zynga IPO and What It Says about the New Economy.” Forbes. Dec. 18, 2011. [Link](#)
61. Yahoo! Finance. (2012) “Zynga, Inc. (ZNGA) Historical Prices.” Jul. 27, 2012. [Link](#)  
Gerry Shih. (2012) “Zynga Slashes Outlook, Denting Its Stock and Facebook’s.” Reuters. Jul. 26, 2012. [Link](#)
62. Brian Womack. (2012) “Facebook Stock Plunge Slashes \$34 Billion of Market Value.” Forbes. Jul. 27, 2012. [Link](#)
63. Business Wire. (2012) “Law Firm of Wohl & Fruchter LLP Announces Investigation of Zynga, Inc.” Bloomberg. Jul. 27, 2012. [Link](#)  
Business Wire. (2012) “Shareholder Alert: The Law Firm of Levi & Korsinsky, LLP Launches an Investigation of Zynga, Inc. Concerning Possible Violations.” Bloomberg. Jul. 27, 2012. [Link](#)  
Globe Newswire. (2012) “The Rosen Law Firm Announces Investigation of Securities Claims Against Zynga, Inc. -- ZNGA.” Jul. 27, 2012. [Link](#)

PR Newswire. (2012) "Faruqi & Faruqi, LLP Encourages Investors Who Suffered Substantial Losses of \$100,000 Investing in Zynga, Inc. to Contact the Firm." Jul. 27, 2012. [Link](#)

64. Facebook. (2012) "Facebook, Inc.: Amendment No. 4 to Form S-1." United States Securities and Exchange Commission. Washington, DC. Apr. 23, 2012.

65. Donna Tam. (2012) "Facebook Stock Drops on News of Decline in User Base." CNET. Jul. 17, 2011. [Link](#)

66. Approximately 83 million vs. a previous estimate of 42.3 – 50.7 million.

"We had 955 million monthly active users (MAUs) as of June 30, 2012... We estimate that 'duplicate' accounts (an account that a user maintains in addition to his or her principal account) may have represented approximately 4.8% of our worldwide MAUs as of June 30, 2012... As of June 30, 2012, we estimate user-misclassified accounts may have represented approximately 2.4% of our worldwide MAUs and undesirable accounts may have represented approximately 1.5% of our worldwide MAUs."

Facebook. (2012) "Facebook, Inc.: Form 10-Q for the Quarterly Period Ended June 30, 2012." United States Securities and Exchange Commission. Washington, DC.

Previous estimate from:

Facebook. (2012) "Facebook, Inc.: Amendment No. 2 to Form S-1." United States Securities and Exchange Commission. Washington, DC. Mar. 7, 2012.

67. It is important to note that the methodology used by this company is not revealed, so it is impossible to evaluate the claim.

Emil Protalinski. (2012) "Firm Ditches Facebook for Twitter, Claims Clicks Are Bots." CNET. Jul. 30, 2012. [Link](#)

68. Yahoo! Finance. (2012) "Facebook, Inc. (FB) Historical Prices." Aug. 1, 2012. [Link](#)

69. As compared to its price-to-earnings ratio.

Brian Womack. (2012) "Facebook Stock Plunge Slashes \$34 Billion of Market Value." Forbes. Jul. 27, 2012. [Link](#)

70. Caveat: This research relies on self-reported motivations for behavior, which are often poor indicators of actual motivation, and also used a limited sample, but the findings are supported by other research as well as many behavioral and usage indicators.

Daniel Hunt, David Atkin, Archana Krishnan. (2012) "The Influence of Computer-Mediated Communication Apprehension on Motives for Facebook Use." Journal of Broadcasting & Electronic Media. Vol. 56, No. 2, pp. 187-202.

71. Brian Stelter, Tanzina Vega. (2011) "Ad Money Reliably Goes to Television." The New York Times. Aug. 7, 2011. [Link](#)

72. There are many different ways of measuring time spent on websites and many different ways of making comparisons (such as including mobile usage or comparing browser-only usage, or comparing Facebook to just Google or to all Google-owned sites, like YouTube). Nevertheless, many recently reported measurements say people spend around two to four times as much time on Facebook.

The Nielsen Company. (2012) “May 2012 – Top U.S. Web Brands and News Websites.” Press Release. Jun. 22, 2012. [Link](#)

Mark Gongloff. (2011) “Facebook Sucks Up a Ridiculously Huge and Growing Share of Our Time Wasted Online.” The Wall Street Journal. Sep. 26, 2011. [Link](#)

73. Agustino Fontevecchia. (2012) “The Two Things Holding Facebook Back.” Forbes. May 18, 2012. [Link](#)
74. John Dobosz. (2012) “Facebook No Bargain Compared to Google at IPO.” Forbes. May 17, 2012. [Link](#)
75. Agustino Fontevecchia. (2012) “The Two Things Holding Facebook Back.” Forbes. May 18, 2012. [Link](#)

76. Joanna Brenner. (2012) “Pew Internet: Social Networking.” Pew Internet & American Life Project. May 31, 2012. [Link](#)

Arbitron/Edison Research. (2011) “The Infinite Dial 2011: Navigating Digital Platforms.” Arbitron. Columbia, MD.

77. In Facebook’s IPO registration statement, the company said it needed to deliver “content that is interesting, useful, and relevant” and “create new products that sustain or increase the value of [its] ads and other commercial content.”

Facebook. (2012) “Facebook, Inc.: Amendment No. 6 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. May 9, 2012.

78. Albert Einstein, Alice Calaprice (Ed.) (2010) “The Ultimate Quotable Einstein.” Princeton University Press. Princeton, NJ.

Although this book attributes the quote to Rita Mae Brown in her 1983 book *Sudden Death*, a similar saying appeared in a 1981 *Narcotics Anonymous* publication and it may be even older.

Literature Sub-Committee of Narcotics Anonymous. (1981) “Basic Text Approval Form.” Narcotics Anonymous. Van Nuys, CA.

79. All three of these articles specifically mention FarmVille updates as the first example of annoyances on Facebook.

Michelle Kessler. (2010) “Facebook to Make Games Less Annoying, More Engaging.” USA Today. Sep. 22, 2010. [Link](#)

Kathy Kristof. (2010) “3 Most Annoying Facebook Habits That Bug Your Friends.” CBS News. Sep. 23, 2010. [Link](#)

Ian Paul. (2012) “The 10 Most Annoying Facebook Features.” PCWorld. Jun. 18, 2012. [Link](#)

80. Jared Morgenstern. (2010) “Making Games on Facebook Better.” Facebook. Sep. 21, 2010. [Link](#)
81. Technically, this scholarship is awarded by the Rhodes Trust, but the University would probably award badges for all scholarships, regardless of the source.
82. Coins image © alexfiodorov - Fotolia.com.
83. Kukkiwon. (2011) “Rules for Promotion Test.” World Taekwondo Headquarters. Seoul, South Korea.
84. Nike. (2012) “Nike+ Products.” Nike.com. Jun. 11, 2012. [Link](#)
85. Foursquare. (2012) “About foursquare.” Foursquare.com Jun. 11, 2012. [Link](#)
86. Doghouse image © 2011 TheDesignCrew.
87. Right now, the closest buzzword is “gamification.”  
 Patrick Salyer. (2011) “Gamification: Why Sites Need To Simplify Social.” Fast Company. Jul. 20, 2011. [Link](#)  
 Gartner. (2011) “Gartner Says By 2015, More Than 50 Percent of Organizations That Manage Innovation Processes Will Gamify Those Processes.” Press Release. Apr. 12, 2011. [Link](#)
88. European Brand Institute. (2011) “Top 100 Brand Ranking – Brand Corporations Worldwide.” Oct. 2011. [Link](#)
89. Expedia. (2012) “Expedia, Inc.: Form 10-K, Annual Report for the fiscal year ended December 31, 2011.” United States Securities and Exchange Commission. Washington, DC. Mar. 12, 2012.
90. Big Texan Steak Ranch. (2012) “Free 72 oz. Steak Dinner Rules.” BigTexan.com. Mar. 13, 2012. [Link](#)
91. Clear Channel Communications. (2012) “CC Media Holdings, Clear Channel Communications and Clear Channel Outdoor Holdings Set Date for Second Quarter 2012 Earnings Teleconference.” Press Release. Jul. 20, 2012. [Link](#)
92. The American Red Cross was founded in 1881.  
 Patrick Gilbo. (1981) “The American Red Cross: The First Century.” HarperCollins. New York, NY.
93. This is an example of the endowment effect, a psychological phenomenon that explains why people are extremely reluctant – to the point of irrationality – to give something up once they have acquired it.  
 Daniel Kahneman, Jack Knetsch Richard Thaler. (1991) “Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias.” The Journal of Economic Perspectives. Vol. 5, No. 1, pp. 193-206.

94. Ginny Mies. (2010) “Should You Not Donate by Text Message?” PC World. Jun. 1, 2010. [Link](#)

95. Activision Blizzard. (2011) “Form 10-K Annual Report.” United States Securities and Exchange Commission. Washington, DC.

Also:

Activision Blizzard. (2011) “Activision Blizzard Second Quarter Calendar 2011 Results Conference Call.” Aug. 3, 2011.

Guinness World Records. (2009) “Guinness World Records Gamer’s Edition.” Time Home Entertainment. New York, NY.

Blizzard Entertainment. (2008) “World of Warcraft subscriber base reaches 11.5 million worldwide.” Press Release. Nov. 21, 2008. [Link](#)

96. Average number of achievements for other video games is based on an analysis of all games listed at:

PS3Trophies.org. (2010) “Trophies.” Jul. 23, 2010. [Link](#)

Xbox360Achievements.org. (2010) “Achievements.” Jul. 23, 2010. [Link](#)

The number of achievements in World of Warcraft based on:

Wowhead. (2012) “Achievements – World of Warcraft.” Wowhead.com. May 16, 2012. [Link](#)

97. John Hafner, Jeremy Sturgell, David Matlock, Elizabeth Bockewitz, Lisa Barker. (2012) “‘Stayin’ Alive’: A Novel Mental Metronome to Maintain Compression Rates in Simulated Cardiac Arrests.” *The Journal of Emergency Medicine*. Vol. 43, No. 5, pp. e373-e377.

Earlier study:

D. Matlock, J. Hafner Jr., E. Bockewitz, L. Barker, J. Dewar. (2008) “‘Stayin’ Alive’: A Pilot Study to Test the Effectiveness of a Novel Mental Metronome in Maintaining Appropriate Compression Rates in Simulated Cardiac Arrest Scenarios.” *Annals of Emergency Medicine*. Vol. 52, No. 4, pp. S67-68.

Since newborns require faster chest compressions, some have suggested using another disco hit, Gloria Gaynor’s “I Will Survive” for neonatal CPR.

Vincent Rigo, Jacques Rigo. (2009) “Newborns Need Another Tune: ‘I Will Survive’ Sets Neonatal Resuscitation Rhythm.” *Annals of Emergency Medicine*. Vol. 53, No. 6, pp. 837.

98. Blizzard split the proceeds evenly between themselves and the Make-a-Wish Foundation.

Blizzard Entertainment. (2010) “The Make-A-Wish Foundation receives \$1.1 million donation from Blizzard Entertainment.” Press Release. Feb. 16, 2010. [Link](#)

Interestingly, Zynga had a similar program that turned into a public relations nightmare. Zynga first created a program called “Sweet Seeds for Haiti” in FarmVille, its most popular online game. They sold virtual sweet

potato seeds for a limited time and donated half the proceeds to Haiti to promote sustainable farming. Later, when Haiti was struck by an earthquake, Zynga created a new promotion, selling white corn seeds, this time with all proceeds going to help disaster victims. A short time later, a Brazilian magazine, confusing the two different fundraising initiatives, reported that Zynga had misled the public and only given half of the money collected to Haiti, even though both promotions were very clearly advertised. In an unfortunate twist of social networking at its worst, the story spread quickly, and although several news outlets later printed retractions, the damage was already done.

Mathew Ingram. (2010) “Zynga Gets Unfairly Slammed Over Haiti Donations.” GigaOM. Mar. 4, 2010. [Link](#)

99. Alexander Sliwinski. (2011) “GTA IV Surpasses 22M Shipped, Franchise at 114M Total.” Joystiq. Sep. 16, 2011. [Link](#)
100. Guinness World Records. (2009) “Guinness World Records Gamer’s Edition.” Time Home Entertainment. New York, NY.
101. Real person, fictional quotes.
102. Amanda Lenhart, Joseph Kahne, Ellen Middaugh, Alexandra Macgill, Chris Evans, Jessica Vitak. (2008) “Teens, Video Games and Civics.” Pew Research Center. Washington, DC. [Link](#)
103. For example, in 2012, after fans did not like the end to a popular game, they raised over \$60,000 (which they donated to charity) in an effort to convince the game developer to change it.

Ray Muzyka. (2012) “To Mass Effect 3 Players, from Dr. Ray Muzyka, Co-Founder of BioWare.” Bioware.com. Mar. 21, 2012. [Link](#)

ChipIn. (2012) “Retake Mass Effect – Child’s Play.” ChipIn.com Mar. 23, 2012. [Link](#)

Also, about 8% of those ages 8 to 18 played “pathologically.”

Douglas Gentile. (2009) “Pathological Video-Game Use Among Youth Ages 8 to 18: A National Study.” Psychological Science. Vol. 20, No. 5, pp. 594-602.

The link between online game addiction and the Millennials can be partially explained by their high levels of narcissism, since these games reinforce narcissistic needs.

Eun Joo Kim, Kee Namkoong, Taeyun Ku, Se Joo Kim. (2008) “The Relationship Between Online Game Addiction and Aggression, Self-Control and Narcissistic Personality Traits.” European Psychiatry. Vol. 23, No. 3, pp. 212-218.

104. Nick Shore. (2011) “Millennials Are Playing with You.” Harvard Business Review. Dec. 12, 2011. [Link](#)
105. Custom keychain created by Zazzle, Inc. [Link](#)

106. At first, some would require external sensors, until demand drove manufacturers to build them into all devices.
107. Coupawz. (2012) “About Us.” Coupawz.com. Jun. 22, 2012. [Link](#)  
 Jewpon. (2012) “About.” Jewpon.com. Jun. 22, 2012. [Link](#)  
 Buys for Brides. (2012) “About Us.” BuysForBrides.com. Jun. 22, 2012. [Link](#)
108. Kris Ashton. (2011) “The Big List of Daily Deal Aggregators.” Daily Deal Media. Jul. 25, 2011. [Link](#)  
 Chadwick Matlin. (2011) “482 Groupon Clones, One New Business Model.” Fortune. Jul. 27, 2011. [Link](#)
109. Alistair Barr. (2011) “Facebook Ending Deals Product after Four-Month Test.” Reuters. Aug. 26, 2011. [Link](#)
110. Aaron Smith, Janna Quitney Anderson, Lee Rainie. (2012) “The Future of Money: Smartphone Swiping in the Mobile Age.” Pew Research Center. Washington, DC.  
 Also, in a survey of educated Millennials, more said they could least afford to lose their laptop, smartphone, or tablet on a trip compared to those who said their wallet was most important.  
 Cisco Systems. (2011) “2011 Cisco Connected World Technology Report.” Cisco Systems. San Jose, CA.
111. Lance Whitney. (2011) “NFC Mobile Payments Could Hit \$50 Billion by 2014.” CNET. Jun. 8, 2011. [Link](#)
112. Christie Smythe, Dakin Campbell. “Visa, MasterCard Settle Merchants’ Swipe-Fee Lawsuit.” Bloomberg. Jul. 14, 2012. [Link](#)
113. Robin Sidel. (2012) “Retailers Join Payment Chase.” The Wall Street Journal. Mar. 2, 2012. [Link](#)
114. Kelly Clay. (2012) “Starbucks Introduces Mobile Payments for Canada and UK.” Forbes. Jul. 11, 2012. [Link](#)
115. This is not a shot at Groupon. (Even though Groupon had lost about half its value within six months after its IPO when its accounting practices were questioned.)  
 Danielle Kucera. (2012) “Groupon Loses Half of Value Since IPO on Accounting Woes.” Bloomberg. May 4, 2012. [Link](#)  
 If anything, it would be a reference to Instagram, although it could apply to hundreds of social media companies.
116. One example (of many):  
 Joseph Galante, Joel Rosenblatt. (2011) “Google Sued by PayPal Over Claims It Stole Trade Secrets.” Bloomberg. May 27, 2011. [Link](#)
117. Kit Eaton. (2011) “In the Messy NFC Battle, Consumers Are the Biggest Losers.” Fast Company. Dec. 14, 2011. [Link](#)

Later it was revealed that both Apple and Google spent more in 2011 on patent lawsuits and patent purchases than they did on research and development.

