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# A Conceptual Value Function to Explain the Benefits Derived from Users of Free-To-Play Video Games

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A CONCEPTUAL VALUE FUNCTION TO EXPLAIN THE BENEFITS DERIVED  
FROM USERS OF FREE-TO-PLAY VIDEO GAMES

by

Connor M. Smart

A Thesis Submitted in Partial Fulfillment  
of the Requirements for a Degree with Honors  
(Business Administration in Accounting and Finance)

The Honors College

University of Maine

May 2016

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## ABSTRACT

Customers of free-to-play video games are becoming one of the largest and most lucrative consumers of entertainment products in America, and yet relatively little formal literature has been written about these users. Because this customer group is significant and influential within the video game industry, and because video games are becoming a popular and mainstream medium, understanding these consumers is important to understanding our economy, our culture, and for making better gaming products.

This thesis will define a conceptual and qualitative value function that could help one better comprehend F2P consumers' desires and needs in regards to free-to-play video games, and thus help one better understand this consumer group. To improve readability and to support this value function, the thesis will also provide a brief review of the video game industry, as well as details regarding game design and the market for video games. In theory, this model could be used to help a free-to-play developing firm understand their consumer base better and adapt their product to provide those benefits most appreciated by the primary users.

Support and evidence for the model comes from both primary and secondary sources. Primary sources include a demographics survey administered through the University of Maine community in which 264 respondents participated, and email correspondence between the author and a video game developer. Secondary sources include data and information gathered from professionally published articles and journals, news reports, demographic reports, sales and market trends, and insight from industry professionals.

## DEDICATION

To my brother Darren, who continues to inspire me and who helped to foster my love of video games, among so many other things,

And to my partner Susan Lodge, who supported me throughout the writing process even when I thought it wouldn't work out, and whose love still continues to amaze me.

## ACKNOWLEDGEMENTS

I had a lot of support when writing this, and it is safe to say that without that help this paper wouldn't be half as good as it is now (and twice as long as it needed to be).

First and foremost is my thesis advisor Matthew Skaves, who was a god-send during the entire process. His advice and critiques helped to get this thesis not only finished, but also made this paper something that I can feel proud of. This thesis could not have been written without him.

I would like to thank Nick Parkinson for all of his assistance with this project. Nick was always very thoughtful, and his insight into the video game industry formed the foundation from which a lot of my further research and conclusions were based. Without Nick, this whole thing would have been far more difficult than it was.

I want to thank my Thesis Committee, who were kind and helpful during the entire process. Their opinions and advice were both encouraging and thought-provoking. I value each one of their opinions, and their combined and continual availability and willingness to help has meant a lot to me.

I owe a lot of thanks to the Maine Business School and to the Honors College, both of which have led me to meet the best friends of my life and to become the person I am today. I can confidently say that I am going to be leaving the University of Maine with a very well-rounded education that is worth being proud of, and I owe that to these institutions and to the people who make them what they are.

Lastly, I'd like thank my friends and family, who encouraged me throughout the writing process even though it involved a topic as unwritten about as video games.

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## KEY TERMS:

**Video Games:** a software application that can be run on computing devices and is used primarily for entertainment purposes. Platform, genre, audience, price, or style are subsets of a game, but do not define a “video game”. Rather, such features more accurately describe the type of game.

**Gamer:** an individual who plays video games in some way or form. Gamers are not limited or defined by age or gender. A person does not need to self-identify as a gamer in order to be one; consumption of a video game product is enough to be classified as a gamer, whereas self-identification is not necessary.

**Free-to-Play:** abbreviated as “F2P”; a video game product where there is no up-front cost for the customer to acquire the title. Revenue is generated either through in-game advertisements or in-game purchases

**Traditional Games:** also referred to as “pay-to-play”, “P2P”, or “paid games”. These products follow a typical retail process where customers must first pay to acquire the product before they can use it.

**Hardcore Gamers:** consumers of video games who are very passionate about the medium. They are knowledgeable about the industry, and are more critical of short-comings in visual/narrative quality and technical errors. “Hardcore games” would mostly be played by “hardcore players”. Hardcore games are titles that are complex, difficult, and typically require an advanced level of skill to play.

