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**Candy Crush Saga and Society: How One Game Has
Exploited Our Technological Dependence to Achieve
Unprecedented Success**

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Technology is increasing at an incredible rate – this is a fact that people everywhere would acknowledge. Most would argue that these technological advancements have made life easier. As technology has become mobile and more accessible, people have developed a dependency on it; as Dr. Larry Rosen writes, “A recent study found that 35 percent of Americans open up smartphone apps, 18 percent check Facebook, 23 percent use a web browser, and 24 percent check e-mail before even getting out of bed in the morning” (54). In addition, about 50% of the Millennial Generation is said to experience anxiety when they are unable to check their devices (Rosen 53).

This dependency is in one way reflected by the ever-increasing amount of apps available for instant download. The fact that the Apple App Store recently reached 1 million apps is mind numbing, but not nearly as mind numbing as the effects those apps have on the people who use them (Jones). This statement especially holds true for games. In the past, we have seen games like *Tetris*, *Pac Man*, and *Bejeweled* take electronic gamers by storm. In fact, there is currently a Facebook page to provide support for nearly 4,000 people “addicted” the game *Bejeweled Blitz*. Millions of people immerse themselves in the thousands of smartphone games available on app stores. One game, however, has had received an unprecedented reaction from gamers. That game is *Candy Crush Saga*.

I first downloaded *Candy Crush* my senior year of high school. After crushing my way through the first ten or so levels, I decided the game simply was not worth my while, so I deleted it. My friends and two younger sisters, serious “crushers” themselves, could not believe I had committed such an abhorrent act. At school, I even noticed faculty members playing the game on their iPads when they were supposed to be

patrolling the cafeteria in search of students using their phones, which was an act that was highly frowned upon at my high school. I simply could not fathom the hysteria. But soon I started fearing that maybe I was missing out on something special. I was the only one of my friends and siblings not playing the game. I felt like the odd man out. “Just try it one more time,” I thought to myself, “and see what happens. If you don’t like it you can delete it. It’s just a game.” ...Just a game. Ha.

I am currently stuck on level 245 of *Candy Crush Saga*. I have been stuck on this level for almost a month. How did I get here? I do not know. Why do I keep playing? I do not know. How much time have I wasted playing *Candy Crush*? Again, I do not know. But what I do know is this: I have not deleted the game. Or rather, I cannot delete the game. Over the past year, this game has forced its way into my life, and I am embarrassed to admit that I enjoy its presence. Before I fall asleep in bed at night, I play *Candy Crush*. When I get bored in class, I play *Candy Crush*. When I am with my friends and should be giving them my attention, you guessed it, I play *Candy Crush*. This game is unlike any other game I have played. Its draw is too strong to deny. I wish I knew how many times I have been angry at myself for playing *Candy Crush* instead of doing something productive, like schoolwork, but that number is so high that it is not even worth guessing. And yet, I cannot tell you if or when I will ever stop crushing. This is something with which I have slowly come to terms. But thankfully, I find comfort in the fact that I definitely am not alone.

According to ThinkGaming.com, *Candy Crush* is played by about 100 million people daily, is installed over 30 thousand times per day, and generates an estimated \$850,000 in daily revenue (“Candy Crush Saga”). In more whopping terms, the game itself is played close to 1 billion times per day, and it accrued nearly \$600 million in

profit in 2013 alone (“Candy Crush Saga”). And to top it all off, the game is *free*. Simply said, *Candy Crush*’s success is unprecedented. How and why is it that it has had such a huge impact on society? Why is this one game so much more addictive than others? How has one game been so successful that the company that owns it recently decided to go public and sell its stock on Wall Street?

Candy Crush Saga is a product of King Digital Entertainment, a leading company in mobile gaming. While King offers over 180 different titles, *Candy Crush* is by far its most popular and profitable game. It was released for computers in April 2012 and again released for smartphones in November. The concept of the game is very simple and easy to understand and is similar to that of *Bejeweled*. Players must swipe candies of the same color into combinations of three or more. The more difficult or impressive the move, the higher the point values. The format and objectives of levels get more and more difficult as players continue through the game. When a player is stuck on a level, the game offers the option of purchasing “boosters,” or candies that are meant to help beat the level, for a few dollars. For those who decide not to purchase boosters, the game offers one spin per day on a prize wheel.