Charles Duhigg, Steve Lohr. (2012) “The Patent, Used as a Sword.” The New York Times. Oct. 7, 2012. [Link](#)

118. Amir Efrati, Anton Troianovski. (2011) “War Over the Digital Wallet.” The Wall Street Journal. Dec. 7, 2011. [Link](#)  
 Kit Eaton. (2011) “Verizon, AmEx, and the Race to Control the (Possible) Billion-Dollar Mobile Payments Industry.” Fast Company. Aug. 1, 2011. [Link](#)
119. SBA Office of Advocacy. (2011) “Frequently Asked Questions.” US Small Business Administration. Washington, DC.
120. Chris Matyszczyk. (2012) “This New Facebook Phone: Why Would Anyone Want One?” CNET. May 28, 2012. [Link](#)  
 Mathew Ingram. (2012) “A Facebook Phone: Ambitious Leap or Fatal Mistake?” Bloomberg BusinessWeek. May 29, 2012. [Link](#)  
 Farhad Manjoo. (2012) “Who Wants a Terrible Facebook Phone?” Slate. May 29, 2012. [Link](#)
121. The word “most” was added when Google announced it had moved its payment data to the cloud.  
 Sarah Kessler. (2012) “Google Wallet Uses the Cloud to Support All Credit Cards.” Fast Company. Aug. 1, 2012. [Link](#)
122. Andy Greenberg. (2011) “Meet Comex, the 19-Year-Old iPhone Uber-Hacker Who Keeps Outsmarting Apple.” Forbes. Aug. 1, 2011. [Link](#)  
 Note: Shortly after this article was published, Apple hired Allegra (Comex) as an intern, an arrangement that lasted almost a year.  
 Andy Greenberg. (2012) “iPhone Uber-Hacker Comex Is Out at Apple.” Forbes. Oct. 18, 2012. [Link](#)
123. Chris Dannen. (2011) “NFC’s Great, but Rumors of Credit Cards’ Death Are Greatly Exaggerated.” Fast Company. Mar. 10, 2011. [Link](#)
124. Roy Want. (2006) “An Introduction to RFID Technology.” Pervasive Computing. Vol. 5, No. 1, pp. 25-33.
125. Kit Eaton. (2011) “NFC’s Stuttering Start.” Fast Company. Dec. 28, 2011. [Link](#)
126. CTIA. (2011) “CTIA Semi-Annual Wireless Industry Survey.” CTIA. Washington, DC.
127. Staff Reporter. (2012) “Two Thirds of New Mobile Buyers Now Opting for Smartphones.” The Nielsen Company. Jul. 12, 2012. [Link](#)
128. Marguerite Reardon. (2012) “Is NFC killing Google Wallet?” CNET. May 25, 2012. [Link](#)

129. Google later changed their system to store credit card information in the cloud to allow other credit cards, but the other restrictions still applied.  
Google. (2012) “Use Any Credit or Debit Card with Google Wallet.” Official Android Blog. Aug. 1, 2012. [Link](#)
130. Comparing groups that were “extremely” or “very” concerned to those who were “somewhat” or “not” concerned.  
Lieberman Research Group. (2011) “Unisys Security Index: US.” Unisys. Blue Bell, PA.
131. This study found 96% of Americans objected to mobile devices sharing information with stores when they visit without making a purchase. (79% definitely would not allow it, 17% probably would not allow it.) The response rate increased when asking about situations in which they actually made a purchase, but was still low. It also found that 74% of respondents were either “not too likely” or “not at all likely” to adopt mobile payment systems.  
Chris Jay Hoofnagle, Jennifer Urban, Su Li. (2012) “Mobile Payments: Consumer Benefits & New Privacy Concerns.” Social Science Research Network. Working Paper #2045580. [Link](#)
132. Santiago Budría Rodríguez, Javier Díaz-Giménez, Vincenzo Quadrini, José-Víctor Ríos-Rull. (2002) “Updated Facts on the U.S. Distributions of Earnings, Income, and Wealth.” Federal Reserve Bank of Minneapolis Quarterly Review. Vol. 26, No. 3, pp. 2-35.  
Arthur Kennickell. (2003) “A Rolling Tide: Changes in the Distribution of Wealth in the U.S., 1989-2001.” FEDS Working Paper No. 2003-24; Levy Economics Institute Working Paper No. 393. Social Science Research Network. Working Paper #427720. [Link](#)
133. Juniper Research. (2012) “NFC Mobile Payments & Retail Marketing: Business Models & Forecasts 2012-2017.” Juniper Research. Hampshire, England.
134. Rachel King. (2012) “Square CTO: We’re Not Worried About NFC.” ZDNet. Jul. 11, 2012. [Link](#)
135. Christie Smythe, Dakin Campbell. (2012) “Visa, MasterCard Settle Merchants’ Swipe-Fee Lawsuit.” Bloomberg. Jul. 14, 2012. [Link](#)
136. Christie Smythe, Dakin Campbell. (2012) “Visa, MasterCard Settle Merchants’ Swipe-Fee Lawsuit.” Bloomberg. Jul. 14, 2012. [Link](#)  
Jessica Silver-Greenberg. (2012) “MasterCard and Visa Will Pay Billions to Settle Antitrust Suit.” The New York Times. Jul. 13, 2012. [Link](#)
137. Although I first wrote about this theoretical idea in 2007, a company has recently begun offering credit card processing with no interchange fees, instead taking a share of revenue from loyalty programs and promotions.  
Christina Chaey. (2012) “LevelUp Will End Your Business’ Credit Card Processing Fees. Really.” Fast Company. Jul. 11, 2012. [Link](#)

138. This settlement has not been finalized yet.

Christie Smythe, Dakin Campbell. (2012) “Visa, MasterCard Settle Merchants’ Swipe-Fee Lawsuit.” Bloomberg. Jul. 14, 2012. [Link](#)

Jessica Silver-Greenberg. (2012) “MasterCard and Visa Will Pay Billions to Settle Antitrust Suit.” The New York Times. Jul. 13, 2012. [Link](#)

139. Andrew Johnson. (2012) “Visa, MasterCard Rise on Merchant Settlement.” Fox Business. Jul. 16, 2012. [Link](#)

Christie Smythe, Dakin Campbell. (2012) “Visa, MasterCard Settle Merchants’ Swipe-Fee Lawsuit.” Bloomberg. Jul. 14, 2012. [Link](#)

140. Only ten states in 2012 had laws forbidding credit card processing surcharges: California, Texas, New York, Florida, Massachusetts, Colorado, Oklahoma, Connecticut, Kansas, and Maine. However, since this group includes the four most populous states, these ten contain roughly 40% of the population of the United States.

Paul Mackun, Steven Wilson. (2011) “Population Distribution and Change: 2000 to 2010.” US Census Bureau. Washington, DC.

Visa. (2012) “Checkout Fees.” Visa.com. Apr. 22, 2012. [Link](#)

141. Kevin Foster, Erik Meijer, Scott Schuh, Michael Zabek. (2010) “The 2008 Survey of Consumer Payment Choice.” FRB of Boston Public Policy Discussion Paper No. 09-10. Social Science Research Network. Working Paper #1559959. [Link](#)

142. To clarify, “the last century” would not include most of the Great Depression if this had been written in 2040.

Jon Hilsenrath, Serena Ng, Damian Paletta. (2008) “Worst Crisis Since ‘30s, With No End Yet in Sight.” The Wall Street Journal. Sep. 18, 2008. [Link](#)

James Crotty. (2009) “Structural Causes of the Global Financial Crisis: A Critical Assessment of the ‘New Financial Architecture.’” Cambridge Journal of Economics. Vol. 33, No. 4, pp. 563-580.

143. Although the details in this section are widely documented, a clear, concise overview of the financial crisis can be found in:

Geoff Colvin. (2011) “Are the Bankers to Blame?” in Time. “What is Occupy? Inside the Global Movement.” Time Books. New York, NY.

144. Greg Allen. (2012) “Birthplace of ‘Robo-Signing’ Eyes Deal Critically.” NPR. Feb. 9, 2012. [Link](#)

145. Staff Reporter. (2005) “Global House Prices: A Home-Grown Problem.” The Economist. Sep. 8, 2005. [Link](#)

146. Only about a third of Americans knew that TARP was enacted under Bush. This lack of knowledge held constant across parties.

Pew Research Center. (2010) “Political Knowledge Update.” Pew Research Center. Washington, DC. [Link](#)

147. In this poll, 49% of Americans felt that government loans to banks did not help, and 62% felt that the stimulus did not help.  
Pew Research Center. (2010) “Pessimistic Public Doubts Effectiveness of Stimulus, TARP.” Pew Research Center. Washington, DC. [Link](#)
148. US Government Accountability Office. (2011) “Opportunities Exist to Strengthen Policies and Processes for Managing Emergency Assistance.” Report #GAO-11-696. US Government Accountability Office. Washington, DC.  
Bob Ivry, Bradley Keoun, Phil Kuntz. (2011) “Secret Fed Loans Gave Banks \$13 Billion Undisclosed to Congress.” Bloomberg. Nov. 28, 2011. [Link](#)
149. Charles Ferguson. (2012) “Predator Nation: Corporate Criminals, Political Corruption, and the Hijacking of America.” Crown Business. New York, NY.  
William Black. (2011) “Why No Punishment for CEO Greed?” Bloomberg Businessweek. Jun. 9, 2011. [Link](#)
150. US unemployment rate in 2007: 4.6%. In 2009: 9.3%.  
US Bureau of Labor Statistics. (2012) “Labor Force Statistics from the Current Population Survey.” US Department of Labor. Washington, DC. [Link](#)
151. Stephen Grocer. (2010) “Banks Set for Record Pay.” The Wall Street Journal. Jan. 15, 2010. [Link](#)
152. Associated Press. (2011) “‘Robo-signing’ of Mortgages Still a Problem.” CBS News. Jul. 18, 2011. [Link](#)
153. David Lynch. (2012) “Big Banks: Now Even Too Bigger to Fail.” Bloomberg Businessweek. Apr. 19, 2012. [Link](#)
154. Lindsay Owens. (2012) “The Polls—Trends: Confidence in Banks, Financial Institutions, and Wall Street, 1971–2011.” Public Opinion Quarterly. Vol. 76, No. 1, pp. 142-162.
155. Credit Union National Association. (2012) “2012-2013 Senior Executive Total Compensation Survey.” Credit Union National Association. Washington, DC.
156. Credit Union National Association. (2011) “2011-2012 Credit Union Fees Survey.” Credit Union National Association. Washington, DC.
157. Credit Union National Association. (2012) “The Credit Union Value Proposition.” Credit Union National Association. Washington, DC.
158. Credit Union National Association. (2006) “2006-2007 Credit Union Fees Survey.” Credit Union National Association. Washington, DC.
159. Chase. (2012) “Award-Winning Chase QuickDeposit Nominated for Two Webby Awards; Chase Person-to-Person QuickPay Named Honoree.” Press Release. Apr. 25, 2012.
160. Statistics cited were based on estimates.

Robert McGarvey. (2012) “Mobility Matters: Tracking the Mobile Banking Revolution in Credit Unions.” Credit Union Times. Jul. 16, 2012. [Link](#)

161. Jonelle Marte. (2009) “Safe Havens: Credit Unions Earn Some Interest.” The Wall Street Journal. Mar. 15, 2009. [Link](#)
162. This assumes functionality similar to adding a small cash withdrawal to transactions conducted with debit cards today, only in reverse. Merchants would probably provide this service for free to normal customers, but would place limits on the amount, and many would only provide the service to customers along with another transaction.
163. Very rough, unscientific estimates based on information from:  
 Linda Kohn, Janet Corrigan, Molla Donaldson. (Eds.) (2000) “To Err Is Human: Building a Safer Health System.” National Academies Press. Washington, DC.  
 Alan Schwartz, Saul Weiner, Frances Weaver, Rachel Yudkowsky, Gunjan Sharma, Amy Binns-Calvey, Ben Preyss, Neil Jordan. (2012) “Uncharted Territory: Measuring Costs of Diagnostic Errors Outside the Medical Record.” BMJ Quality & Safety. Vol. 21, No. 11, pp. 918-924.  
 US Department of Health & Human Services. (2011) “Partnership for Patients to Improve Care and Lower Costs for Americans.” Press Release. Apr. 12, 2011. [Link](#)
164. Nicola Jentzsch, Sören Preibusch, Andreas Harasser. (2012) “Study on Monetising Privacy: An Economic Model for Pricing Personal Information.” European Network and Information Security Agency. Heraklion, Greece.  
 Judith Rauhofer. (2008) “Privacy Is Dead, Get Over It! Information Privacy and the Dream of a Risk-Free Society.” Information & Communications Technology Law. Vol. 17, No. 3, pp. 185-197.
165. Amanda Forest, Joanne Wood. (2012) “When Social Networking Is Not Working: Individuals with Low Self-Esteem Recognize but Do Not Reap the Benefits of Self-Disclosure on Facebook.” Psychological Science. Vol. 23, No. 3, pp. 295-302.  
 Christopher Carpenter. (2012) “Narcissism on Facebook: Self-Promotional and Anti-Social Behavior.” Personality and Individual Differences. Vol. 52, No. 4, pp. 482-486.  
 Stephen Marche. (2012) “Is Facebook Making Us Lonely?” The Atlantic. Mar. 2012.
166. Causes. (2012) “Meet the Team.” Causes.com. Mar. 1, 2012. [Link](#)
167. Causes had been used to raise \$40 million for charities, compared to 845 million active Facebook users.  
 Causes. (2012) “About Causes.” Causes.com. Mar. 1, 2012. [Link](#)  
 Roger Cheng. (2012) “Facebook Files to Go Public, Plans to Raise \$5B.” CNET. Feb. 1, 2012. [Link](#)

168. Kim Hart, Megan Greenwell. (2009) “Causes’ Social Networking May Be All Talk, No Cash for Nonprofits Seeking Funds.” The Washington Post. Apr. 22, 2009. [Link](#)
169. Basic economics would suggest that the net effect to Facebook would be small, since the additional ad buys would increase the overall value of advertising – essentially the same effect as giving free or discounted air time for public service announcements.
170. Dan Pallotta. (2009) “The Worst Question to Ask About Charity.” Harvard Business Review. Jun. 16, 2009. [Link](#)
- Dean Karlan. (2011) “Why Ranking Charities by Administrative Expenses is a Bad Idea.” Freakonomics. Jun. 9, 2011. [Link](#)
171. Amos Tversky, Daniel Kahneman. (1991) “Loss Aversion in Riskless Choice: A Reference-Dependent Model.” The Quarterly Journal of Economics. Vol. 106, No. 4, pp. 1039-1061.
172. Dan Ariely. (2008) “Predictably Irrational: The Hidden Forces That Shape Our Decisions.” HarperCollins. New York, NY.
173. Rajesh Bagchi, Xingbo Li. (2011) “Illusionary Progress in Loyalty Programs: Magnitudes, Reward Distances, and Step-Size Ambiguity.” Journal of Consumer Research. Vol. 37, No. 5, pp. 888-901.
174. This research furthers the study of which circumstances trigger loss aversion responses.
- Nathan Novemsky, Daniel Kahneman. (2005) “The Boundaries of Loss Aversion.” Journal of Marketing Research. Vol. 42, No. 2, pp. 119-128.
- To see the effect compared to more rational decisions, see:
- Daniel Kahneman, Jack Knetsch Richard Thaler. (1991) “Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias.” The Journal of Economic Perspectives. Vol. 5, No. 1, pp. 193-206.
175. Leaf Van Boven, David Dunning, George Loewenstein. (2000) “Egocentric Empathy Gaps Between Owners and Buyers: Misperceptions of the Endowment Effect.” Journal of Personality and Social Psychology. Vol. 79, No. 1, pp. 66-76.
176. Youjae Yi, Hoseong Jeon. (2003) “Effects of Loyalty Programs on Value Perception, Program Loyalty, and Brand Loyalty.” Journal of the Academy of Marketing Science. Vol. 31, No. 3, pp. 229-240.
- Lars Meyer-Waarden. (2007) “The Effects of Loyalty Programs on Customer Lifetime Duration and Share of Wallet.” Journal of Retailing. Vol. 83, No. 2, pp. 223-236.
177. James Cigliano, Margaret Georgiadis, Darren Pleasance, Susan Whalley. (2000) “The Price of Loyalty.” McKinsey Quarterly. Nov. 2000, pp. 68-77.
178. Starbucks Corporation. (2008) “Starbucks Holiday Beverages Turn (RED)<sup>TM</sup> Nov. 27.” Press Release. Nov. 26, 2008. [Link](#)

179. Between 2008 and 2011, Starbucks contributed nearly \$10 million through this program.  
Starbucks Corporation. (2011) “Make a Difference This World AIDS Day With Your Beverage Purchase at Starbucks.” Press Release. Dec. 1, 2011. [Link](#)
180. Cone Communications. (2008) “Past. Present. Future. The 25th Anniversary of Cause Marketing.” Cone Communications. Boston, MA.
181. Anne Landman. (2010) “Can Eating Junk Food Cure Breast Cancer?” Center for Media and Democracy. Apr. 21, 2010. [Link](#)
182. Deborah Webb, Lois Mohr. (1998) “A Typology of Consumer Responses to Cause-Related Marketing: From Skeptics to Socially Concerned.” *Journal of Public Policy & Marketing*. Vol. 17, No. 2, pp. 226-238.
183. Susan Tyler Eastman. (2000) “Research in Media Promotion.” Lawrence Erlbaum Associates. Mahwah, NJ.
184. Michael Jay Polonsky, Greg Wood. (2001) “Can the Overcommercialization of Cause-Related Marketing Harm Society?” *Journal of Macromarketing*. Vol. 21, No. 1, pp. 8-22.
185. William Harbaugh, Ulrich Mayr, Daniel Burghart. (2007) “Neural Responses to Taxation and Voluntary Giving Reveal Motives for Charitable Donations.” *Science*. Vol. 316, No. 5831, pp. 1622-1625.
186. Sonya Sachdeva, Rumén Iliev, Douglas Medin. (2009) “Sinning Saints and Sainly Sinners: The Paradox of Moral Self-Regulation.” *Psychological Science*. Vol. 20, No. 4, pp. 523-528.
- Anna Merritt, Daniel Effron, Benoît Monin. (2010) “Moral Self-Licensing: When Being Good Frees Us to Be Bad.” *Social and Personality Psychology Compass*. Vol. 4, No. 5, pp. 344-357.
- Nina Mazar, Chen-Bo Zhong. (2010) “Do Green Products Make Us Better People?” *Psychological Science*. Vol. 21, No. 4, pp. 494-498.
187. Adam Corner, Alex Randall. (2011) “Selling Climate Change? The Limitations of Social Marketing As a Strategy for Climate Change Public Engagement.” *Global Environmental Change*. Vol. 21, No. 3, pp. 1005-1014.
188. Even just imagining doing good is enough to induce this effect.  
Uzma Khan, Ravi Dhar. (2006) “Licensing Effect in Consumer Choice.” *Journal of Marketing Research*. Vol. 43, No. 2, pp. 259-266.
189. Donald Lichtenstein, Minette Drumwright, Bridgette Braig. (2004) “The Effect of Corporate Social Responsibility on Customer Donations to Corporate-Supported Nonprofits.” *The Journal of Marketing*. Vol. 68, No. 4, pp. 16-32.
- Karen Flaherty, William Diamond. (1999) “The Impact of Consumers’ Mental Budgeting on the Effectiveness of Cause-Related Marketing,” *Proceedings of the American Marketing Association Conference*. Vol. 10. American Marketing Association. Chicago, IL.