**Casual Gamers & Casual Games:** those consumers of video games who are not particularly passionate about video games. For these consumers, video games represent a much more passive interest. For casual gamers, video games are a

distraction or a utility as opposed to an active hobby. Casual and/or social games would be played by casual gamers. Casual and/or social games are titles that are generally less graphic, simpler, and more accessible.

**Hardcore Free-to-Play (F2P):** video games which use a free-to-play pricing model but exhibit characteristics which are typical of traditional games. Generally such titles have higher production values, more complex gameplay, and are more competitive when compared to typical F2P games.

**Platforms/Consoles:** hardware devices which can run the video game software applications. “Platforms” is a broader term which can be used synonymously with “devices” but “consoles” is slightly more specific. Video game consoles are dedicated hardware devices whose primary function is to run video games, and they usually require an elaborate home-entertainment set-up. Examples include the Sony PlayStation and the Nintendo Wii.

**MOBA’s:** an abbreviation for “multiplayer-online-battle-arena”. MOBA’s are a popular genre for online F2P games in which two teams of five players try to push their team into the opposing team’s “base”. MOBA’s are a common genre for hardcore F2P games.

**MMORPG’s:** an abbreviation for “massive-multiplayer-online-role-playing-game”. MMORPG’s are often F2P or based on subscription payments. They allow thousands of players to connect and play with each other in an elaborate and cohesive game world. Like MOBA’s, MMORPG’s are also popular as hardcore F2P games.

## INTRODUCTION

Over the past few decades, video games have transitioned from a relatively niche hobby to a very large and lucrative entertainment medium. Today, video games are as much a part of society as movies, sports, and television. This is due, in part, to the adoption of the free-to-play (F2P) business model. In this business model, video games are offered to players without any acquisition costs, and the product generates revenues through alternative means.

Prior to F2P, video games catered primarily to a small market comprised of self-identified and active game-players. The F2P model has grown the overall market for video games by including a new consumer segment beyond self-identified players, and has essentially made gaming a national pastime. Despite how fast the gaming industry has grown, not much has been written about this industry compared to other forms of entertainment (Marchand & Henning-Thurau, 2013). Even less has been written about this new consumer-segment.

This thesis will attempt to close this literature gap, and address the following questions: Who are these new consumers, how do they determine the value of video games, and how is their value-set different from traditional game consumers? The following function has been developed to explain the benefits that F2P game consumers place on these gaming products.

Value of F2P Games to F2P Consumers = (Benefits) – (Costs)

Where Benefits = (G + T<sub>F</sub> + M + S) and Costs = (C<sub>B</sub> + T<sub>C</sub>)

Therefore, Value of F2P Games = (G + T<sub>F</sub> + M + S) – (C<sub>B</sub> + T<sub>C</sub>)

Key:

BENEFITS:

COSTS:

G = Gameplay

C<sub>B</sub> = Additional Costs

T<sub>F</sub> = Time Freedom

T<sub>C</sub> = Time Commitment

M = Mobility

S = Social Connectivity

This function applies broadly to all F2P consumers, though more specific F2P consumer-segments likely exist. Also, for this function to apply at all, the gaming product must first be free to acquire. Otherwise, it will not be considered by these consumers.

It is important to note that this function has not been proven to be statistically significant. Rather, the function exists as a conceptual framework built on ample qualitative evidence. For a video game development firm to successfully implement F2P product design, or for an analyst to effectively study the gaming industry, it is necessary to understand the F2P market and how this market derives value. The proposed value function is an initial attempt to explain the F2P market in this way. Such an attempt, to the best of the author's knowledge, has not been made before.

This thesis will be divided into the following sections and subsections, written to provide the necessary context and support for the function.

## SECTION #1:

First, the traditional business model for video games will be examined, as well as the market for traditional gaming products. In order to see how F2P consumers derive value from video games, it is necessary to first understand the traditional market segment from which F2P consumers differ.

Major technological innovations within the gaming industry will also be discussed. Specifically, the importance of internet-integration and mobile-integration within video games will be covered.

Lastly, section #1 will discuss the importance of video games in today's economy, as well as the mainstream success and cultural impact of video games. This subsection will show the size of the video game industry today and will illustrate why the F2P market in particular is worth studying.