One of the most important elements of *Candy Crush* is life. Each player starts out with five lives. When a person does not successfully beat a level, that person loses a life. In order to regain that life, the player must wait 30 minutes. Again, the game offers players the option of buying more lives that are immediately available for use upon purchase. But what about those who do not buy lives? How are they able to keep playing? Simple. All they have to do is ask their Facebook friends. This feature is convenient because it gives players the ability to grant their friends lives and tickets that let them access the next level. Linking Facebook accounts also lets players track their

progress against friends and compare scores. The social aspect of the game, as you will soon see, is just one of the reasons why so many people cannot stop playing.

Continued developments in computer technologies, smartphones, and tablets have only increased our dependence on our devices. There is an increasing fear that real addictions to these devices and/or apps are possible. While internet addiction, for example, has been diagnosed as a real thing, there is no diagnosed addiction to *Candy Crush* per se. However, there a number of cognitive theories about addiction that could give one reason to believe that a *Candy Crush* addiction is a legitimate possibility.

One of the more prominent theories surrounding addiction comes from Mihaly Csikszentmihalyi. In his 1975 publication “Beyond Boredom and Anxiety,” the Russian psychologist and former head of the department of psychology at the University of Chicago coined the term “flow.” He defined flow as the enjoyment and satisfaction that one feels when he achieves something to which he has completely devoted his involvement (Johnson 2). Csikszentmihalyi believed that a number of precursory conditions must be met for an activity to have flow, “including the need to ensure that the level of challenge of an activity is proportional to the skill level of the participant, the importance of having clear goals in mind, the necessity of provision and reinforcing feedback, and an ability to lose the sense of self-consciousness through immersion” (Johnson 2). If these conditions are met, people will likely feel a powerful draw to whatever it is that they are doing. In the case of multimedia, for example, designers design with the desire that their product will have flow (Csikszentmihalyi 48).

American psychologist and behaviorist B.F. Skinner further addressed Csikszentmihalyi’s point regarding feedback. According to Skinner, whether or not a person will do an activity depends on the outcome of previous attempts at that activity.

Essentially, people will do something if they have received positive feedback after doing it in the past, and they will not do it if feedback after past attempts was negative (Johnson 3).

Additionally, the Social Cognitive Theory by Albert Bandura emphasized the idea of positive reinforcement (Johnson 3). Positive reinforcement is the act of providing encouragement to a person or thing after it does an action. Positive reinforcement is implemented in hopes that the actor will continue that behavior in future attempts. After repeatedly doing an action and receiving positive reinforcement, Bandura argued, actors will subconsciously link the action with the reinforcement they repeatedly received (Johnson 3). Once this happens, people have increased confidence in themselves and their ability to succeed, and thus will continue to act in this way. For example, the owner of a puppy will reward it with a treat for every time it uses the bathroom outside instead of on the carpet inside. After repeatedly being rewarded for doing this, the puppy links going to the bathroom outside with getting a treat. Once this link has been made, there is a very high probability that in the future the puppy will continue to relieve itself outside rather than on the carpet.

If one assumes these three theories to be true, then they provide great insight to why so many people actually feel like they have some degree of addiction to *Candy Crush*. If we apply Csikszentmihalyi's theory of flow and its conditions, we see that *Candy Crush* has all the makings of a game with flow. Its levels are challenging, but not to that point that players feel they are unwinnable. If there was no challenge, people would simply stop playing after beating the first few levels. Every time we beat a level, our brains release the neurochemical dopamine, the chemical that is associated with pleasure and addiction (Smith). The more difficult the level, the greater pleasure we

receive when we beat it. The desire for pleasure is a driving force behind people who play the game. *Candy Crush* also has clear objectives. At the beginning of each level, the players are informed of their tasks clearly and concisely, and the objectives even remain on the screen throughout gameplay. This constant visible reminder almost whispers to the player, “You are so close! One more move and you’ve got it!” *Candy Crush* is always providing feedback. Whether it is the point total that appears on screen with every move you make, the deep, jolly voice telling you how “delicious” your move was, or seeing (or not seeing) your name among your Facebook friends on a list of high scores, the game always provides valuable feedback to us whether we realize it or not.