190. Patricia Mooney Nickel, Angela Eikenberry. (2009) “A Critique of the Discourse of Marketized Philanthropy.” Vol. 52, No. 7, pp. 974-989.
191. Although this report defines Millennials as those born from 1979 to 2001, it focused on those born between 1981 and 1993.  
Cone Communications. (2006) “The 2006 Cone Millennial Cause Study.” Cone Communications. Boston, MA.
192. Ron Alsop. (2008) “The Trophy Kids Grow Up: How the Millennial Generation Is Shaking Up the Workplace.” John Wiley & Sons. Hoboken, NJ.
193. The American Red Cross. (2010) “The American Red Cross and Dunkin’ Donuts Launch ‘Give a Pint, Get a Pound’ Campaign.” Press Release. Jan. 4, 2010. [Link](#)
194. Some early research that examined this phenomenon:  
Richard Cardozo. (1965) “An Experimental Study of Customer Effort, Expectation, and Satisfaction.” Journal of Marketing Research. Vol. 2, No. 3, pp. 244-249.  
For an overview of the dynamics, see:  
Richard Oliver. (1980) “A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions.” Journal of Marketing Research. Vol. 17, No. 4, pp. 460-469.
195. Ethiopia’s adult literacy rate is approximately 30%.  
UNICEF. (2010) “Ethiopia: Statistics.” Unicef.org. Mar. 2, 2010. [Link](#)
196. A glimmer of things to come: The UK-based retail giant Tesco recently conducted a test program in which customers linked their loyalty club cards to their Facebook accounts. This program essentially turned their customers into affiliate marketers by asking them to “Like” products on Facebook, then awarding them loyalty club points when their friends clicked on those products and bought them.  
Tesco. (2012) “Earn Extra Clubcard Points on Facebook When You ‘Share & Earn.’” Press Release. Jul. 5, 2012. [Link](#)
197. Real person, fictional quote.  
At the time of writing, David Stern held the commissioner position; however, he said he would retire within five years and strongly endorsed Silver, the deputy commissioner, to replace him.  
Associated Press. (2012) “David Stern Says Adam Silver Is Ready.” ESPN. Feb. 26, 2012. [Link](#)
198. Matthew Futterman. (2011) “Has Baseball’s Moment Passed?” The Wall Street Journal. Mar. 31, 2011. [Link](#)
199. Alfred Yen. (2003) “Western Frontier or Feudal Society?: Metaphors and Perceptions of Cyberspace.” Berkeley Technology Law Journal. Vol. 17, pp. 1207-1263.

200. Patricia Wallace. (1999) "The Psychology of the Internet." Cambridge University Press. Cambridge, England.
201. Sara Russell, Lawrence James. (2008) "Recording Lying, Cheating, and Defiance in an Internet Based Simulated Environment." *Computers in Human Behavior*. Vol. 24, No. 5, pp. 2014-2025.
202. This research suggests that stronger social bonds would reduce piracy.  
George Higgins, Scott Wolfe, Catherine Marcum. (2008) "Digital Piracy: An Examination of Three Measurements of Self-Control." *Deviant Behavior*. Vol. 29, No. 5, pp. 440-460.
203. Laura Hlavach, William Freivogel. (2011) "Ethical Implications of Anonymous Comments Posted to Online News Stories." *Journal of Mass Media Ethics*. Vol. 26, No. 1, pp. 21-37.
204. Jeffrey Hancock. (2007) "Digital Deception: Why, When and How People Lie Online." (Adam Joinson, Katelyn McKenna, Tom Postmes, Ulf-Dietrich Reips, Eds.) In "Oxford Handbook of Internet Psychology." Oxford University Press. New York, NY.
205. Peter Steiner. (1993) *The New Yorker*. Vol. 69, No. 20, p. 61. Jul. 5, 1993.
206. HireRight. (2009) "Top Five Candidate Lies." HireRight, Inc. Irvine, CA. Jun. 1, 2009. [Link](#)
207. Julianne Pepitone. (2012) "Yahoo CEO Scott Thompson Caught Padding His Resume." CNN Money. May 4, 2012. [Link](#)  
Yahoo!. (2012) "Yahoo! Names Fred Amoroso Chairman and Appoints Ross Levinsohn Interim CEO." Press Release. May 13, 2012. [Link](#)  
Amir Efrati, Joann Lublin. (2012) "Thompson Resigns as CEO of Yahoo." *The Wall Street Journal*. May 13, 2012. [Link](#)  
Stephen Shankland. (2012) "Yahoo Boots Thompson, Names Ross Levinsohn Interim CEO." CNET. May 13, 2012. [Link](#)  
At the time, Yahoo was No. 483 in the Fortune 500.  
Fortune. (2012) "Yahoo." CNN Money. May 21, 2012. [Link](#)
208. Associated Press. (2006) "RadioShack CEO's Resume Raises Questions." MSNBC. Feb. 14, 2006. [Link](#)  
It is worth noting that media coverage treated lying on a résumé as a worse crime than being arrested for driving while intoxicated three times.  
At the time, Radio Shack was No. 423 in the Fortune 500.  
Fortune. (2006) "Radio Shack." CNN Money. Apr. 27, 2006. [Link](#)
209. Mark Wexler. (2006) "Successful Resume Fraud: Conjectures on the Origins of Amoralty in the Workplace." *Journal of Human Values*. Vol. 12, No. 2, pp. 137-152.

210. Interestingly, this research suggests that lying about one's profession is unrelated to attractiveness. In this study, less attractive people did not lie about their profession more than attractive people did. (The less attractive they were, however, the more they lied about their age, weight, and height, though.)  
Catalina Toma, Jeffrey Hancock. (2010) "Looks and Lies: The Role of Physical Attractiveness in Online Dating Self-Presentation and Deception." *Communication Research*. Vol. 37, No. 3, pp. 335-351.
211. American Board of Forensic Anthropology. (2010) "Board and Diplomates." ABFA, Inc. Dec. 3, 2010. [Link](#)
212. Richard Paddock. (2009) "Military Impostors Are Neither Few Nor Proud." AOL News. Dec. 14, 2009. [Link](#)
213. Amy Chozick. (2005) "Veterans' Web Sites Expose Pseudo Heroes, Phony Honors." *The Wall Street Journal*. May 6, 2005. [Link](#)
214. Tamar Lewin. (2007) "Dean of Admissions at M.I.T. Resigns." *The New York Times*. Apr. 26, 2007. [Link](#)
215. Sewell Chan. (2007) "Report Says 14 in Fire Dept. Used Fake Degrees." *The New York Times*. Feb. 1, 2007. [Link](#)
216. Karen Levitz Vactor, Susan Lynn Peterson. (2002) "Starting and Running Your Own Martial Arts School." Tuttle Publishing, North Clarendon, VT.  
Penn Jillette, Teller, Star Price, Tom Kramer, Michael Goudeau. (2010) "Martial Arts." Penn & Teller: Bullshit! Showtime. Jun. 24, 2010.
217. John Morgan, Stephen Shoop. (2003) "Collin Chou: 'The One' for Martial Arts Safety." *USA Today*. Nov. 18, 2003. [Link](#)
218. Rebecca Leung. (2009) "Diplomas for Sale." CBS News. Feb. 11, 2009. [Link](#)
219. US Government Accountability Office. (2011) "Diploma Mills: Federal Employees Have Obtained Degrees from Diploma Mills and Other Unaccredited Schools, Some at Government Expense." Report # GAO-04-771T. US Government Accountability Office. Washington, DC.
220. A good overview of various studies of Medicare fraud:  
PolitiFact. (2009) "Coburn Says 20 Percent of Every Medicare Dollar Goes to Fraud." PolitiFact.com. Aug. 27, 2009. [Link](#)
221. US Government Accountability Office. (2011) "Selected Cases of Public and Private Schools That Hired or Retained Individuals with Histories of Sexual Misconduct." Report # GAO-11-200. US Government Accountability Office. Washington, DC.
222. Nicole Ellison, Rebecca Heino, Jennifer Gibbs. (2006) "Managing Impressions Online: Self-Presentation Processes in the Online Dating Environment." *Journal of Computer-Mediated Communication*. Vol. 11, No. 2, pp. 415-441

223. David DeAndrea, Joseph Walther. (2011) "Attributions for Inconsistencies Between Online and Offline Self-Presentations." *Communication Research*. Vol. 38, No. 6, pp. 805-825.
224. Nicole Ellison, Jeffrey Hancock, Catalina Toma. (2012) "Profile As Promise: A Framework for Conceptualizing Veracity in Online Dating Self-Presentations." *New Media & Society*. Vol. 14, No. 1, pp. 45-62.
- David DeAndrea, Stephanie Tom Tong, Yuhua Jake Liang, Timothy Levine, Joseph Walther. (2012) "When Do People Misrepresent Themselves to Others? The Effects of Social Desirability, Ground Truth, and Accountability on Deceptive Self-Presentations." *Journal of Communication*. Vol. 62, No. 3, pp. 400-417.
225. Shelley Taylor, Jonathon Brown. (1988) "Illusion and Well-Being: A Social Psychological Perspective on Mental Health." *Psychological Bulletin*. Vol. 103, No. 2, pp. 193-210.
226. K. Patricia Cross. (1977) "Not Can, But Will College Teaching Be Improved?" *New Directions for Higher Education*. Vol. 1977, No. 17, pp. 1-15.
227. David Dunning. (1999) "A Newer Look: Motivated Social Cognition and the Schematic Representation of Social Concepts." *Psychological Inquiry*. Vol. 10, No. 1, pp. 1-11.
228. Justin Kruger. (1999) "Lake Wobegon Be Gone! The 'Below-Average Effect' and the Egocentric Nature of Comparative Ability Judgments." *Journal of Personality and Social Psychology*. Vol. 77, No. 2, pp. 221-232.
- We even tailor our concept of average and optimal levels of various traits to our perceptions of our own traits.
- Peter Borkenau, Katrin Zaltauskas, Daniel Leising. (2009) "More May Be Better but There May Be Too Much: Optimal Trait Level and Self-Enhancement Bias." *Journal of Personality*. Vol. 77, No. 3, pp. 825-858.
229. Nicholas Epley, David Dunning. (2000) "Feeling 'Holier Than Thou': Are Self-Serving Assessments Produced by Errors in Self- or Social Prediction?" *Journal of Personality and Social Psychology*. Vol. 79, No. 6, pp. 861-875.
230. Susan Harter. (1999) "The Construction of the Self: A Developmental Perspective." The Guilford Press. New York, NY.
- Oliver John, Richard Robins. (1994) "Accuracy and Bias in Self-Perception: Individual Differences in Self-Enhancement and the Role of Narcissism." *Journal of Personality and Social Psychology*. Vol. 66, No. 1, pp. 206-219.
231. Justin Kruger, Thomas Gilovich. (2004) "Actions, Intentions, and Self-Assessment: The Road to Self-Enhancement Is Paved with Good Intentions." *Personality and Social Psychology Bulletin*. Vol. 30, No. 3, pp. 328-339.
232. David Dunning, Judith Meyerowitz, Amy Holzberg. (1989) "Ambiguity and Self-Evaluation: The Role of Idiosyncratic Trait Definitions in Self-Serving Assessments of Ability." *Journal of Personality and Social Psychology*. Vol. 57, No. 6, pp. 1082-1090.

233. Associated Press. (2011) “100-Year-Old Marathoner Sets World Record by Completing Toronto Race.” AARP. Oct. 17, 2011. [Link](#)
234. E. Tory Higgins. (1987) “Self-Discrepancy: A Theory Relating Self and Affect.” *Psychological Review*. Vol. 94, No. 3, pp. 319-340.
235. Shanyang Zhao, Sherri Grasmuck, Jason Martin. (2008) “Identity Construction on Facebook: Digital Empowerment in Anchored Relationships.” *Computers in Human Behavior*. Vol. 24, No. 5, pp. 1816-1836.
236. “...SNS profiles appear to restore users’ sense of self-worth by reminding them of the important aspects of their lives... participants who spent 5 minutes on their Facebook profiles were more likely to take responsibility for their performance and less likely to blame others when receiving negative feedback.”
- Catalina Toma. (2010) “Affirming the Self through Online Profiles: Beneficial Effects of Social Networking Sites.” *Proceedings of the 28th International Conference on Human Factors in Computing Systems*, Apr. 10-15, 2010. Atlanta, GA.
237. Edwin Locke, Gary Latham. (2002) “Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35-Year Odyssey.” *American Psychologist*. Vol. 57, No. 9, pp. 705-717.
238. Mark Conner, Paul Norman. (Eds.) (2005) “Predicting Health Behaviour: Research and Practice with Social Cognition Models.” Second Edition. Open University Press. Berkshire, England.
- Victor Strecher, Gerard Seijts, Gerjo Kok, Gary Latham, Russell Glasgow, Brenda DeVellis, Ree Meertens, David Bulger. (1995) “Goal Setting as a Strategy for Health Behavior Change.” *Health Education Quarterly*. Vol. 22, No. 2, pp. 190-200.
- Gary Latham, Edwin Locke. (1991) “Self-Regulation through Goal Setting.” *Organizational Behavior and Human Decision Processes*. Vol. 50, No. 2, pp. 212-247.
239. Raymond Miller, Stephanie Brickman. (2004) “A Model of Future-Oriented Motivation and Self-Regulation.” *Educational Psychology Review*, Vol. 16, No. 1, pp. 9-33.
- Jennifer Stock, Daniel Cervone. (1990) “Proximal Goal-Setting and Self-Regulatory Processes.” *Cognitive Therapy and Research*. Vol. 14, No. 5, pp. 483-498.
240. W. Larry Gregory, Robert Cialdini, Kathleen Carpenter. (1982) “Self-Relevant Scenarios as Mediators of Likelihood Estimates and Compliance: Does Imagining Make It So?” *Journal of Personality and Social Psychology*. Vol. 43, No. 1, pp. 89-99.
241. Junghyun Kim, Jong-Eun Roselyn Lee. (2011) “The Facebook Paths to Happiness: Effects of the Number of Facebook Friends and Self-Presentation

on Subjective Well-Being.” *Cyberpsychology, Behavior, and Social Networking*. Vol. 14, No. 6, pp. 359-364.

242. Kimberly Ling, Gerard Beenen, Pamela Ludford, Xiaoqing Wang, Klarissa Chang, Xin Li, Dan Cosley, Dan Frankowski, Loren Terveen, Al Mamunur Rashid, Paul Resnick, Robert Kraut. (2005) “Using Social Psychology to Motivate Contributions to Online Communities.” *Journal of Computer-Mediated Communication*. Vol. 10, No. 4.
243. In 2010, Foursquare offered a similar virtual “sticker” which users could earn by checking in at a polling station.
- Foursquare. (2010) “Check in and Vote on Foursquare.” Oct. 28, 2010. [Link](#)
- Brenna Ehrlich. (2010) “More Than 20,000 Foursquare Users Have Earned the ‘I Voted’ Badge So Far .” *Mashable*. Nov. 2, 2010. [Link](#)
244. U.S. Politics on Facebook. (2010) “Snapshot: The Day After Election Day.” *Facebook.com*. Nov. 3, 2010. [Link](#)
- Some evidence suggests this had a surprisingly large impact on voting.
- John Bohannon. (2012) “‘Social Voting’ Really Does Rock the Vote.” *Science*. Sep. 12, 2012. [Link](#)
245. Alec Baldwin was chosen as an outspoken liberal actor with a consistent voting record. This record shows that he voted 21 times from 1991-2010.
- The Smoking Gun. (2011) “‘Mayor’ Alec Baldwin Not Even Gotham Voter.” *TheSmokingGun.com*. Jun. 8, 2011. [Link](#)
246. John Woolley, Gerhard Peters. (2009) “Voter Turnout in Presidential Elections: 1828 – 2008.” *The American Presidency Project*. UC Santa Barbara. Santa Barbara, CA. [Link](#)
- Michael McDonald. (2011) “2008 General Election Turnout Rates.” *United States Elections Project*. George Mason University. Fairfax, VA. [Link](#)
247. Staff Reporter. (2011) “‘It Has to Go Away’: Facebook Director Calls for an End to Internet Anonymity.” *Daily Mail*. Jul. 28, 2011. [Link](#)
- Randi Zuckerberg left Facebook shortly after making this comment.
- Elsbeth Reeve. (2011) “Zuckerberg’s Sister Quits Facebook to Start New Firm.” *The Atlantic*. Aug. 3, 2011. [Link](#)
248. Alex Bayley. (2011) “Preliminary Results of My Survey of Suspended Google+ Accounts.” *Infotropism (Personal Blog)*. Jul. 25, 2011. [Link](#)
249. Detlef Fetchenhauer, David Dunning. (2010) “Why So Cynical?: Asymmetric Feedback Underlies Misguided Skepticism Regarding the Trustworthiness of Others.” *Psychological Science*. Vol. 21, No. 2, pp. 189-193.
250. Hazel Markus, Paula Nurius. (1986) “Possible Selves.” *American Psychologist*. Vol. 41, No. 9, pp. 954-969.