## SECTION #2:

This section will begin with an overview of the F2P business model. F2P pricing mechanisms are responsible for expanding the gaming market and creating a new consumer-group. Therefore, in order to understand these consumers, one must understand the business model that created them.

Next, the design principles of F2P games will be discussed. Successful F2P games and their characteristics will be analyzed to identify key experiences and value sets that these games have in common. This provides an idea of what kind of value F2P consumers are looking for.

Third, this thesis will discuss the consumers for F2P games. The characteristics of F2P consumers sets this group apart from traditional game consumers.

Lastly, the value function will be reintroduced, and each variable will be explained in turn. Through the use of the value function, the primary thesis questions will be addressed.

This topic has not been seriously addressed in existing literature except in very limited degrees and references. Therefore, this paper will provide new insight into one of the world's fastest growing entertainment mediums. As video games are becoming incredibly significant both from an economic and cultural perspective, efforts should be taken to analyze the users within this industry, and to understand their needs and desires.

Information and support for this thesis comes from both primary and secondary sources. Primary sources include a survey administered through the University of Maine First Class web portal. The survey had a total of 264 participants. Primary sources also include email correspondence between the author and Nick Parkinson, a F2P video game developer for the firm SGN Games<sup>1</sup>. Support for this thesis comes from news periodicals such as The Wall Street Journal, The Economist, Forbes, Fortune, and other publications. Published game developer commentaries and interviews, statistics reports, financial reports and sales-data, published surveys, and peer-reviewed journals were also used to support the conclusions and claims presented in this thesis. Approximately 100 sources in total were used to inform and support the writing process for this thesis. Limitations to available information, as well as potential additions to the function, will be discussed as appropriate.

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<sup>1</sup> Nick Parkinson wanted it to be known that our correspondence represented only his personal opinions, and that his views do not represent any associate or employer, past or present.

# THE EVOLUTION OF VIDEO GAMES

## 1-1: THE TRADITIONAL GAMING INDUSTRY

### Part A: The Traditional Video Game Business Model

The business model for a traditional video game company is similar to that of a manufacturing firm and is summarized in Table 1. Traditional video game firms develop a product that consumers can acquire only through a monetary purchase. Product development for traditional games is often costly, and large titles can take years to finish. After purchase, the product belongs to the consumer for his or her own use (Marchand & Hennig-Thurau, 2013). Within the video game industry, this pricing model is called “pay-to-play” (P2P):

“P2P architecture consists in three stages from the point of view of the consumer: Monetization (the player first buys the game), Acquisition (the player discovers the gameplay), and Retention (the player enjoys the game and repeats gaming). Retention is at the end of the process and is independent from the monetization stage. Once the price is sunk, the quality is tested and the player is more or less retained” (Myriam, 2014).

In essence, the P2P model follows basic economic theories of supply and demand, where consumers willing to buy the product will purchase the game, and the initial price will adjust to a level that is (ideally) most beneficial for both the developers and the customers (Myriam, 2014).

Table 1: Traits of traditional P2P video games

<ul style="list-style-type: none"><li>• Follows a “pay-to-play” pricing model</li><li>• Audience is skewed towards male consumers</li><li>• Games are usually only available on a limited number of devices</li><li>• Hardware and software are expensive</li></ul>	<ul style="list-style-type: none"><li>• Games are launched as a finished product</li><li>• Content is frequently mature and graphic</li><li>• Games demand large time commitments</li><li>• Games are often single-player or narrative-based experiences</li></ul>
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Key characteristics of traditional pay-to-play video games



An important part of this process is that, with the exception of minor improvements delivered through online patches, a game released under a P2P model is largely a finished product when launched (Griffiths, 2013). While recent innovations in technology have allowed traditional games to be acquired digitally via download, a large portion of traditional games are still purchased at physical retail outlets.

The largest traditional video games are often referred to as “AAA Games” (pronounced “Triple-A”). Games such as *Super Mario Brothers*, *Call of Duty*, and *Grand Theft Auto* are examples of AAA Games that all follow a P2P pricing model. AAA titles are similar to blockbuster movie releases. These products are frequently available only on dedicated gaming consoles or high-end gaming computers, which limits their accessibility and convenience, but heightens their exclusivity.