Continuing the application of the cognitive theories surrounding addiction, we see that *Candy Crush* also has the ability to make people lose their self-consciousness. People get so absorbed by the game that it is all they focus on. Just take it from P E D R O, who Tweeted how he “just [missed] two trains because [he] was playing *Candy Crush Saga*,” and as a result was “gonna be late for work.” But he has not been the only one. In February 2014, David Greenfield also Tweeted how “*Candy Crush* players left their children stranded at school, neglected housework and injured themselves.” He even provided a link to a TIME article that provided a further explanation. These tweets make it clear that *Candy Crush* has a serious psychological grasp on some people. In fact, in an interview with ABC’s *Good Morning America*, Dr. Jeffrey Gardere of the Touro College of Osteopathic Medicine says that *Candy Crush* players are, “waiting for the payoff, and that’s the same thing as gambling.”

The two most addictive aspects of the game are its simplicity and its ability to function as social media. It is a game so simple that any person can learn the basic premise within a few minutes. Because it is so simple, *Candy Crush* has set itself apart

from more complicated games by virtue of the fact that it can cater to a much broader audience. The game's social aspect is addictive because of its competitive element, which "usually ensures the undivided attention of a player who would not be motivated otherwise" (Csikszentmihalyi 41). It can also be addictive because players form relationships where they depend on one another for lives and other perks. The reward that players feel when they help a friend can be just as satisfying as beating a level.

The designers of *Candy Crush Saga* clearly had a superb understanding of the cognitive theories that discuss addiction. Whether or not they intended to, they created a game that has legitimate addictive effects. And whether or not they feel sorry that their game is the reason for stranded children, unkempt houses, injuries, and who knows what else, it is most likely the case that they do not regret creating their addictive product, and that is because of money.

Because of *Candy Crush*, which generates about 80 percent of King Digital Entertainment's profit, King Digital Entertainment is one of the top casual-social gaming companies in the world. With over 180 titles spanning the mobile gaming market, King has established itself as a formidable contender in its field. In fact, having generated so much profit and hype in 2013, King decided to file for an IPO in early 2014. When King debuted on Wall Street on March 26, 2014, it was priced at \$22.50 a stock. At that rate, King was worth about \$7.6 billion as a company (Solomon). However, its selling price has dropped in the month that it has been on Wall Street, going from \$22.50 to \$17.15. This decline in price also dropped the company's worth to about \$5.4 billion (Yahoo! Finance). While these numbers are undeniably remarkable for a company in such a field, there is one main reason why most investors have been staying away from King.

Mobile games come and go. It is very rare to find a game that can pass the test of time. The mobile-gaming market produces so many one-hit wonders mainly because it is so simple, easy, and cheap to create new games. Just about anyone can enter the market. Investors feel that King is not a reliable company in which to invest because *Candy Crush* is, as far as we can tell, a one-hit wonder. The point is this: being stuck on level 245 for close to a month can get very old. *Candy Crush* has had a good run and is still turning a huge profit, and maybe it will continue to do so for the foreseeable future. But, like all fads, *Candy Crush* will fade. Sooner or later it will happen. And when it does, it will leave a legacy of being the perfectly designed distraction.

So what does this all mean? What is the big point? What does *Candy Crush Saga* say about society? First off, *Candy Crush* is a masterpiece. It has captured that which every other mobile game has found to be so elusive. The designers have keyed in to the human psyche and revealed some incredible things about how the human mind responds to technology. The designers should reap the benefits of their product because this game is undeniably fun.

With that being said, *Candy Crush* is concerning because it is making society forget how to lose. Most people would rather win at something than lose – that is simply a matter of fact. But when a game like *Candy Crush* comes along, people become so attached to beating levels and winning the game that they forget the importance of losing. Similar to gambling, notes Michelle Castillo of *The Week*, when a person loses, they do not “really see themselves as losing as much as almost winning.” *Candy Crush* players have become so obsessed with the pleasure that they get from winning that admitting defeat is not an option. Players are starting to lose touch of the fact that losing is healthy. When we acknowledge our losses, we strengthen ourselves mentally. Being

able to admit defeat is what keeps us sane. *Candy Crush* players need to stand up and acknowledge that the game has been beating them ever since it was released, and it is about time that people finally say “no more” to the game. Gamers get stuck in the “Caramel Cove” and fail to realize that in the real world, there is no option to buy boosters or extra lives. In the real world, you either win or lose. Losing is something that we all must do in life in order to grow and become more well-rounded people, and *Candy Crush* hinders players from doing that. It is only at the point that players realize this, admit defeat, and give up the game that *Candy Crush* will have made its most positive impact on society.

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