251. Edward Deci, Richard Ryan. (2000) “The ‘What’ and ‘Why’ of Goal Pursuits: Human Needs and the Self-Determination of Behavior.” *Psychological Inquiry*. Vol. 11, No. 4, pp. 227-268.  
Edwin Locke, Gary Latham. (1990) “A Theory of Goal Setting & Task Performance.” Prentice Hall. Englewood Cliffs, NJ.
252. Burrhus Frederic Skinner. (1938) “The Behavior of Organisms: An Experimental Analysis.” Appleton-Century. Oxford, England.
253. Bobbie Johnson. (2010) “Privacy No Longer a Social Norm, Says Facebook Founder.” *The Guardian*. Jan. 10, 2010. [Link](#)
254. Fred Vogelstein. (2010) “What if the Facebook (Un)Privacy Revolution Is a Good Thing?” *Wired*. May 29, 2010. [Link](#)
255. Research produced dozens of different definitions of the generations alive. As such, almost all referenced studies of “Millennials” refer to age groups that are at least slightly different. Some of the most commonly accepted:  
William Strauss, Neil Howe. (1991) “Generations: The History of America’s Future, 1584 to 2069.” William Morrow and Co. New York, NY.
256. Suzy Platt. (1992) “Respectfully Quoted: A Dictionary of Quotations from the Library of Congress.” Congressional Quarterly Press. Washington, DC.  
This quote is commonly attributed to Socrates, however, as with anything he supposedly said, it is suspect because all we know about Socrates comes from others who wrote about him. It is interesting to note further that some scholars believe this “quote” is actually a rewording of a passage from Aristophanes’ *The Clouds*, particularly because in this play, a caricature of Socrates is portrayed as a fraud, and Plato considered it to have contributed to his execution.  
Plato, James Helm (Ed.). (1997) “Plato: Apology.” Bolchazy-Carducci Publishers. Wauconda, IL.
257. Vern Bengtson. (1970) “The Generation Gap: A Review and Typology of Social-Psychological Perspectives.” *Youth & Society*. Vol. 2, No. 1, pp. 7-32.  
Vern Bengtson. (1971) “Inter-Age Perceptions and the Generation Gap.” *The Gerontologist*. Vol. 11, No. 4, pp. 85-89.
258. Author’s Note: After writing this, I came across a strikingly similar passage in the preface to the following report:  
Pew Research Center. (2010) “Millennials: Confident. Connected. Open to Change.” Pew Research Center. Washington, DC. [Link](#)
259. Stanley Coopersmith, Mary Regan, Lois Dick. (1975) “The Myth of the Generation Gap.” Albion Publishing. San Francisco, CA.  
Frank Giancola. (2006) “The Generation Gap: More Myth than Reality.” *Human Resource Planning*. Vol. 29, No. 4, pp. 32-37.

260. Daniel Schacter (Ed.) (1997) “Memory Distortion: How Minds, Brains, and Societies Reconstruct the Past.” First Harvard University Press. Cambridge, MA.
261. Sydney Jones, Susannah Fox. (2009) “Generations Online in 2009.” Pew Research Center. Washington, DC.
262. Tom Brokaw. (1998) “The Greatest Generation.” Random House. New York, NY.
263. Ronald Reagan was born in 1911; Jimmy Carter and George H.W. Bush were born in 1924; Bill Clinton and George W. Bush were born in 1946. The first definition of the Silent Generation was those born between 1925 and 1945, although another common definition stopped at 1942.
- Staff Reporter. (1951) “People: The Younger Generation.” Time. Nov. 5, 1951.
- William Strauss, Neil Howe. (1991) “Generations: The History of America’s Future, 1584 to 2069.” William Morrow and Co. New York, NY.
264. Landon Jones. (1980) “Great Expectations: America and the Baby Boom Generation.” Coward-McCann. New York, NY.
- Santiago Budría Rodríguez, Javier Díaz-Giménez, Vincenzo Quadrini, José-Víctor Ríos-Rull. (2002) “Updated Facts on the U.S. Distributions of Earnings, Income, and Wealth.” Federal Reserve Bank of Minneapolis Quarterly Review. Vol. 26, No. 3, pp. 2-35.
- Arthur Kennickell. (2003) “A Rolling Tide: Changes in the Distribution of Wealth in the U.S., 1989-2001.” FEDS Working Paper No. 2003-24; Levy Economics Institute Working Paper No. 393. Social Science Research Network. Working Paper #427720. [Link](#)
- Dennis Cauchon. (2007) “Generation Gap? About \$200,000.” USA Today. May 20, 2007. [Link](#)
265. Divorce rates roughly doubled in the US between the mid-1960s and mid-1970s.
- Betsey Stevenson, Justin Wolfers. (2007) “Marriage and Divorce: Changes and Their Driving Forces.” Journal of Economic Perspectives. Vol. 21, No. 2, pp. 27-52.
- Source of data:
- Susan Carter, Scott Sigmund Gartner, Michael Haines, Alan Olmstead, Richard Sutch, Gavin Wright. (2006) “Historical Statistics of the United States: Millennial Edition.” Cambridge University Press. New York, NY.
266. David Elkind. (1998) “All Grown Up and No Place to Go: Teenagers In Crisis.” Perseus Books. New York, NY.
267. Peter Sacks. (1999) “Generation X Goes to College: An Eye-Opening Account of Teaching in Postmodern America.” Open Court. Peru, IL.
268. Definitions of the Millennial Generation vary widely. Some go back to the late 1970s, some go as far forward as 2010. Definitions of Generation Z are

even more widely varied and may not solidify for some time; however, future demographers will likely define it as the generation that grew up with the internet.

269. Don Tapscott. (2008) “Grown Up Digital: How the Net Generation is Changing Your World.” McGraw Hill. New York, NY.
270. Matthew Futterman. (2011) “Has Baseball’s Moment Passed?” The Wall Street Journal. Mar. 31, 2011. [Link](#)
271. 97% of people ages 12-17 play computer, web, portable, or console games.  
Amanda Lenhart, Joseph Kahne, Ellen Middaugh, Alexandra Macgill, Chris Evans, Jessica Vitak. (2008) “Teens, Video Games and Civics.” Pew Research Center. Washington, DC. [Link](#)
272. Arlene Nicholas, John Lewis. (2008) “Millennial Attitudes Toward Books and E-Books.” The International Journal of the Book. Vol. 5, No. 2, pp. 81-92.
273. Staff Reporter. (2010) “Rutgers Student Suicide Renews Debate Over Cyberbullying.” Fox News. Oct. 1, 2010. [Link](#)  
Reuters. (2010) “Cyber-Bullying Causes More Depression, Study Finds.” Fox News. Sep. 21, 2010. [Link](#)  
Erik Eckholm, Katie Zezima. (2010) “Strategies Take Shape for Trials in Bully Case.” The New York Times. Sep. 15, 2010.
274. Michael Austin. (2009) “Texting While Driving: How Dangerous Is It?” Car & Driver. Jun. 2009. [Link](#)  
Mary Madden, Amanda Lenhart. (2009) “Teens and Distracted Driving.” Pew Research Center. Washington, DC.
275. Neil Howe, William Strauss. (2000) “Millennials Rising: The Next Great Generation.” Vintage Books. New York, NY.
276. Paul Taylor, Richard Morin. (2009) “Forty Years after Woodstock, A Gentler Generation Gap.” Pew Research Center. Washington, DC. [Link](#)
277. Nancy Gibbs. (2009) “The Growing Backlash Against Overparenting.” Time. Nov. 20, 2009. [Link](#)
278. Rick Lyman. (2006) “In Many Public Schools, the Paddle Is No Relic.” The New York Times. Sep. 30, 2006. [Link](#)
279. David Elkind. (1998) “All Grown Up and No Place to Go: Teenagers In Crisis.” Perseus Books. New York, NY.
280. Naomi Aoki. (2004) “Harshness of Red Marks Has Students Seeing Purple.” Boston Globe. Aug. 23, 2004. [Link](#)  
Staff Reporter. (2008) “Marking in Red Ink Banned in Case It Upsets Schoolchildren.” The Telegraph. Dec. 26, 2008. [Link](#)
281. Valen Johnson. (2003) “Grade Inflation: A Crisis in College Education.” Springer-Verlag. New York, NY.

Robert Ziomek, Joseph Svec. (1995) “High School Grades and Achievement: Evidence of Grade Inflation.” ACT Research Report Series 95-3. American College Testing Program. Iowa City, IA.

282. Ron Clark. (2011) “What Teachers Really Want to Tell Parents.” CNN. Sep. 6, 2011. [Link](#)
283. Eva Pomerantz, Elizabeth Moorman, Scott Litwack. (2007) “The How, Whom, and Why of Parents’ Involvement in Children’s Academic Lives: More Is Not Always Better.” *Review Of Educational Research*. Vol. 77, No. 3, pp. 373-410.
284. Adrian Bangerter, Chip Heath. (2004) “The Mozart Effect: Tracking the Evolution of a Scientific Legend.” *British Journal of Social Psychology*. Vol. 43, No. 4, pp. 605-623.
285. Lee Carroll, Jan Tober. (1999) “The Indigo Children: The New Kids Have Arrived.” Hay House. Carlsbad, CA.
286. Allen Frances. (2010) “Normality Is an Endangered Species: Psychiatric Fads and Overdiagnosis.” *Psychiatric Times*. Jul. 6, 2010.

Although many scientists found there to be little evidence that ADHD was systematically overdiagnosed, media and the public generally thought otherwise.

Mark Scitutto, Miriam Eisenberg. (2007) “Evaluating the Evidence For and Against the Overdiagnosis of ADHD.” *Journal of Attention Disorders*. Vol. 11, No. 2, pp. 106-113.

287. This was one of the most heavily researched topics between 1998 and 2010, and literally thousands of scientific studies found no link between the MMR vaccine and autism.

Hideo Honda, Yasuo Shimizu, Michael Rutter. (2005) “No Effect of MMR Withdrawal on the Incidence of Autism: A Total Population Study.” *Journal of Child Psychology and Psychiatry*. Vol. 46, No. 6, pp. 572-579.

Stanley Plotkin, Jeffrey Gerber, Paul Offit. (2009) “Vaccines and Autism: A Tale of Shifting Hypotheses.” *Clinical Infectious Diseases*. Vol. 48, No. 4, pp. 456-461.

288. A.J. Wakefield, S.H. Murch, A. Anthony, J. Linnell, D.M. Casson, M. Malik, M. Berelowitz, A.P. Dhillon, M.A. Thomson, P. Harvey, A. Valentine, S.E. Davies, J.A. Walker-Smith. (1998) “Ileal-Lymphoid-Nodular Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children.” *The Lancet*. Vol. 351, No. 9103, pp. 637-641.

This research was later retracted.

The Editors of *The Lancet*. (2010) “Retraction—Ileal-Lymphoid-Nodular Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children.” *The Lancet*. Vol. 375, No. 9713, p. 445.

289. The UK General Medical Council found Wakefield guilty of serious professional misconduct. Among the charges of dishonesty and

irresponsibility, they found that Wakefield conducted procedures on children that were both unnecessary and unauthorized, failed to disclose that he had received substantial sums of money from a law firm that was working on a case against a vaccine manufacturer, and also failed to disclose that he had filed a patent for a new vaccine before publishing his initial research.

General Medical Council. (2010) “Dr Andrew Jeremy Wakefield: Determination on Serious Professional Misconduct (SPM) and Sanction.” General Medical Council. London, England. May 24, 2010.

General Medical Council. (2010) “Fitness to Practise Panel Hearing.” General Medical Council. London, England. Jan. 28, 2010.

Zosia Kmietowicz. (2010) “Wakefield is Struck Off for the ‘Serious and Wide-Ranging Findings Against Him.’” *British Medical Journal*. Vol. 340, p. c2803.

Clare Dyer. (2010) “Wakefield Was Dishonest and Irresponsible Over MMR Research, Says GMC.” *British Medical Journal*. Vol. 340, p. c593.

Brian Deer. (2011) “How the Case Against the MMR Vaccine Was Fixed.” *British Medical Journal*. Vol. 342, p. c5347.

Brian Deer. (2011) “How the Vaccine Crisis Was Meant to Make Money.” *British Medical Journal*. Vol. 342, p. c5258.

290. Todd Elder. (2010) “The Importance of Relative Standards in ADHD Diagnoses: Evidence Based on Exact Birth Dates.” *Journal of Health Economics*. Vol. 29, No. 5, pp. 641-656.
291. Tanya Froehlich, Bruce Lanphear, Jeffery Epstein, William Barbaresi, Slavica Katusic, Robert Kahn. (2007) “Prevalence, Recognition, and Treatment of Attention-Deficit/Hyperactivity Disorder in a National Sample of US Children.” *Archives of Pediatrics & Adolescent Medicine*. Vol. 161, No. 9, pp. 857-864.
292. Gretchen LeFever, Keila Dawson, Ardythe Morrow. (1999) “The Extent of Drug Therapy for Attention Deficit-Hyperactivity Disorder among Children in Public Schools.” *American Journal of Public Health*. Vol. 89, No. 9, pp. 1359-1364.
- Gretchen LeFever, Margaret Villers, Ardythe Morrow, E. Sidney Vaughn, III. (2002) “Parental Perceptions of Adverse Educational Outcomes among Children Diagnosed and Treated for ADHD: A Call for Improved School/Provider Collaboration.” *Psychology in the Schools*. Vol. 39, No. 1, pp. 63-71.
- A good criticism of some conclusions commonly drawn from this work can be found in:
- Mark Sciotto, Miriam Eisenberg. (2007) “Evaluating the Evidence For and Against the Overdiagnosis of ADHD.” *Journal of Attention Disorders*. Vol. 11, No. 2, pp. 106-113.

293. Leslie Iversen. (2006) “Speed, Ecstasy, Ritalin: The Science of Amphetamines.” Oxford University Press. New York, NY.
294. Todd Elder. (2010) “The Importance of Relative Standards in ADHD Diagnoses: Evidence Based on Exact Birth Dates.” *Journal of Health Economics*. Vol. 29, No. 5, pp. 641-656.
295. Lydia Lum. (2006) “Handling ‘Helicopter Parents.’” *Diverse: Issues in Higher Education*. Vol. 23, No. 20, pp. 40-43.
- Larry Gordon. (2010) “Keeping Parents’ ‘Helicopters’ Grounded During College.” *Los Angeles Times*. Aug. 29, 2010. [Link](#)
296. Sue Shellenbarger. (2006) “Helicopter Parents Go to Work: Moms and Dads Are Now Hovering at the Office.” *The Wall Street Journal*. Mar. 16, 2006. [Link](#)
- Jennifer Ludden. (2012) “Helicopter Parents Hover in the Workplace.” *NPR*. Feb. 6, 2012. [Link](#)
297. Pew Research Center. (2010) “Millennials: Confident. Connected. Open to Change.” Pew Research Center. Washington, DC. [Link](#)
298. The examples in this section are drawn from some entries on this bookshelf:
- Chip Espinoza, Mick Ukleja, Craig Rusch. (2010) “Managing the Millennials: Discover the Core Competencies for Managing Today’s Workforce.” John Wiley & Sons. Hoboken, NJ.
- Bruce Tulgan. (2009) “Not Everyone Gets a Trophy: How to Manage Generation Y.” Jossey-Bass. San Francisco, CA.
- Joanne Sujansky, Jan Ferri-Reed. (2009) “Keeping The Millennials: Why Companies Are Losing Billions in Turnover to This Generation – and What to Do About It.” John Wiley & Sons. Hoboken, NJ.
- Nicole Lipkin, April Perrymore. (2009) “Y in the Workplace: Managing the ‘Me First’ Generation.” The Career Press. Franklin Lakes, NJ.
- Carolyn Martin, Bruce Tulgan. (2001) “Managing Generation Y: Global Citizens Born in the Late Seventies and Early Eighties.” HRD Press. Amherst, MA.

Also:

Cisco Systems. (2011) “2011 Cisco Connected World Technology Report.” Cisco Systems. San Jose, CA.

299. Ruben Navarrette, Jr. (2011) “Are Millennials Cut Out for this Job Market?” *CNN*. Aug. 5, 2011. [Link](#)

In this quote, the author is summarizing the point of view in:

Jean Twenge. (2006) “Generation Me: Why Today’s Young Americans Are More Confident, Assertive, Entitled--and More Miserable Than Ever Before.” Free Press. New York, NY.

300. In 2010, the percentage of Americans living in multi-generational households continued climbing to become the highest it had been since the 1950s.
- Kim Parker. (2011) “The Boomerang Generation: Feeling OK about Living with Mom and Dad.” Pew Research Center. Washington, DC. [Link](#)
- Pew Research Center. (2010) “Millennials: Confident. Connected. Open to Change.” Pew Research Center. Washington, DC. [Link](#)
301. The authors of this research also suggest that the connotation of considering oneself important also changed over time, from a negative mark of grandeur to a positive mark of self-esteem, which is another dramatic social change.
- Cassandra Rutledge Newsom, Robert Archer, Susan Trumbetta, Irving Gottesman. (2003) “Changes in Adolescent Response Patterns on the MMPI/MMPI-A Across Four Decades.” *Journal of Personality Assessment*. Vol. 81, No. 1, pp. 74-84.
302. Douglas Falconer. (1981) “Introduction to Quantitative Genetics.” Longman. London, England.
- To be perfectly clear, the comparison to genetics is a metaphor only and does not refer to a genetic cause to the rise in narcissism.
303. Jeremy Paxman. (2011) “‘I Am Part of the Most Selfish Generation in History and We Should Be Ashamed of Our Legacy,’ Says Jeremy Paxman.” *Daily Mail*. Oct. 31, 2011. [Link](#)
- Robert Putnam. (2000). “Bowling Alone: The Collapse and Revival of American Community.” Simon & Schuster. New York, NY.
- Daniel Kadlec. (2006) “‘Me Generation’ becomes ‘We Generation.’” *USA Today*. Aug. 2, 2006. [Link](#)
304. Richard Munich, Matthew Munich. (2009) “Overparenting and the Narcissistic Pursuit of Attachment.” *Psychiatric Annals*. Vol. 39, No. 4, pp. 227-235.
305. Jean Twenge, Joshua Foster. (2009) “Birth Cohort Increases in Narcissistic Personality Traits Among American College Students, 1982-2009.” *Social Psychological and Personality Science*. Vol. 1, No. 1, pp. 99-106.
- Jean Twenge, W. Keith Campbell. (2009) “The Narcissism Epidemic: Living in the Age of Entitlement.” Free Press. New York, NY.
306. Jean Twenge, Sara Konrath, Joshua Foster, W. Keith Campbell, Brad Bushman. (2008) “Egos Inflating Over Time: A Cross-Temporal Meta-Analysis of the Narcissistic Personality Inventory.” *Journal of Personality*. Vol. 76, No. 4, pp. 875-902.
307. Pew Research Center. (2010) “Millennials: Confident. Connected. Open to Change.” Pew Research Center. Washington, DC. [Link](#)
308. Don Tapscott. (2008) “Grown Up Digital: How the Net Generation Is Changing Your World.” McGraw Hill. New York, NY.