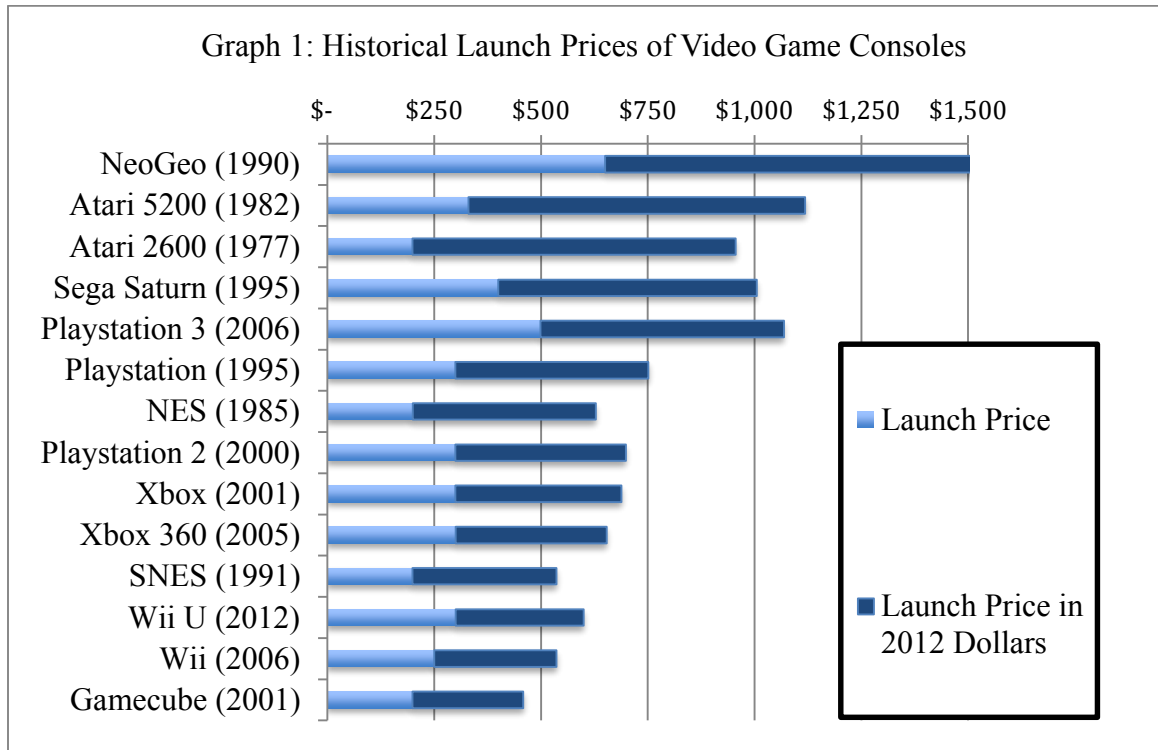
### **Part B: The Market for Traditional Games**

The nature of the traditional video game business model implies a specific type of target demographic and user. The market for the traditional business model consists of self-identified gamers, because there is an upfront cost to simply try a game. In fact, in order to play any traditional video game, one first needs to acquire the hardware.

While new video games can be expensive (usually retailing at around \$60) the prices of the consoles necessary to play them are substantially more costly. A report by Statista (see Graph 1) compares the prices of gaming consoles over time, indexed for inflation. Even the least expensive options cost a few hundred dollars (Richter, 2013). This likely presents a high barrier-to-entry for consumers outside the core market.

This cost barrier could partially explain why, in 2010, 75% of gamers were aged 18 or older. This age group is substantially more likely to be working and have

disposable income (Entertainment Software Rating Board, 2010). Besides age, demographic trends pertaining to gender and motivation can also be observed for the traditional video game consumer.



Prices of video game consoles at launch, indexed for inflation up to 2012 dollars. Data provided by Statista. Note: to read graph, look at the absolute length of the bars, not the sum. Ex: Wii U cost \$300 at launch, which is both its launch price and price in 2012 dollars.

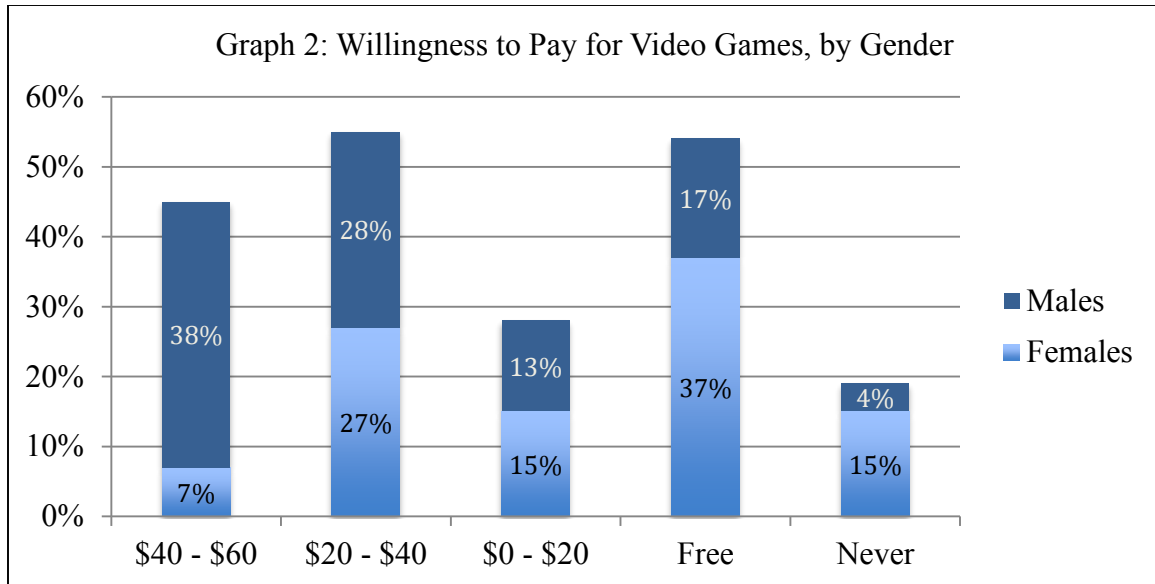
According to the Entertainment Software and Review Board (ESRB), of all self-identified female gamers, 80% used the Nintendo Wii as their primary gaming device in 2010 (ESRB, 2010). Nintendo is unique in the traditional gaming industry because it has set itself apart by appealing to a more family-focused and neutral audience. These are efforts that many traditional gaming firms have not undertaken (Gaudiosi, 2007). While Nintendo has a more inclusive business model that has been especially appealing to female consumers, Nintendo's products do not command the largest market share.

The ESRB claims that only 41% of males used the Wii as their primary gaming device, with the other 59% using either an Xbox 360 or a PS3 – notably more intensive

consoles intended for a more mature audience (Entertainment Software Ratings Board, 2010). According to Androich (2012), writing for Marketing Magazine, female video game users are more likely to use non-gaming specific devices (phones, tablets, etc.) to play video games than are males. While females do consume video games, they are less likely to use dedicated consoles, which makes them less likely to be traditional game consumers. Male game consumers are consistently found to prefer dedicated gaming systems (i.e., Xbox or PlayStation) more so than females, which, by effect, makes males more likely to be traditional game consumers. The UMaine survey supports this idea (see Appendix C).

Male gaming consumers generally spend a greater amount of time playing traditional video games than females (Androich, 2012), and, based on the survey of UMaine students, male gamers are more likely to spend money on video games as well (see Graph 2). These results agree with an article from Business Wire (2014), where male gamers were found not only to be more likely to pay for video games, but to actually prefer to pay (as opposed to playing for free).

The typical user for a traditional video game product is more likely to be male. Because traditional gaming products require an up-front cost to use, and because females appear to be less willing to spend money on video games than males, potential female consumers may have felt alienated or excluded from participating in this market in the past. This means that male consumers largely drive the market for traditional games. Perhaps, as a result, top selling traditional video games are frequently complex and graphic in nature (Statistics Brain Research Institute, 2013 & 2015). It is possible that traditional gaming products are appealing to stereotypical male characteristics.