309. Neil Howe, William Strauss. (2000) “Millennials Rising: The Next Great Generation.” Vintage Books. New York, NY.

The same authors predicted Millennials to be a Hero/Civic generation archetype in:

William Strauss, Neil Howe. (1991) “Generations: The History of America’s Future, 1584 to 2069.” William Morrow and Co. New York, NY.

Also:

Morley Winograd, Michael Hais. (2008) “Millennial Makeover: MySpace, YouTube, and the Future of American Politics.” Rutgers University Press. Piscataway, NJ.

Morley Winograd, Michael Hais. (2011) “Millennial Momentum: How a New Generation Is Remaking America.” Rutgers University Press. Piscataway, NJ.

310. Pew Research Center. (2010) “Millennials: Confident. Connected. Open to Change.” Pew Research Center. Washington, DC. [Link](#)
311. Neil Howe, William Strauss. (2000) “Millennials Rising: The Next Great Generation.” Vintage Books. New York, NY.
- Eric Greenberg, Karl Weber. (2008) “Generation We: How Millennial Youth are Taking Over America and Changing Our World Forever.” Pachatusan. Emeryville, CA.
312. Paul Taylor, Richard Morin. (2009) “Forty Years after Woodstock, a Gentler Generation Gap.” Pew Research Center. Washington, DC. [Link](#)
313. Pew Research Center. (2010) “Religion among the Millennials.” Feb. 17, 2010. [Link](#)
314. Pew Research Center. (2007) “A Portrait of ‘Generation Next:’ How Young People View Their Lives, Futures and Politics.” Jan. 9, 2007. [Link](#)
315. Scott Keeter, Paul Taylor. (2009) “The Millennials.” Pew Research Center. Washington, DC. [Link](#)
316. Arthur Brooks. (2006) “Who Really Cares: The Surprising Truth about Compassionate Conservatism.” Basic Books. New York, NY.
- Nicholas Kristof. (2008) “Bleeding Heart Tightwads.” The New York Times. Dec. 20, 2008. [Link](#)
317. Jean Twenge, W. Keith Campbell, Elise Freeman. (2012) “Generational Differences in Young Adults’ Life Goals, Concern for Others, and Civic Orientation, 1966–2009.” Journal of Personality and Social Psychology. Vol. 102, No. 5, pp. 1045-1062.
318. US Bureau of Labor Statistics. (2011) “American Time Use Survey.” US Department of Labor. Washington, DC. [Link](#)
319. Dave Banks. (2010) “After 100 Years, Are the Boy Scouts Still Relevant?” Wired. Feb. 8, 2010. [Link](#)

The decline may actually be even sharper, as the FBI found that some groups reported inflated numbers to secure more funding.

Martin Savidge. (2005) "FBI Investigates Boy Scouts for Fraud." MSNBC. Feb. 17, 2005. [Link](#)

320. Megan Greenwell. (2009) "Girl Scouts Is Modernizing, Rebranding Itself as Membership Falls." The Washington Post. Mar. 2, 2009. [Link](#)
321. Andrea Stone. (2009) "'Civic Generation' Rolls Up Sleeves in Record Numbers." USA Today. Apr. 14, 2009. [Link](#)
322. Michelle Healy. (2012) "Millennials Might Not Be So Special After All, Study Finds." USA Today. Mar. 15, 2012. [Link](#)
323. Rebecca Skinner, Chris Chapman. (1999) "Service-Learning and Community Service in K-12 Public Schools." National Center for Education Statistics. Washington, DC.
324. 59% of students who participated in service-learning programs said that they did so to fulfill a requirement.
- Dana Markow, Suzanne Martin, Gretchen Comey, Emily Zwanziger, Amie Kim. (2005) "The National Survey on Service-Learning and Transitioning to Adulthood." National Youth Leadership Council. St. Paul, MN.
325. Mike Planty, Robert Bozick, Michael Regnier. (2006) "Helping Because You Have To or Helping Because You Want To? Sustaining Participation in Service Work from Adolescence through Young Adulthood." Youth & Society. Vol. 38, No. 2, pp. 177-202.
326. Ben Mezrich. (2009) "The Accidental Billionaires: The Founding of Facebook: A Tale of Sex, Money, Genius, and Betrayal." Doubleday. New York, NY.
327. Bart Gzik. (2011) "Indispensable Technologies: Mapping the Co-Evolution of Needs and Novelty in the Digital Revolution." Universiteit Utrecht. Utrecht, Netherlands.

Elisabeth Platzer, Otto Petrovic, Wolf Rauch, Martina Brunnhofer. (2010) "Causes and Consequences of Mobile Phone's Indispensability for Everyday Life." Paper presented at the 2010 Ninth International Conference on Mobile Business and 2010 Ninth Global Mobility Roundtable (ICMB-GMR). Jun. 13-15, 2010.

Don Tapscott. (2008) "Grown Up Digital: How the Net Generation is Changing Your World." McGraw Hill. New York, NY.

Lee Rainie, John Horrigan. (2005) "A Decade of Adoption: How the Internet Has Woven Itself into American Life." Pew Research Center. Washington, DC.

Donna Hoffman, Thomas Novak, Alladi Venkatesh. (2004) "Has The Internet Become Indispensable? Empirical Findings and Model Development." Communications of the ACM. Vol. 47, No. 7, pp. 37-42.

328. Kathryn Zickuhr. (2011) “Generations and Their Gadgets.” Pew Research Center. Washington, DC.
329. This is an area that is being explored. Not long ago, dependence on internet technology used to be seen as a rare condition, an extension of other addictions.

Kimberly Young, Molly Pistner, James O’Mara, Jennifer Buchanan. (1999) “Cyber Disorders: The Mental Health Concern for the New Millennium.” *Cyberpsychology & Behavior*. Vol. 2, No. 5, pp. 475-479.

In 2008, a market research group found that 27% of respondents to a questionnaire experienced significantly more anxiety when deprived of internet or wireless access.

Solutions Research Group. (2008) “Age of Disconnect Anxiety.” Solutions Research Group. Toronto, ON.

Since then, scholars have been working to measure the effects in a more scientific manner. Some efforts:

John Durocher, Kelly Lufkin, Michelle King, Jason Carter. (2011) “Social Technology Restriction Alters State-Anxiety but Not Autonomic Activity in Humans.” *American Journal of Physiology – Regulatory, Integrative, and Comparative Physiology*. Vol. 301, No. 6, pp. R1773-R1778.

Michelle Hackman. (2011) “Communication Underload: Validating the Existence of Disconnect Anxiety.” John. L. Miller Great Neck North High School.

The latter entry is notable because although the research does not appear in a peer-reviewed journal – in fact, it was a project conducted by a blind 17-year-old high school student – it was conducted with more scientific rigor than dozens of well-funded university and commercial research projects that have attempted to study this phenomenon.

330. Judy Pearson, Anna Carmon, Cloy Tobola, Michael Fowler. (2010) “Motives for Communication: Why the Millennial Generation Uses Electronic Devices.” *Journal of the Communication, Speech & Theatre Association of North Dakota*. Vol. 22, pp. 45-56.

Cisco Systems. (2011) “2011 Cisco Connected World Technology Report.” Cisco Systems. San Jose, CA.

331. In 2011, mobile phone owners ages 18-24 sent and received an average of 109.5 text messages each day.
- Aaron Smith. (2011) “Americans and Text Messaging.” Pew Research Center. Washington, DC.
332. In 2009, American girls ages 14-17 sent an average of 100 text messages each day. (Figure does not include messages received.)
- Amanda Lenhart, Rich Ling, Scott Campbell, Kristen Purcell. (2010) “Teens and Mobile Phones.” Pew Research Center. Washington, DC.

333. Graeme Paton. (2010) “Children ‘More Likely to Own a Mobile Phone Than a Book.’” *The Telegraph*. May 26, 2010. [Link](#)
334. Kathryn Zickuhr. (2011) “Generations and Their Gadgets.” Pew Research Center. Washington, DC.
335. Amanda Lenhart, Kristen Purcell, Aaron Smith, Kathryn Zickuhr. (2010) “Social Media & Mobile Internet Use among Teens and Young Adults.” Pew Research Center. Washington, DC.
336. Gina Sverdlov, Reineke Reitsma, Amelia Martland, Samantha Jaddou. (2011) “The State of Consumers and Technology: Benchmark 2011, US.” Forrester Research. Cambridge, MA.
337. Researchers find that extraverts use social networking for social enhancement, while introverts use it for social compensation, both of which are related to greater usage and narcissism.  
Daria Kuss, Mark Griffiths. (2011) “Online Social Networking and Addiction—A Review of the Psychological Literature.” *International Journal of Environmental Research & Public Health*. Vol. 8, No. 9, pp. 3528-3552.
338. Janna Quitney Anderson, Lee Rainie. (2010) “Millennials’ Likely Lifelong Online Sharing Habit.” Pew Research Center. Washington, DC.
339. Farhad Manjoo. (2011) “Not Sharing Is Caring.” *Slate*. Sep. 22, 2011. [Link](#)
340. The Nielsen Company. (2011) “State of the Media: The Social Media Report Q3 2011.” The Nielsen Company. New York, NY.
341. Millennials ages 18-29 had 696 Facebook friends each on average.  
Dan Schawbel. (2012) “Gen-Y & Facebook Study.” *Millennial Branding*. Boston, MA.
342. In this study, 70% of Millennials said they felt more excited when their friends agreed with them about how to spend their time and money on leisure activities.  
Barkley, Boston Consulting Group, Service Management Group. (2011) “American Millennials: Deciphering the Enigma Generation.” Barkley. Kansas City, MO.
343. Jaelyn Cabral. (2008) “Is Generation Y Addicted to Social Media?” *Elon Journal of Undergraduate Research in Communications*. Vol. 2, No. 1, pp. 5-14.  
D. Karaiskos, E. Tzavellas, G. Balta, T. Paparrigopoulos. (2010) “Po2-232 - Social Network Addiction: A New Clinical Disorder?” *European Psychiatry*. Vol. 25, Suppl. 1, p. 855.  
Daria Kuss, Mark Griffiths. (2011) “Online Social Networking and Addiction—A Review of the Psychological Literature.” *International Journal of Environmental Research & Public Health*. Vol. 8, No. 9, pp. 3528-3552.
344. Cisco Systems. (2011) “2011 Cisco Connected World Technology Report.” Cisco Systems. San Jose, CA.

345. Cisco Systems. (2011) “2011 Cisco Connected World Technology Report.” Cisco Systems. San Jose, CA.
346. Invisible Children. (2012) “Kony 2012.” YouTube. Mar. 5, 2012. [Link](#)
347. Samantha Grossman. (2012) “‘Kony 2012’ Documentary Becomes Most Viral Video in History.” Time. Mar. 12, 2012. [Link](#)
348. Conrad Quilty-Harper. (2012) “Kony 2012: Stats Breakdown of the Viral Video.” The Telegraph. Mar. 9, 2012. [Link](#)
349. Lee Rainie, Paul Hitlin, Mark Jurkowitz, Michael Dimock, Shawn Neidorf. (2012) “The Viral Kony 2012 Video.” Pew Research Center. Washington, DC.
350. Conrad Quilty-Harper. (2012) “Kony 2012: Stats Breakdown of the Viral Video.” The Telegraph. Mar. 9, 2012. [Link](#)
351. Staff Reporter. (2012) “Uganda Screenings of Kony Film Halted After Protests.” AFP. Mar. 15, 2012. [Link](#)
352. Staff Reporter. (2012) “Ugandan PM: Kony 2012 Video Gives False Impression.” The Telegraph. Mar. 18, 2012. [Link](#)
353. Staff Reporter. (2009) “LRA Rebels Fleeing Towards Central African Republic.” AFP. Jan. 2, 2009.
- Els De Temmerman. (2009) “LRA’s Joseph Kony to Seek Protection from Sudan Army.” New Vision. Nov. 22, 2009.
- Anneke Van Woudenberg, Ida Sawyer, Maria Burnett, Elise Keppler. (2010) “Trail of Death: LRA Atrocities in Northeastern Congo.” Human Rights Watch. New York, NY.
- Michael Wilkerson. (2010) “Why Can’t Anyone Stop the LRA?” Foreign Policy. Apr. 19, 2010. [Link](#)
- Andre Le Sage. (2011) “Countering the Lord’s Resistance Army in Central Africa.” Institute for National Strategic Studies. Washington, DC.
- Mareike Schomerus, Tim Allen, Koen Vlassenroot. (2011) “Obama Takes on the LRA: Why Washington Sent Troops to Central Africa.” Foreign Affairs. Nov. 15, 2011. [Link](#)
- Staff Reporter. (2012) “Ugandan PM: Kony 2012 Video Gives False Impression.” The Telegraph. Mar. 18, 2012. [Link](#)
- Mareike Schomerus, Tim Allen, Koen Vlassenroot. (2012) “KONY 2012 and the Prospects for Change.” Foreign Affairs. Mar. 13, 2012. [Link](#)
354. Invisible Children. (2012) “Critiques.” InvisibleChildren.com. Mar. 8, 2012. (Updated multiple times in March 2012, now removed.)

This document was revised a few days after it was first published, and the support for the UPDF was removed. Later in the month, it was edited again, and a revised statement was added that said that IC advocated for the Ugandan regional government, but did not support it monetarily. Furthermore, the statement acknowledged the human rights violations

committed by the Ugandan government and the UPDF, but called the UPDF “a necessary piece in counter-LRA activities.”

The founders of Invisible Children also posed while holding guns alongside members of the Sudan People’s Liberation Army for a photograph that became infamous. (The SPLA is also accused of countless human rights violations.)

Elizabeth Flock. (2012) “Invisible Children Founders Posing with Guns: an Interview with the Photographer.” *The Washington Post*. Mar. 8, 2012. [Link](#)

Also see:

Noelle Jouglet. (2012) “KONY 2012 - Help Raise Awareness and Stop Joseph Kony.” *Reddit*. Mar. 6, 2012. [Link](#)

355. In Transparency International’s 2010 Corruption Perceptions Index, Uganda scored a 2.5 out of 10, tied with Belarus, Ecuador, Lebanon, Nicaragua, Syria, and Timor-Leste.

Transparency International. (2011) “Corruption Perceptions Index 2010.” Transparency International. Berlin, Germany.

356. Nidal Nabil Jurdi. (2011) “The International Criminal Court and National Courts: A Contentious Relationship.” Ashgate Publishing, London, England.

Amnesty International. (2011) “Amnesty International Report 2011: The State of the World’s Human Rights.” Amnesty International, London, England.

Emma Mutaizibwa. (2012) “UPDF in Kony Hunt Accused of Rape, Looting.” *The Observer*. Mar. 2, 2012. [Link](#)

Mahmood Mamdani. (2012) “Kony: What Jason Did Not Tell the Invisible Children.” *Al Jazeera*. Mar. 13, 2012. [Link](#)

Michael Deibert. (2012) “The Problem with Invisible Children’s ‘Kony 2012.’” *The Huffington Post*. Mar. 7, 2012. [Link](#)

357. Oren Dorell. (2012) “‘Kony 2012’ Viral Video by Invisible Children Stirs Debate.” *USA Today*. Mar. 9, 2012. [Link](#)

358. Chenda Ngak. (2012) “Invisible Children’s ‘Kony 2012’ Viral Video Stirs Emotion and Controversy.” *CBS News*. Mar. 8, 2012. [Link](#)

359. Meghan Keneally. (2012) “Kony 2012 Filmmakers Under Fire for Funding from Anti-Gay Christians.” *Daily Mail*. Mar. 12, 2012. [Link](#)

360. Invisible Children. (2011) “2011 Financial Statement.” *InvisibleChildren.com*. Sep. 22, 2011.

Invisible Children. (2012) “Critiques.” *InvisibleChildren.com*. Mar. 8, 2012. (Updated multiple times in March 2012, now removed.)

361. Staff Reporter. (2012) “‘Kony 2012’ Exec Joked About Keeping \$900k Donation for Himself.” *TMZ*. Mar. 27, 2012. [Link](#)

For context, the contest ended shortly after a major earthquake in Haiti, and just before this, Invisible Children promised to donate \$100,000 of the million-dollar prize to relief work there.