UM Community willingness to pay for video games based on different price levels, split by gender identity

There are multiple reasons why an individual would devote time and money to traditional video games, such as the pursuit of fantasy/escapism, challenge, or to fulfill curiosity (Marchand & Hennig-Thurau, 2013). An article by Nick Yee of Stanford University argues that video game players find personal achievement, social interactions, and/or personal immersion to be major motivations for playing video games (Yee, 2006). These motivations dovetail with the characteristics of traditional games: the titles are plot-driven, competition-based, or designed as a method of mental escape.

Traditional games frequently require significant amounts of time to achieve in-game goals (competition, completing stories, etc.). This implies that traditional gamers find more value in these products the longer they use them. Members of Uppsala University, Sweden, pursue this idea. They argue that “passionate gamers” who cultivate an avid interest in a title will find more enjoyment in that title:

“Value-in-use implies that value is not ready-made and embedded, and that the offering is of no value if the intended user does not decide to get involved and benefit from the offering through investing necessary resources, activities, and time. Hence, creating value requires that the beneficiary makes use of and

experiences the potential value of the offering (i.e. the value proposition) and thus creates her own value” (Gidhagen, Ridell, Sorhammar, 2011).

Because of the costs necessary to enjoy traditional games, players may feel as though they must commit many hours to a game before their purchase is justified.

When one considers the types of games made under the traditional model, this “value-in-use” idea appears correct. Traditional video games require a substantial amount of skill to play effectively. As in anything, the more skilled a person is at something, the more likely they are to enjoy it, and skills take time to develop. This also coincides with the narrative aspects of the game. It seems reasonable to think that traditional video games become more enjoyable the more invested the player is in the story. To deliver a quality narrative, traditional games are frequently quite long. Online polls from video game players have found that many P2P games can take tens of hours to complete (How Long To Beat, 2016).

In short, the market for traditional video games is largely male driven. Motivation for playing these games is found in escapism/fantasy, challenge, and curiosity. Traditional game consumers value high quality productions, lengthy and complex gameplay experiences, and well-crafted stories. Because of the costs and dedication needed to participate in the traditional gaming market, the overall consumer-base for these products is naturally small and relatively exclusive.

## **1-2: MAJOR INNOVATIONS IN THE VIDEO GAME INDUSTRY**

### **Part A: Video Games on the Web**

One of the most important advancements in the gaming industry has been the integration between video games and the internet. Once video games became internet-enabled, their user-base experienced massive growth. The practice of connecting video games and gamers together on the internet has largely been responsible for games becoming a global industry, and it has allowed many more developers and players to enter the market (Zackariasson & Wilson, 2010). This is especially true on PC's, where social and casual games are easily accessible and free. The internet adds value to games in the form of convenience, causing users of casual games to play more frequently.

“A substantial part of this [video game industry] growth comes from the democratization of gaming today thanks to new technologies, innovations in game designs, and new business models. 135m people play [video games] at least one hour per month. Most of these new gamers are casual gamers and have been attracted to the gaming world by social or free-to-play games. In the US, 70% of PC gamers play casual games, and 50% play casual social games in 2010...casual online games appeal to all segments, including hardcore PC gamers” (Myriam, 2014)

The internet serves as both a virtual distribution network for video games and as a tool that can connect players, gaming communities, and developers together. This has allowed anybody anywhere, so long as they have an internet connection, to access gaming media. Without this online network, it is sometimes not even possible for some consumers to access video games. While integrating video games with the internet was significant, putting games on mobile devices has been equally important to the industry.

## **Part B: Video Games on Mobile Devices**

Video games on smartphones and tablets have been crucial to industry growth over the past few years. Research published by The NPD Group reports that, as mobile devices have become more popular, there has been a clear increase in the amount of time and money being spent on video games (especially free games):

“Mobile gamers, those who play on a smartphone, iPod touch, or tablet, are playing more often, and for longer periods of time, than they were two years ago. In fact, the average time spent playing in a typical day has increased 57 percent to over two hours per day in 2014” (NPD Press Release – Average time spent playing games, 2015).

Around the world, smartphones and tablet devices are peoples’ first real computing device (Gaudiosi, 2015). Video games are widely available on mobile devices. This means that mobile devices also represent many peoples’ first real gaming platform, which has significantly expanded the potential market for video games.

Since the market for mobile video games is so large, developers no longer need to create games for dedicated consoles or expensive hardware. Today, developers can create games that can be played on convenient and commonly owned devices. This has lowered the entry barriers for new users to become market participants. Mobile technology has also allowed smaller, independent game developers to make video games, and earn a profit, at a fraction of traditional console game development costs (Gaudiosi, 2015). Some claim that mobile game revenues will have surpassed dedicated console game revenues in some markets by the end of 2015 (Pearson, 2014). There is now an excess supply of mobile games because they generally cost less to produce than traditional games (Gaudiosi, 2015).

## **1-3: THE STATE OF VIDEO GAMES TODAY**

### **Part A: Why Video Games Matter**

Despite the stigma that video games are merely toys, video games have actually evolved into a huge industry that is relevant to a lot of people. For many in the US and around the world, video games represent an important interest. One could even say that video games have become an American pastime.

The majority of people in the United States play games to some degree, whether they consider themselves “gamers” or not. Video games have become “at least as mainstream as any other pop culture in our fragmented media landscape [television, movies, etc.]” (Cox, 2014). By 2013, the video game industry was estimated to be worth \$21 billion dollars in the US alone (Cox, 2014). To put this in perspective, an article published in the Journal of Interactive Marketing states that “more Americans play video games than go to the movies,” (Marchand & Hennig-Thurau, 2013). Sales of games and additional in-game purchases (items purchased digitally through in-game stores) combine for revenues that are “about five times higher than global music revenues...higher than consumer book sales...and similar to movie revenues...Video games thus appear to be the fastest growing and most exciting category of mass media for the coming decade” (Marchand & Hennig-Thurau, 2013).

With such high revenues as stake, game development companies are more than willing to front huge investment costs in order to make a successful product. For example, *Grand Theft Auto V*, one of the most successful titles in gaming history, cost an estimated \$266 million to create and grossed \$800 million in sales within its first 24



hours of release. At the time, *Grand Theft Auto V*'s release represented the biggest launch day for any single entertainment product ever (Kamenetz, 2013). According to Cox (2014), "seeing a large studio spend between \$50 and \$100 million on a video game is no longer uncommon".

What is interesting about the industry is that there exist both large companies making incredibly expensive products like *Grand Theft Auto V* and smaller teams that create much less expensive – but not necessarily less successful – products as well. An example of a smaller yet profitable title would be the mobile game *Candy Crush*. *Candy Crush*, when compared to a game like *Grand Theft Auto V*, has a much smaller production budget, but, thanks to the internet and mobile technology, it still has millions of regular users and generates millions of dollars in revenues.

Video games do not just represent big business opportunities; the practice of playing video games and consuming gaming media is becoming a cultural phenomenon. Game developers and professional game-players are becoming minor celebrities, akin to movie directors or well-known athletes. Video game tournaments are regularly held and streamed online, where people from across the world tune in to watch professionals play for million dollar cash prizes (Wingfield, 2014). For example, the World Championship for the popular online title, *League of Legends*, attracted approximately 27 million online streaming views. The audience for this video game tournament outnumbered the average viewership of individual games of the world series and had roughly the same number of viewers as the NCAA 2014 basketball final (Booton, 2015).

But why do video games matter to so many people? What is it about video games that convinces players to commit their time and money to this source of entertainment?

Many believe it is because video games offer a level of interaction that other forms of entertainment media can not.

Whether a person is watching a movie, reading a book, or listening to a record, they are a passive audience member. However, a video game player is responsible for the outcome and results of the experience. This carries with it an intrinsic level of pleasure and commitment. Tobias Batton, an online entrepreneur and video game developer, had the following to say on the issue:

“Operant conditioning plays a hand in game design which filmmaking cannot replicate. ‘Since films are not interactive, it can’t play a role in that medium,’ ... ‘There is no signal or reward, it’s just sit-and-watch. This is the reason that games are better tools and a more effective form of psychological learning. The individual modifies the occurrence and form of his own behavior due to the association of that behavior with a stimulus’.” (Correa, 2013).