Laren Poole. (2010) “Help Invisible Children Give Away 100K for Haiti.” The Huffington Post. Jan. 20, 2010. [Link](#)

362. Nathaniel Whittemore. (2010) “More Dubious Behavior in the Chase Contest.” Change.org. Jan. 19, 2010. [Link](#)

363. Angelo Izama. (2012) “Acholi Street. Stop #Kony2012. Invisible Children’s Campaign of Infamy.” Angelo Opi-aiya Izama (Personal Blog). Mar. 7, 2012. [Link](#)

Mike Pflanz. (2012) “Joseph Kony 2012: Growing Outrage in Uganda Over Film.” The Telegraph. Mar. 8, 2012. [Link](#)

Ishaan Tharoor. (2012) “Why You Should Feel Awkward About the ‘Kony2012’ Video.” Time. Mar. 8, 2012. [Link](#)

Kate Cronin-Furman, Amanda Taub. (2012) “Solving War Crimes with Wristbands: The Arrogance of ‘Kony 2012.’” The Atlantic. Mar. 8, 2012. [Link](#)

364. Polly Curtis, Tom McCarthy. (2012) “Kony 2012: What’s the Real Story?” The Guardian. Mar. 8, 2012. [Link](#)

365. Polly Curtis, Tom McCarthy. (2012) “Kony 2012: What’s the Real Story?” The Guardian. Mar. 8, 2012. [Link](#)

See also:

John Vidal, Mustafa Khalili, Alex Healey, Ken Macfarlane. (2012) “Kony 2012: John Vidal’s Verdict.” The Guardian. Mar. 8, 2012. [Link](#)

366. Parallels: Infomercials are typically 30 minute-long videos, which contain few facts but spend the majority of the time using a variety of emotional appeals to make the audience focus on a specific problem they normally would not think about, then resolve the problem by showcasing an easy, affordable solution at the end.

367. Invisible Children. (2012) “Kony 2012.” YouTube. Mar. 5, 2012. [Link](#)

Invisible Children. (2012) “Kony Bracelet.” Invisible Children Store. Mar. 9, 2012. [Link](#)

Invisible Children. (2012) “Kony 2012 Action Kit.” Invisible Children Store. Mar. 9, 2012. [Link](#)

368. A typical headline the day after the video was released:

Enjoli Francis. (2012) “‘Kony 2012’ Campaign Against Uganda Warlord Takes Over Internet.” ABC News. Mar. 7, 2012. [Link](#)

369. Judson Berger. (2012) “Anti-Kony Campaign Draws Renewed Support on Hill, Opens Door to More US Involvement.” Fox News. Mar. 28, 2012. [Link](#)

370. J. David Goodman. (2012) “Backlash Aside, Charities See Lessons in a Web Video.” The New York Times. Mar. 16, 2012. [Link](#)

Robert Wright. (2012) “Can the Internet Catch Joseph Kony?” The Atlantic. Mar. 9, 2012. [Link](#)

371. Scott Stump. (2012) “Maker of ‘KONY 2012’ Video Deflects Critics, Urges Action.” MSNBC. Mar. 9, 2012. [Link](#)

372. Transparency International. (2011) “Corruption Perceptions Index 2010.” Transparency International. Berlin, Germany.

373. Eric Margolis. (2011) “Bwana Uncle Sam.” The Huffington Post. Oct. 31, 2011. [Link](#)

Josh Kron. (2011) “Uganda’s Oil Could Be Gift That Becomes a Curse.” The New York Times. Nov. 25, 2011. [Link](#)

“In America, it’s interesting because the political importance is that Obama has sent 100 troops to Uganda specifically to find and bring [Kony] to justice...Nobody knows exactly what they are doing now, they don’t seem to have any particular relevance, they don’t have any remit to go outside the country, so people in Uganda say they must be there to get the oil...we don’t have any idea what they are doing there, we have no way of knowing...In Uganda, it has very little political relevance because the war is over, and the man is not seen as any great threat. He’s not even living in the country.”

John Vidal, Mustafa Khalili, Alex Healey, Ken Macfarlane. (2012) “Kony 2012: John Vidal’s Verdict.” The Guardian. Mar. 8, 2012. [Link](#)

374. Anneke Van Woudenberg, Ida Sawyer, Maria Burnett, Elise Keppler. (2010) “Trail of Death: LRA Atrocities in Northeastern Congo.” Human Rights Watch. New York, NY.

375. Anneke Van Woudenberg, Ida Sawyer, Maria Burnett, Jehanne Henry, Elise Keppler. (2009) “The Christmas Massacres: LRA attacks on Civilians in Northern Congo.” Human Rights Watch. New York, NY.

376. In April 2012, Invisible Children’s four most popular videos on YouTube were “Kony 2012,” “Kony 2012: Part II - Beyond Famous,” and “Kony 2012 Teaser,” and “Protection Plan,” which were all released in the previous six weeks. The fifth most popular video, “Invisible Children: Who We Are,” had amassed about 175,000 views over the five years before “Kony 2012” was released, with nearly perfectly steady, linear growth.

YouTube. (2012) “Invisible Children: Uploaded Videos.” YouTube.com. Apr. 8, 2012. [Link](#)

Invisible Children. (2006) “Invisible Children: Who We Are.” YouTube. Dec. 12, 2006. [Link](#)

377. After the Kony 2012 video was released, the total number of views rose dramatically.

Invisible Children. (2011) “Invisible Children // Who is the LRA?” YouTube. Oct. 5, 2011. [Link](#)

378. One of the major flaws was that it still did not address the corruption and human rights violations of the African governments and military. From the

video: “Strengthening ongoing efforts of the African Union and regional governments is the best way to apprehend top LRA leadership, and it is something every country in the world can support.”

Invisible Children. (2012) “KONY 2012: Part II - Beyond Famous.” YouTube. Apr. 5, 2012. [Link](#)

379. On April 11, 2012, the original Kony 2012 video had 87 million views on YouTube, while the follow-up video had 1.5 million views. (Note: Viewing statistics have since been made private.)

Invisible Children. (2012) “KONY 2012: Part II - Beyond Famous.” YouTube. Apr. 5, 2012. [Link](#)

380. Megan Garber. (2012) “How Kony 2012’s Big Event Fizzled Out.” The Atlantic. Apr. 24, 2012. [Link](#)

Peter Walker. (2012) “Kony 2012 Charity’s Cover the Night Protest Draws Less Visible Support.” The Guardian. Apr. 20, 2012. [Link](#)

Chris Paine. (2012) “Kony 2012’s Struggle to Remain Visible.” The Telegraph. Apr. 21, 2012. [Link](#)

381. Rory Carroll. (2012) “Kony 2012 Cover the Night Fails to Move from the Internet to the Streets.” The Guardian. Apr. 21, 2012. [Link](#)

382. Staff Reporter. (2012) “New Jason Russell: The Naked Meltdown from Up Close.” TMZ. Mar. 18, 2012. [Link](#)

383. Note: Although IC later explained that this behavior was the result of dehydration and exhaustion, as with most news, the vast majority of attention was paid to the more scandalous details.

Sarah Grieco. (2012) “Invisible Children Co-Founder Detained: SDPD.” NBC. Mar. 17, 2012. [Link](#)

Staff Reporter. (2012) “‘Kony 2012’ Activist Reportedly Found Roaming Streets Nearly Naked after Suffering from ‘Exhaustion.’” Fox News. Mar. 16, 2012. [Link](#)

Eyder Peralta. (2012) “‘Invisible Children’ Co-Founder Detained by Police in San Diego.” NPR. Mar. 16, 2012. [Link](#)

384. A week after “Move” was released, it had about 120,00 views on YouTube.

Invisible Children. (2012) “MOVE: Invisible Children’s New Film from the Creators of KONY 2012.” YouTube. Oct. 14, 2012. [Link](#)

385. Janna Quitney Anderson. (2012) “Millennials Will Benefit and Suffer Due to Their Hyperconnected Lives.” Pew Research Center. Washington, DC.

Some comments from this study:

“Increasingly, teens and young adults rely on the first bit of information they find on a topic, assuming that they have found the ‘right’ answer, rather than using context and vetting/questioning the sources of information to gain a holistic view of a topic.”

“It’s simply not possible to discuss, let alone form societal consensus around, major problems without lengthy, messy conversations about those problems. A generation that expects to spend 140 or fewer characters on a topic and rejects nuance is incapable of tackling these problems.”

386. Sonya Sachdeva, Rumén Iliev, Douglas Medin. (2009) “Sinning Saints and Sainly Sinners: The Paradox of Moral Self-Regulation.” *Psychological Science*. Vol. 20, No. 4, pp. 523-528.
- Nina Mazar, Chen-Bo Zhong. (2010) “Do Green Products Make Us Better People?” *Psychological Science*. Vol. 21, No. 4, pp. 494-498.
387. The last words in the video are: “Above all, share this movie online. It’s free. Find it all at [Kony2012.com](http://Kony2012.com).” (Punctuation added.)
- Invisible Children. (2012) “Kony 2012.” YouTube. Mar. 5, 2012. [Link](#)
388. Author’s Note: I am either the last of Generation X or the first of the Millennials, depending on which demographer you ask. Either way, as I sit at my desk, trying to help solve social problems just by typing words into a computer, the hypocrisy is uncomfortably palpable.
389. Pew Research Center. (2010) “Millennials: Confident. Connected. Open to Change.” Pew Research Center. Washington, DC. [Link](#)
390. Paul Taylor, Richard Morin. (2009) “Forty Years after Woodstock, a Gentler Generation Gap.” Pew Research Center. Washington, DC. [Link](#)
391. Janna Quitney Anderson. (2012) “Millennials Will Benefit and Suffer Due to Their Hyperconnected Lives.” Pew Research Center. Washington, DC.
392. A reference to the 10,000 Hour Rule described in:
- Malcolm Gladwell. (2008) “Outliers.” Little, Brown and Co. New York, NY.
393. Christine Dugas. (2010) “Generation Y’s Steep Financial Hurdles: Huge Debt, No Savings.” *USA Today*. Apr. 23, 2010. [Link](#)
394. Tim Ferguson. (2007) “Broadband Adoption Passes Halfway Mark in U.S.” CNET. Feb. 18, 2007. [Link](#)
395. For an excellent example of DLC breathing new life into a game (no pun intended), see Rockstar’s *Red Dead Redemption: Undead Nightmare*, which sold over 2 million copies.
- Tom Magrino, Eddie Makuch. (2011) “Take-Two Sales Sink 12% in June Quarter.” *GameSpot*. Aug. 8, 2011. [Link](#)
- For another great example (coincidentally, another mod that filled a game with zombies), see the *Arma 2/DayZ* endnotes below.
396. DLC improved profit margins by combating the used game trade, since the original developers of the game did not receive any revenue from such sales. With the promise of new content in the future, some players who otherwise would have sold a game shortly after completing it decided instead to hold on to them, which kept those copies out of the used game market.

Later, this concept was extended, and games shipped with portions of the game locked from use. Original purchasers received a free unlock code that only worked once, forcing subsequent owners of the game to purchase a code to experience the full game. At present, more games are moving to this model, adding more value to original buyers of games and making them more difficult to pirate or resell. This practice is a stopgap that will be replaced by streaming gaming.

397. Mike Rose. (2012) “How a Mod Put Three-Year-Old Arma 2 on Top of Steam’s Charts.” Gamasutra. May 18, 2012. [Link](#)

398. Estimate based on the following information:

Arma 2 sold approximately 300,000 copies at full price (\$29.99) in the first two months the mod was available, at which point the mod had 330,000 unique users.

William Usher. (2012) “DayZ Helps Arma 2 Rack Up More Than 300,000 in Sales.” Cinema Blend. Jul. 1, 2012. [Link](#)

The game company credited up to 80% of those sales to the mod.

Luke Plunkett. (2012) “PC Zombie Darling Causes Sale Explosion, Arma Devs Happy to Help.” Kotaku. May 15, 2012.

A few months later, the mod had over a million unique users and was still growing.

Dean Hall. (2012) “About.” DayZMod.com. Aug. 6, 2012. [Link](#)

399. Thomas Debeauvais, Bonnie Nardi, Diane Schiano, Nicolas Ducheneaut, Nicholas Yee. (2011) “If You Build It They Might Stay: Retention Mechanisms in World of Warcraft.” Proceedings of the Sixth International Conference on the Foundations of Digital Games. ACM. New York, NY.

400. An incredibly rough prediction based on data extrapolated from:

IDATE. (2012) “World Television Report: Terrestrial - Cable - Satellite – IPTV.” IDATE. Montpellier, France.

IDATE. (2012) “World Video Game Market: Markets & Forecasts, 2011-2015.” IDATE. Montpellier, France.

Signals and Systems Telecom. (2012) “US Telecom Industry Assessment & Forecasts 2011 - 2020.” Signals and Systems Telecom. Ras Al Khaimah, United Arab Emirates.

PricewaterhouseCoopers. (2011) “Global Entertainment and Media Outlook: 2011-2015.” PricewaterhouseCoopers. London, England.

DFC Intelligence. (2011) “Worldwide Market Forecasts for the Video Game and Interactive Entertainment Industry.” DFC Intelligence. San Diego, CA.

Author’s Note: Forecasting is infamously inaccurate, although PricewaterhouseCoopers was very, very close in their estimates for 2012 in the 2008 version of their Global Entertainment and Media Outlook report.

Also taken into account is my own prediction that the television industry will experience a resurgence when a company finally introduces a convenient and affordable on-demand service that offers new content and also properly monetizes the content owners' extensive back catalogs of television shows and movies, similar to what Steam does for computer games. (Good candidates are Amazon, Apple, Google, Netflix, or Steam itself.)

401. Investment U. (2008) "The Video Game Industry: An \$18 Billion Entertainment Juggernaut." Seeking Alpha. Aug. 5, 2008. [Link](#)
402. Tom Chatfield. (2009) "Videogames Now Outperform Hollywood Movies." The Guardian. Sep. 26, 2009. [Link](#)
403. Don Reisinger. (2011) "Call of Duty: Modern Warfare 3 Makes \$1 Billion--In 16 Days." CNET. Dec. 12, 2011. [Link](#)
404. Forty-two critics awarded The Social Network an average score of 95/100. Metacritic. (2012) "The Social Network." Metacritic. Feb. 15, 2012. [Link](#)
405. The Academy of Motion Picture Arts and Sciences. (2011) "Winners and Nominees for the 83rd Academy Awards." Feb. 28, 2011. [Link](#)
- Caroline McCarthy. (2011) "'The Social Network' Nominated for Eight Oscars." CNET. Jan. 25, 2011. [Link](#)
406. John Horn. (2011) "'The Social Network' Is Friendied by the Hollywood Foreign Press." Los Angeles Times. Jan. 17, 2011. [Link](#)
407. Box Office Mojo. (2011) "The Social Network." Mar. 3, 2011. [Link](#)
408. In 2010, World of Warcraft accounted for 89% of Blizzard's consolidated net revenue, which was \$1.656 billion.
- Activision Blizzard. (2011) "Form 10-K Annual Report." United States Securities and Exchange Commission. Washington, DC.
- In 2011, World of Warcraft accounted for 90% of Blizzard's consolidated net revenue, which was \$1.243 billion.
- Activision Blizzard. (2012) "Form 10-K Annual Report." United States Securities and Exchange Commission. Washington, DC.
409. PricewaterhouseCoopers. (2011) "Global Entertainment and Media Outlook: 2011-2015." PricewaterhouseCoopers. London, England.
- Tim Cross. (2011) "All the World's a Game." The Economist. Dec. 10, 2011. [Link](#)
- Ian Livingstone. (2012) "Viewpoint: Video Games Tax Breaks Level the Playing Field." BBC News. Mar. 12, 2012. [Link](#)
410. For a great explanation of how free products distort our decision-making process, read:
- Dan Ariely. (2008) "Predictably Irrational: The Hidden Forces That Shape Our Decisions." HarperCollins. New York, NY.

411. John Gaudiosi. (2011) “Cloud Gaming Prospects for 2012.” FC Business Intelligence. London, England.
412. Jeferson Valadares. (2011) “Consumers Spend Average of \$14 per Transaction in iOS and Android Freemium Games.” Flurry. Jul. 25, 2011. [Link](#)
- Tim Rogers. (2011) “Who Killed Video Games? (A Ghost Story).” Insert Credit. Sep. 22, 2011. [Link](#)
- Adam Saltsman. (2011) “Contrivance and Extortion: In-App Purchases & Microtransactions.” Gamasutra. Oct. 18, 2011. [Link](#)
- Vic Roman. (2011) “Is DLC Evil?” 1UP.com. Nov. 3, 2011. [Link](#)
- Carter Dotson. (2011) “Why Do Freemium Games Get Such a Bad Rap?” Mashable. Nov. 15, 2011 [Link](#)
413. This blog post is notable not only because it is one of the most concise and clear opinions on the matter, but also because it came from a successful game developer, not an angry consumer. Note: Misspellings were corrected.
- Markus Persson. (2011) “I Hate ‘Free to Play.’” The Word of Notch (Personal Blog). Oct. 24, 2011. [Link](#)
- Another good piece from an industry insider on the impact of freemium:
- Raphael van Lierop. (2012) “The True Cost of Free: What the Rise of Free to Play Might Mean for Single-Player Games.” Penny Arcade. Aug. 30, 2012. [Link](#)
414. Piers Harding-Rolls. (2011) “Zynga Preliminary IPO Filing Legitimizes Social Gaming Market.” iSuppli. Jun. 30, 2011. [Link](#)
415. Jeferson Valadares. (2011) “Free-to-play Revenue Overtakes Premium Revenue in the App Store.” Flurry. Jul. 7, 2011. [Link](#)
416. John Gaudiosi. (2012) “Riot Games’ League of Legends Officially Becomes Most Played PC Game in the World.” Forbes. Jul. 11, 2011. [Link](#)
417. Nielsen. (2012) “Top Tens & Trends: Video Games.” Apr. 22, 2012. [Link](#)
418. Facebook. (2012) “Facebook, Inc.: Amendment No. 4 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Apr. 23, 2012.
419. “Apps built by developers of social games, particularly Zynga, are currently responsible for substantially all of our revenue derived from Payments.”
- Facebook. (2012) “Facebook, Inc.: Amendment No. 4 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Apr. 23, 2012.
- Brittany Darwell. (2012) “Facebook Estimates 4 Percent of Q1 Revenue Came from Ads on Zynga App Pages, 11 Percent from Zynga Directly.” InsideFacebook. Apr. 23, 2012. [Link](#)
420. Facebook. (2012) “Facebook, Inc.: Amendment No. 4 to Form S-1.” United States Securities and Exchange Commission. Washington, DC. Apr. 23, 2012.

421. Daniel Lyons. (2010) “Money for Nothing.” The Daily Beast. Mar. 18, 2010. [Link](#)
422. Mark Pincus via Startup Berkeley. (2009) “Mark Pincus Talk at Startup@Berkeley.” Vimeo. Aug. 19, 2009. [Link](#)
423. Zynga. (2012) “Partners.” Zynga.org. Mar. 15, 2012. [Link](#)
424. Michael Arrington. (2009) “Scamville: The Social Gaming Ecosystem of Hell.” TechCrunch. Oct. 31, 2009. [Link](#)
425. Zynga also paid early employees with stock, then demanded it back before its IPO, but this too is becoming more common.  
Justin Scheck, Shayndi Raice. (2011) “Zynga Leans on Some Workers to Surrender Pre-IPO Shares.” The Wall Street Journal. Nov. 10, 2011. [Link](#)
426. Former employees said copying games was a fundamental part of Zynga’s business strategy.  
Peter Jamison. (2009) “FarmVillains.” SF Weekly. Sep. 8, 2010. [Link](#)
427. Paul Tassi. (2012) “Everything Wrong with Zynga in One Image.” Forbes. Jan. 25, 2012. [Link](#)  
Paul Tassi. (2012) “Zynga Stock Falls as Second Post-IPO Game Fails to Impress.” Forbes. Jan. 6, 2012. [Link](#)  
Nick O’Neill. (2009) “Zynga Launches ‘FarmVille’. Does It Look Familiar?” AllFacebook. Jun. 22, 2009. [Link](#)
428. In Zynga’s defense, copying was rampant in the software industry. Zynga’s *Dream Heights* may have been a blatant knockoff of Nimblebit’s *Tiny Tower*, but *Tiny Tower* looked awfully similar to Maxis’ *SimTower*.  
Chenda Ngak. (2012) “Zynga Steal Tiny Tower? That’s What Developers Say.” CBS News. Jan 25, 2012. [Link](#)
429. Chih-Hung Ko, Gin-Chung Liu, Sigmund Hsiao, Ju-Yu Yen, Ming-Jen Yang, Wei-Chen Lin, Cheng-Fang Yen, Cheng-Sheng Chen. (2009) “Brain Activities Associated with Gaming Urge of Online Gaming Addiction.” Journal of Psychiatric Research. Vol. 43, No. 7, pp. 739-747.  
Doug Hyun Han, Nicolas Bolo, Melissa Daniels, Lynn Arenella, In Kyoon Lyoo, Perry Renshaw. (2011) “Brain Activity and Desire for Internet Video Game Play.” Comprehensive Psychiatry. Vol. 52, No. 1, pp. 88-95.
430. Michael Shepherd. (2012) “Prison for Higgins.” Kennebec Journal. Jan. 7, 2012. [Link](#)  
Betty Adams. (2011) “Higgins Pleads Guilty to Embezzling from Law Group.” Kennebec Journal. Dec. 14, 2011. [Link](#)
431. Edecio Martinez. (2010) “Mother Obsessed with Computer Game Neglects Kids, Starves Dogs.” CBS News. Sep. 14, 2010. [Link](#)
432. Mark Tran. (2010) “Girl Starved to Death while Parents Raised Virtual Child in Online Game.” The Guardian. Mar. 5, 2010. [Link](#)

433. Kim Carollo. (2011) “Man Dies from Blood Clot after Marathon Gaming.” ABC News. Aug. 2, 2011. [Link](#)
434. Staff Reporter. (2005) “S Korean Dies after Games Session.” BBC News. Aug. 10, 2005. [Link](#)
435. Guy Porter, Vladan Starcevic, David Berle, Pauline Fenech. (2010) “Recognizing Problem Video Game Use.” Australian & New Zealand Journal of Psychiatry. Vol. 44, No. 2, pp. 120-128.
436. Information Solutions Group. (2011) “2011 PopCap Games Social Gaming Research.” ISG. Bellevue, WA.
437. Dmitri Williams. (2003) “The Video Game Lightning Rod.” Information, Communication & Society. Vol. 6, No. 4, pp. 523-550.
438. Information Solutions Group. (2011) “2011 PopCap Games Social Gaming Research.” ISG. Bellevue, WA.
439. Although Pong was the first video game to reach a mass market, Computer Space is generally recognized as the first commercial video game.  
 Benj Edwards. (2011) “Computer Space and the Dawn of the Arcade Video Game.” Technologist. Dec. 11, 2011. [Link](#)  
 Harold Goldberg. (2011) “All Your Base Are Belong to Us: How Fifty Years of Videogames Conquered Pop Culture.” Three Rivers Press. New York, NY.
440. Information Solutions Group. (2011) “2011 PopCap Games Social Gaming Research.” ISG. Bellevue, WA.
441. Thomas Debeauvais, Bonnie Nardi, Diane Schiano, Nicolas Ducheneaut, Nicholas Yee. (2011) “If You Build It They Might Stay: Retention Mechanisms in World of Warcraft.” Proceedings of the Sixth International Conference on the Foundations of Digital Games. ACM. New York, NY.
442. Julian Dibbell. (2003) “The Unreal Estate Boom.” Wired. Jan. 2003. [Link](#)
443. This study found that casual World of Warcraft players spent 17 hours per week playing.  
 Thomas Debeauvais, Bonnie Nardi, Diane Schiano, Nicolas Ducheneaut, Nicholas Yee. (2011) “If You Build It They Might Stay: Retention Mechanisms in World of Warcraft.” Proceedings of the Sixth International Conference on the Foundations of Digital Games. ACM. New York, NY.  
 This is consistent with earlier studies which also estimated an average playtime of 17 hours per week.  
 William Dobson. (2007) “Nielsen Ratings Say WoW Is Top Dog of the PC Domain.” Massively. Dec. 12, 2007. [Link](#)  
 Another study estimated MMORPG players to average 22 hours per week.  
 Nick Yee. (2006) “The Demographics, Motivations, and Derived Experiences of Users of Massively Multi-User Online Graphical Environments.” Presence: Teleoperators and Virtual Environments. Vol. 15, No. 3, pp. 309-329.

444. Jonathan Bell, Swapneel Sheth, Gail Kaiser. (2012) “A Large-Scale, Longitudinal Study of Player Achievements in World of Warcraft.” Working Paper. Columbia University. New York, NY.
445. Wowhead. (2011) “Achievements.” Nov. 15, 2011. [Link](#)
446. WoW Achievements. (2011) “World Explorer.” Nov. 15, 2011. [Link](#)
447. Wowhead. (2011) “The Arena Master.” Nov. 15, 2011. [Link](#)
448. Wowhead. (2011) “Insane in the Membrane.” Nov. 15, 2011. [Link](#)
449. WoWWiki. (2011) “Gear Score.” Nov. 15, 2011. [Link](#)
450. Christopher Paul. (2010) “Welfare Epics? The Rhetoric of Rewards in World of Warcraft.” *Games and Culture*. Vol. 5, No. 2, pp. 158-176.
451. M. J. Koeppe, R. N. Gunn, A. D. Lawrence, V. J. Cunningham, A. Dagher, T. Jones, D. J. Brooks, C. J. Bench, P. M. Grasby. (1998) “Evidence for Striatal Dopamine Release During a Video Game.” *Nature*. Vol. 393, No. 6682, pp. 266-268.
452. Rodrigo Bressan, J. A. Crippa. (2005) “The Role of Dopamine in Reward and Pleasure Behaviour - Review of Data from Preclinical Research.” *Acta Psychiatrica Scandinavica*. Vol. 111, No. S427, pp. 14-21.
453. Fumiko Hoeft, Christa Watson, Shelli Kesler, Keith Bettinger, Allan Reiss. (2008) “Gender Differences in the Mesocorticolimbic System During Computer Game-Play.” *Journal of Psychiatric Research*. Vol. 42, No. 4, pp. 253-258.
454. Entertainment Software Association. (2011) “Essential Facts About the Computer and Video Game Industry.” ESA. Washington, DC.
455. Josh Constine. (2012) “Pinterest Hits 10 Million U.S. Monthly Uniques Faster Than Any Standalone Site Ever.” *TechCrunch*. Feb. 7, 2012. [Link](#)
456. Petula Dvorak. (2012) “Addicted to a Web Site Called Pinterest: Digital Crack for Women.” *Washington Post*. Feb. 20, 2012. [Link](#)
457. Josh Constine. (2012) “Where the Ladies At? Pinterest. 2 Million Daily Facebook Users, 97% of Fans Are Women.” *TechCrunch*. Feb. 11, 2012. [Link](#)
458. Diana Tamir, Jason Mitchell. (2012) “Disclosing Information about the Self Is Intrinsically Rewarding.” *Proceedings of the National Academy of Sciences*. Vol. 109, No. 21, pp. 8038-8043.
459. Katja Spreckelmeyer, Sören Krach, Gregor Kohls, Lena Rademacher, Arda Irmak, Kerstin Konrad, Tilo Kircher, Gerhard Gründer. (2009) “Anticipation of Monetary and Social Reward Differently Activates Mesolimbic Brain Structures in Men and Women.” *Social Cognitive & Affective Neuroscience*. Vol. 4, No. 2, pp. 158-165.
460. This research is part of a large body of work describing the differences between male and female neuroanatomy that would, on a physical level, suggest this would be true.

Richard Haier, Rex Jung, Ronald Yeo, Kevin Head, Michael Alkire. (2005) "The Neuroanatomy of General Intelligence: Sex Matters." *NeuroImage*. Vol. 25, No. 1, pp. 320-327.

461. Adam Penenberg. (2011) "Digital Oxytocin: How Trust Keeps Facebook, Twitter Humming." *Fast Company*. Jul. 18, 2011. [Link](#)

Adam Penenberg. (2010) "Social Networking Affects Brains Like Falling in Love." *Fast Company*. Jul. 1, 2010. [Link](#)

These articles describe research that is anecdotal at best; however, they are specific to using Facebook and the results would be expected by what is known about oxytocin, namely, that oxytocin is elevated by a wide range of positive social experiences, from talking with other people to being touched, to even just being looked at by a pet dog.

Kerstin Uvnäs-moberg, Maria Petersson. (2005) "Social Interaction, Growth and Healing." *Diabetes*. Vol. 51, No. 1, pp. 1-25.

Miho Nagasawa, Takefumi Kikusui, Tatsushi Onaka, Mitsuaki Ohta. (2009) "Dog's Gaze at Its Owner Increases Owner's Urinary Oxytocin During Social Interaction." *Hormones and Behavior*. Vol. 55, No. 3, pp. 434-441.

462. Michael Kosfeld, Markus Heinrichs, Paul Zak, Urs Fischbacher, Ernst Fehr. (2005) "Oxytocin Increases Trust in Humans." *Nature*. Vol. 435, No. 7042, pp. 673-676.

Andreas Bartels, Semir Zeki. (2004) "The Neural Correlates of Maternal and Romantic Love." *NeuroImage*. Vol. 21, No. 3, pp. 1155-1166.

463. Paul Zak, Angela Stanton, Sheila Ahmadi. (2009) "Oxytocin Increases Generosity in Humans." *PLoS ONE*. Vol. 2, No. 11, p. e1128.

464. Paul Zak, Robert Kurzban, Sheila Ahmadi, Ronald Swerdloff, Jang Park, Levan Efremidze, Karen Redwine, Karla Morgan, William Matzner. (2009) "Testosterone Administration Decreases Generosity in the Ultimatum Game." *PLoS ONE*. Vol. 4, No. 12, p. e8330.

465. These activities also produce dopamine, and when performed with a partner, can even improve a romantic relationship.

Greg Strong, Arthur Aron. (2006) "The Effect of Shared Participation in Novel and Challenging Activities on Experienced Relationship Quality." (Kathleen D. Vohs, Eli J. Finkel, Eds.) In "Self and Relationships: Connecting Intrapersonal and Interpersonal Processes." Guilford Press. New York, NY. pp. 342-359.

466. Wilhelm Hofmann, Kathleen Vohs, Roy Baumeister. (2012) "What People Desire, Feel Conflicted About, and Try to Resist in Everyday Life." *Psychological Science*. Vol. 23, No. 6, pp. 582-588.

467. D. Karaiskos, E. Tzavellas, G. Balta, T. Paparrigopoulos. (2010) "Po2-232 - Social Network Addiction: A New Clinical Disorder?" *European Psychiatry*. Vol. 25, Suppl. 1, p. 855.

468. Joseph Kahne, Ellen Middaugh, Chris Evans. (2009) "The Civic Potential of Video Games." The MIT Press. Cambridge, MA.
469. Debra Fischer, Megan Schwamb, Kevin Schawinski, Chris Lintott, John Brewer, Matt Giguere, Stuart Lynn, Michael Parrish, Thibault Sartori, Robert Simpson, Arfon Smith, Julien Spronck, Natalie Batalha, Jason Rowe, Jon Jenkins, Steve Bryson, Andrej Prsa, Peter Tenenbaum, Justin Crepp, Tim Morton, Andrew Howard, Michele Belevu, Zachary Kaplan, Nick vanNispen, Charlie Sharzer, Justin DeFouw, Agnieszka Hajduk, Joe Neal, Adam Nemecek, Nadine Schuepbach, Valerij Zimmermann. (2012) "Planet Hunters: The First Two Planet Candidates Identified by the Public Using the Kepler Public Archive Data." *Monthly Notices of the Royal Astronomical Society*. Vol. 419, No. 4, pp. 2900-2911.

Note: You can play the game at [planethunters.org](http://planethunters.org). [Link](#)

470. Players were able to diagnose malaria with about 98% accuracy, just one percent less than an infectious disease expert would have achieved.
- Sam Mavandadi, Stoyan Dimitrov, Steve Feng, Frank Yu, Uzair Sikora, Oguzhan Yaglidere, Swati Padmanabhan, Karin Nielsen, Aydogan Ozcan. (2012) "Distributed Medical Image Analysis and Diagnosis through Crowdsourced Games: A Malaria Case Study." *PLoS ONE*. Vol. 7, No. 5, p. e37245.
471. Michael Coren. (2011) "Crowdsourcing Science Promises Hope for Curing Deadly Disease." *Fast Company*. Oct. 21, 2011. [Link](#)
472. Katie Drummond. (2011) "U.S. Intelligence Will Train Super-Sleuths with Videogames." *Wired*. Nov. 22, 2011. [Link](#)
473. Marshall Jones, Robert Kennedy, Alvah Bittner, Jr. (1981) "A Video Game for Performance Testing." *American Journal of Psychology*. Vol. 94, No. 11, pp. 143-152.
474. Earnest Cavalli. (2008) "Man Imitates America's Army, Saves Lives." *Wired*. Jan. 18, 2008. [Link](#)
475. Anthony Gallagher, E. Matt Ritter, MD, Howard Champion, Gerald Higgins, Marvin Fried, Gerald Moses, C. Daniel Smith, Richard Satava. (2005) "Virtual Reality Simulation for the Operating Room." *Annals of Surgery*. Vol. 241, No. 2, pp. 364-372.
476. Neal Seymour, Anthony Gallagher, Sanziana Roman, Michael O'Brien, Vipin Bansal, Dana Andersen, Richard Satava. (2002) "Virtual Reality Training Improves Operating Room Performance." *Annals of Surgery*. Vol. 236, No. 4, pp. 458-464.
477. Chris Velazco. (2012) "Fitocracy Finally Exits Private Beta, Celebrates with a New iOS App." *TechCrunch*. Mar. 29, 2012. [Link](#)
- Steven Overly. (2011) "Now, a Smartphone App That Rewards Exercise." *The Washington Post*. Jan. 3, 2011. [Link](#)

Rip Empson. (2011) “RunKeeper Adds New Integration to Its Health Graph in Hopes of Building “The Facebook Of Fitness.”” TechCrunch. Jun. 26, 2011. [Link](#)

478. Leslie Kaufman. (2012) “On Facebook, Some Friendly Energy Rivalry.” The New York Times. Apr. 3, 2012. [Link](#)

Leslie Kaufman. (2009) “Utilities Turn Their Customers Green, with Envy.” The New York Times. Jan. 30, 2009. [Link](#)

479. Trefis Team. (2012) “Salesforce’s Chatter Aims to Be the Facebook of Enterprises.” Forbes. Apr. 4, 2012. [Link](#)

Staff Reporter. (2012) “The World’s 50 Most Innovative Companies in Social Media.” Fast Company. Feb. 13, 2012. [Link](#)

Tom Taulli. (2011) “Jive – The Facebook of Business.” InvestorPlace. Oct. 26, 2011. [Link](#)

480. Erik Malinowski. (2011) “How RunKeeper Could Become the Facebook of Fitness.” Wired. Jun. 7, 2011. [Link](#)

481. Dean Takahashi. (2011) “Update: Activision Is Slowly Nursing Call of Duty Elite Online Network Back to Health.” VentureBeat. Nov. 17, 2011. [Link](#)

482. Apart from companies built around achievement systems, like FourSquare, a good example of tightly controlled achievements in social media is Google News Badges, which allows users to earn badges Google designed by reading articles from Google News about various topics.

Eric Smalley. (2011) “Google Badges: What Have You Been Reading?” CNET. Jul. 15, 2011. [Link](#)

Google. (2011) “Google News Badges.” Google.com. Jul. 18, 2011. [Link](#)

483. Pew Research Center. (2010) “Millennials: Confident. Connected. Open to Change.” Pew Research Center. Washington, DC. [Link](#)

484. Zizi Papacharissi, Andrew Mendelson. (2008) “Toward a New(er) Sociability: Uses, Gratifications, and Social Capital on Facebook.” Paper presented at the Internet Research Conference, Oct. 2008. Copenhagen, Denmark.

485. Analysis has shown that it is not necessarily competitiveness that motivates change in this case.

Hunt Allcott. (2011) “Social Norms and Energy Conservation.” Journal of Public Economics. Vol. 95, No. 9-10, pp. 1082-1095.

Also, both Microsoft and Google previously released energy usage apps and subsequently shut them down, citing lack of interest.

Martin LaMonica. (2011) “Microsoft Kills Hohm Energy App.” CNET. Jun. 30, 2011. [Link](#)

Elinor Mills. (2011) “Google Euthanizes Google Health, Unplugs PowerMeter” CNET. Jun. 24, 2011. [Link](#)

486. US Bureau of Labor Statistics. (2008) “How Do Volunteers Find the Time?: Evidence from the American Time Use Study.” US Department of Labor. Washington, DC.
487. Almost any way you slice the data, volunteer rates in Utah are far higher than in every other state (as is participation in the Church of Jesus Christ of Latter-day Saints, whose members volunteer far more than average Americans).  
 Corporation for National & Community Service. (2011) “Volunteer Rates – States.” Corporation for National & Community Service. Washington, DC.  
 The Pew Forum on Religion & Public Life. (2012) “Mormons and Civic Life.” Mar. 15, 2012. Pew Research Center. Washington, DC.
488. Nicholas Epley, David Dunning. (2000) “Feeling ‘Holier Than Thou’: Are Self-Serving Assessments Produced by Errors in Self- or Social Prediction?” *Journal of Personality and Social Psychology*. Vol. 79, No. 6, pp. 861-875.  
 Justin Kruger, Thomas Gilovich. (2004) “Actions, Intentions, and Self-Assessment: The Road to Self-Enhancement Is Paved with Good Intentions.” *Personality and Social Psychology Bulletin*. Vol. 30, No. 3, 328-339.
489. Jerry Burger. (1999) “The Foot-in-the-Door Compliance Procedure: A Multiple-Process Analysis and Review.” *Personality and Social Psychology Review*. Vol. 3, No. 4, pp. 303-325.  
 In a study referenced earlier, those who participated in service programs voluntarily (rather than to fulfill a requirement) tended to keep doing it.  
 Mike Planty, Robert Bozick, Michael Regnier. (2006) “Helping Because You Have To or Helping Because You Want To? Sustaining Participation in Service Work from Adolescence through Young Adulthood.” *Youth & Society*. Vol. 38, No. 2, pp. 177-202.
490. According to this source, about 293,000 status updates were being added to Facebook every minute in 2011.  
 Team Popcorn. (2011) “Infographic: 60 Seconds of Social Media Sharing.” Popcorn. Sep. 26, 2011. [Link](#)  
 Although unspecific and unverified, this statistic was widely cited:  
 Mike Flacy. (2011) “Nearly 300,000 Status Updates are Posted to Facebook Every Minute.” Yahoo News. Oct. 8, 2011. [Link](#)  
 Chloe Albanesius. (2011) “Infographic: 60 Seconds of Social Media Sharing.” PC Magazine. Oct. 7, 2011. [Link](#)  
 According to Facebook, during the first quarter of 2012, on average, users uploaded more than 300 million photos and generated 3.2 billion “likes” and comments per day.  
 Facebook. (2012) “Key facts.” Facebook. Jun. 12, 2012. [Link](#)
491. Saul Hansell. (2008) “Zuckerberg’s Law of Information Sharing.” *The New York Times*. Nov. 6, 2008. [Link](#)

492. Criteria includes who posted the content, the type of content, and how many friends have commented on it.  
Facebook. (2012) “How Does My News Feed Determine Which Content Is Most Interesting?” Facebook. May 11, 2012. [Link](#)
493. Josh Constine. (2012) “Your Average Facebook Post Only Reaches 12% of Your Friends.” TechCrunch. Feb. 29, 2012. [Link](#)
494. Josh Constine. (2011) “Facebook Changes News Feed Settings, Some Users Only Shown Close Friends by Default.” Inside Facebook. Feb. 11, 2011. [Link](#)  
Rob Pegoraro. (2011) “Facebook News Feed Filtering Can Make Friends Vanish.” The Washington Post. Feb. 14, 2011. [Link](#)
495. This research found that posts with images were interacted with 54% more than text-only posts, and 22% more than video posts.  
Erika Brookes. (2010) “The Anatomy of a Facebook Post.” Vitruve. Atlanta, GA.
496. Samuel Jacobs. (2012) “Chaos, Confusion Mark Cable TV Reports on Supreme Court Ruling.” Reuters. Jun. 28, 2012. [Link](#)  
Martha Moore. (2012) “Supreme Court’s Complex Ruling Trips Up Media Outlets.” USA Today. Jun. 28, 2012. [Link](#)  
Brian Stelter. (2012) “Rushing to Report the Health Ruling, and Getting It Wrong.” The New York Times. Jun. 28, 2012. [Link](#)
497. US Supreme Court. (2012) National Federation of Independent Business v. Sebelius, No. 11-393, slip op. Jun. 28, 2012.
498. While only 55% knew whether most provisions of the bill were upheld in the court’s ruling, 76% expressed approval or disapproval of the decision.  
Pew Research Center. (2012) “Division, Uncertainty over Court’s Health Care Ruling.” Pew Research Center. Washington, DC. [Link](#)
499. Grant Jacobsen, Kathryn Jacobsen. (2011) “Health Awareness Campaigns and Diagnosis Rates: Evidence from National Breast Cancer Awareness Month.” Journal of Health Economics. Vol. 30, No. 1, pp. 55-61.
500. Christie Aschwanden. (2010) “The Downside of Awareness Campaigns.” Los Angeles Times. Oct. 4, 2010. [Link](#)

For reference:

Susan Love, Karen Lindsey. (2010) “Dr. Susan Love’s Breast Book (Fifth Edition).” Da Capo Press. Philadelphia, PA.

501. Nicole Gottlieb. (2001) “The Age of Breast Cancer Awareness: What Is the Effect of Media Coverage?” Journal of the National Cancer Institute. Vol. 93, No. 20, pp. 1520-1522.

See also:

W. Burke, A. H. Olsen, L. E. Pinsky, S. E. Reynolds, N. A. Press. (2001) "Misleading Presentation of Breast Cancer in Popular Magazines." *Effective Clinical Practice*. Vol. 4, No. 2, pp. 58-64.

502. Caryn Lerman, Kathryn Kash, Michael Stefanek. (1994) "Younger Women at Increased Risk for Breast Cancer: Perceived Risk, Psychological Well-Being, and Surveillance Behavior." *Journal of the National Cancer Institute Monographs*. No. 16, pp. 171-176,

503. Deena Blanchard, Joel Erblich, Guy Montgomery, Dana Bovbjerg. (2002) "Read All About It: The Over-Representation of Breast Cancer in Popular Magazines." *Preventive Medicine*. Vol. 35, No. 4, pp. 343-348.

One example of obsessive behavior based on the knowledge that relatives of people with cancer are at greater risk:

Steven Epstein, Ting Hsiang Lin, Janet Audrain, Michael Stefanek, Barbara Rimer, Caryn Lerman. (1997) "Excessive Breast Self-Examination Among First-Degree Relatives of Newly Diagnosed Breast Cancer Patients." *Psychosomatics*. Vol. 38, No. 3, pp. 253-261.

504. Women in this study also overestimated the absolute amount that breast screening would lower the likelihood of them dying from breast cancer within 10 years by about 150 times.

William Black, Robert Nease Jr., Anna Tosteson. (1995) "Perceptions of Breast Cancer Risk and Screening Effectiveness in Women Younger Than 50 Years of Age." *Journal of the National Cancer Institute*. Vol. 87, No. 10, pp. 720-731.

505. Deena Blanchard, Joel Erblich, Guy Montgomery, Dana Bovbjerg. (2002) "Read All About It: The Over-Representation of Breast Cancer in Popular Magazines." *Preventive Medicine*. Vol. 35, No. 4, pp. 343-348.

506. Society for Women's Health Research. (2005) "Women Most Fear Breast Cancer, but Heart Disease Is the Top Killer." Press Release. Jul. 14, 2005.

Note this study measured fear, rather than knowledge of top dangers among all women. (Although people typically view themselves as too unique for general statistics to apply to them anyway.) Knowledge that heart disease was the top cause of death among women has been increasing sharply; however awareness is lower among minorities and knowledge of prevention remains low.

Allison Christian, Wayne Rosamond, Anthony White, Lori Mosca. (2007) "Nine-Year Trends and Racial and Ethnic Disparities in Women's Awareness of Heart Disease and Stroke: An American Heart Association National Study." *Journal of Women's Health*. Vol. 16, No. 1, pp. 68-81.

507. Rose Marie Robertson. (2001) "Women and Cardiovascular Disease: The Risks of Misperception and the Need for Action." *Circulation*. Vol. 103, No. 19, pp. 2318-20.

Lori Mosca, Lawrence Appel, Emelia Benjamin, Kathy Berra, Nisha Chandra-Strobos, Rosalind Fabunmi, Deborah Grady, Constance Haan,

Sharonne Hayes, Debra Judelson, Nora Keenan, Patrick McBride, Suzanne Oparil, Pamela Ouyang, Mehmet Oz, Michael Mendelsohn, Richard Pasternak, Vivian Pinn, Rose Marie Robertson, Karin Schenck-Gustafsson, Cathy Sila, Sidney Smith Jr., George Sopko, Anne Taylor, Brian Walsh, Nanette Wenger, Christine Williams. (2004) "Evidence-Based Guidelines for Cardiovascular Disease Prevention in Women." *Journal of the American College of Cardiology*. Vol. 43, No. 5, pp. 900-921.

Scott Lippman, Waun Ki Hong. (2002) "Cancer Prevention Science and Practice." *Cancer Research*. Vol. 62, No. 18, pp. 5119-5125.

508. National Breast Cancer Coalition. (2011) "Ending Breast Cancer: A Baseline Status Report." National Breast Cancer Coalition. Washington, DC.
509. Lea Goldman. (2011) "The Big Business of Breast Cancer." *Marie Claire*. Sep. 14, 2011. [Link](#)
- Gayle Sulik. (2010) "Pink Ribbon Blues: How Breast Cancer Culture Undermines Women's Health." Oxford University Press. New York, NY.
- Christie Aschwanden. (2010) "The Downside of Awareness Campaigns." *Los Angeles Times*. Oct. 4, 2010. [Link](#)
510. Susan Donaldson James. (2010) "Bra Color Status on Facebook Goes Viral." *ABC News*. Jan. 8, 2010. [Link](#)
511. Damon Poeter. (2011) "Breast Awareness Meme Knocks Up Facebook." *PC Magazine*. Sep. 2, 2011. [Link](#)
512. Barron Lerner. (2001) "The Breast Cancer Wars: Hope, Fear, and the Pursuit of a Cure in Twentieth-Century America." Oxford University Press. New York, NY.
513. Stefano Puntoni, Steven Sweldens, Nader Tavassoli. (2011) "Gender Identity Salience and Perceived Vulnerability to Breast Cancer." *Journal of Marketing Research*. Vol. 48, No. 3, pp. 413-424.
514. Bruce Jancin. (2011) "Mammogram Compliance Is Poor." *Family Practice News*. Feb. 1, 2011, p. 40.
515. Based on the American Cancer Society's recommendations:  
 American Cancer Society. (2012) "Breast Cancer." American Cancer Society. Atlanta, GA. Jun. 11, 2012.
- Although HIPAA privacy restrictions as they are currently written would prevent doctors from awarding this badge publicly, with sufficient demand and demonstrable public health benefits, either the law would change or creative workarounds would arise.
516. Real person, fictional quote.
517. To be clear, mammograms are generally accepted as effective for older women.

Doris Schopper, Chris de Wolf. (2009) “How Effective Are Breast Cancer Screening Programmes by Mammography? Review of the Current Evidence.” *European Journal of Cancer*. Vol. 45, No. 11, pp. 1916-1923.

However, a growing number of scientists argue against their role in medicine and efficacy in practice, saying that constant screening does more net harm than good, prompting thousands of women to have unnecessary treatment, sometimes losing their breasts, for precancerous conditions that would not turn into cancer. Although the following book is biased and not peer-reviewed, it presents a good overview of the body of evidence that argues against the efficacy of mammography screening.

Peter Gøtzsche. (2012) “Mammography Screening: Truth, Lies and Controversy.” Radcliffe Publishing. London, England.

Some of the author’s earlier research:

Ole Olsen, Peter Gøtzsche. (2001) “Cochrane Review on Screening for Breast Cancer with Mammography.” *The Lancet*. Vol. 358, No. 9290, pp. 1340-1342.

Other researchers have estimated that the likelihood that a mammogram would save a woman’s life is somewhere between .010% and .046%.

H. Gilbert Welch, Brittney Frankel. (2011) “Likelihood That a Woman with Screen-Detected Breast Cancer Has Had Her ‘Life Saved’ by that Screening.” *Archives of Internal Medicine*. Vol. 171, No. 22, pp. 2043-2046.

Other research suggests that mammography screening may not directly affect breast cancer mortality, although many other studies have concluded otherwise.

Philippe Autier, Mathieu Boniol, Anna Gavin, Lars Vatten. (2011) “Breast Cancer Mortality in Neighbouring European Countries with Different Levels of Screening but Similar Access to Treatment: Trend Analysis of WHO Mortality Database.” *British Medical Journal*. Vol. 343, d4411, pp. 1-10.

518. Based on recommendations from a real collaborative project between the three organizations.

American Cancer Society, American Diabetes Association, American Heart Association. (2011) “Everyday Choices.” [Link](#)

519. Breast cancer does affect some men, although this is comparatively rare.

Ian Fentiman, Alain Fourquet, Gabriel Hortobagyi. (2006) “Male Breast Cancer.” *The Lancet*. Vol. 367, No. 9510, pp. 595-604.

520. Similarly titled events exist today, although they are not very well known or widely observed. Some states organize Women’s Health Month events, usually in May, to coincide with Mothers’ Day. At the national level, the closest event is Women’s Health Week.

Office on Women’s Health. (2012) “National Women’s Health Week.” US Department of Health and Human Services. Washington, DC.

521. One official Men's Health Month is in June, coinciding with Fathers' Day.

Men's Health Month. (2012) "June is Men's Health Month." Men's Health Month. Washington, DC. [Link](#)

A more well-known and quickly growing event is Movember, in which men grow moustaches throughout the month of November to raise awareness for men's health issues.

Movember Foundation. (2011) "About Movember." Movember. Venice, CA. [Link](#)

522. Mostly science fiction at this point, but trends point in this direction. For breast cancer specifically, advances in MRI technology suggest that other imaging techniques may replace mammography when the procedure is refined enough to reduce the high incidence of false positive diagnoses.

Debbie Saslow, Carla Boetes, Wylie Burke, Steven Harms, Martin Leach, Constance Lehman, Elizabeth Morris, Etta Pisano, Mitchell Schnall, Stephen Sener, Robert Smith, Ellen Warner, Martin Yaffe, Kimberly Andrews, Christy Russell. (2007) "American Cancer Society Guidelines for Breast Screening with MRI as an Adjunct to Mammography." CA: A Cancer Journal for Clinicians. Vol. 57, No. 2, pp. 75-89.

Mieke Kriege, Cecile Brekelmans, Carla Boetes, Peter Besnard, Harmine Zonderland, Inge Marie Obdeijn, Radu Manoliu, Theo Kok, Hans Peterse, Madeleine Tilanus-Linthorst, Sara Muller, Sybren Meijer, Jan Oosterwijk, Louk Beex, Rob Tollenaar, Harry de Koning, Emiel Rutgers, Jan Klijn. (2004) "Efficacy of MRI and Mammography for Breast-Cancer Screening in Women with a Familial or Genetic Predisposition." The New England Journal of Medicine. Vol. 351, No. 5, pp. 427-437.

523. It is not hard to believe insurance providers will use all information available to calculate risk in the near future, and it probably will not be as voluntary and friendly as in this scenario.

Staff Reporter. (2012) "Insurance Data: Very Personal Finance." The Economist. Jun. 2, 2012. [Link](#)

Anecdotally, one data mining professional doesn't buy junk food with credit cards because he thinks insurance providers will soon use data in this manner.

Kashmir Hill. (2012) "Data Mining CEO Says He Pays for Burgers with Cash to Avoid Junk Food Purchases Being Tracked." Forbes. Jun. 15, 2012. [Link](#)

524. Author's Note: Creating a social movement is a difficult feat, and my hat goes off to anyone who convinces people, especially men, to pay more attention to a health concern. This criticism is not directed at the Movember movement or any other movement. This criticism is directed at people who only superficially participate in a movement without doing anything substantial for a cause. This is one of the unintentional consequences of any movement that confers positive social status with a low barrier to entry, which are

unfortunately two criteria that are all but required to gain traction in modern culture.

525. A finding this drastic would have to be limited to human-generated updates, since app-generated content will likely continue to increase exponentially.
526. Junghyun Kim, Jong-Eun Roselyn Lee. (2011) “The Facebook Paths to Happiness: Effects of the Number of Facebook Friends and Self-Presentation on Subjective Well-Being.” *Cyberpsychology, Behavior, and Social Networking*. Vol. 14, No. 6, pp. 359-364.
527. The sense of security this would cause would likely increase unprotected sexual activity somewhat; however, this would likely be outweighed by the level of risk reduction caused by frequent testing, resulting in a net positive effect.
528. Previous attempts include branding similar services as Microsoft Wallet, Microsoft Passport, .NET Passport, Microsoft Passport Network, and Windows Live ID. In 2008, Microsoft announced it would turn Windows Live ID into an OpenID system, but to date, this has not happened.
- Michael Calore. (2008) “PDC 2008: Windows Live ID Becomes an OpenID Provider.” *Webmonkey*. Oct. 27, 2008. [Link](#)
- David Burt. (2009) “Windows Live ID OpenID Status Update.” Microsoft. Aug. 27, 2009. [Link](#)
- Microsoft. (1999) “Microsoft Passport: Streamlining Commerce and Communication on the Web.” Press Release. Oct. 11, 1999. [Link](#)
529. Facebook. (2012) “Facebook for Websites.” Facebook.com. Aug. 18, 2012. [Link](#)