Batton argues that this ‘psychological learning’, the interaction that occur between the game and the player, makes the video game experience more rewarding and personal than most entertainment medias.

### **Part B: Who (or What) Defines a “Gamer”?**

Disregarding stereotypes, trying to identify someone today as a “gamer” is as silly as trying to identify someone as a “TV-er” or “movie-er” (Cox, 2014). While the traditional game consumer represents an exclusive market segment, the reality is that in the modern, more inclusive gaming industry, who could be considered a potential gamer is much more broad, and much more difficult to define.

Video games are a staple entertainment product in many homes across the country. Table 2 summarizes how mainstream video games have become. For example, it is estimated that 59% of Americans play video games, and 51% of American households have a dedicated console (Cox, 2014). Studies have shown that the average age of

console game consumers in the US is 37 years old and that 42% of game players today are women (Marchand & Hennig-Thurau, 2013). All people, regardless of gender, age, race, or income, are now potential video game consumers.

Table 2: Demographics of American video game consumers	
<ul style="list-style-type: none"> <li>• 59% of Americans play video games</li> <li>• 51% of American households have a dedicated video game console</li> <li>• 71% of players are over age 18</li> </ul>	<ul style="list-style-type: none"> <li>• 81% of young adults ages 18-29 play video games</li> <li>• 48% of players are girls or women</li> <li>• 23% of seniors over age 65 play video games</li> </ul>

General statistics for demographics of American video game consumers, provided by *Consumerist* magazine (Cox, 2014)

For many people, playing games is just another part of their daily routine. For example, Androich (2012) claims that, in 2012, adult males who played video games were spending on average eight hours a week playing games, while females were likely to spend close to five hours a week playing. The survey of UMaine students (see Appendix C) found that 36% of all respondents play video games at least once a day, and an additional 24% play video games at least a once or twice a week. Today, video games are truly everywhere, and for many people they have become just another part of the daily routine.

## FREE VIDEO GAMES

### 2-1: THE GAMING INDUSTRY AFTER FREE-TO-PLAY

#### Part A: The Free-to-Play Business Model

While millions of people throughout the world play video games, this is a relatively recent phenomenon, and it is a result of the industry becoming more inclusive through the use of alternative business models. Technological innovations have helped push video games to their present popularity, but it was not until the widespread implementation of the free-to-play (F2P) business model that the video game market significantly began to expand. The F2P approach to pricing, combined with the internet and mobile devices, has made video games convenient, accessible, and mainstream. Since this F2P consumer-segment only exists because of how games can now be priced, understanding the F2P business model is needed to comprehend these new consumers.

How F2P gaming products generate revenues is summarized in Table 3. F2P gaming products are made available to the market with no upfront monetary costs, and they are released online. Immediately, there is a question of fiscal sustainability – how can such a business model even exist? Every company needs some way of making money. Importantly, in the context of F2P, “free” does not necessarily translate into “without monetization”. Free games can still generate revenues and earn a profit.

Table 3: F2P Video Game Revenue Generation Process	
<ul style="list-style-type: none"><li>• Only a small portion of all users actually put money into the game; the vast majority play for free</li><li>• Uses “casino tactics” to generate revenues</li></ul>	<ul style="list-style-type: none"><li>• No up-front costs to acquire or use the game</li><li>• Revenue is generated via advertisements or in-game purchases</li></ul>

Key details describing the revenue-generation process for F2P games

Generally, there are two ways for F2P games to make money: (1.) in-game purchases, and (2.) advertising revenues (Myriam, 2014). Both of these methods rely on

keeping players engaged and coming back. Advertisements will only work if there are a lot of people watching them consistently. Because of this, advertisers will only sponsor developers if their game attracts many users. The F2P industry is fairly oligarchical, and only a few select titles attract enough users to make advertising viable. Similarly, if not enough people play the game, then there will not be enough players purchasing expansionary materials (levels, upgrades, etc.) to support the title (Myriam, 2014).

“First, the free model was only supported by ads (or out-game revenues) and was mainly used for small casual games... The game is free as long as an ad is viewed. To skip the ads, the player must pay a unit price. It looks like paying for comfort... however, players highlighted two main draw backs of this model: either the game was of lower quality due to lower budget or less fun because of the interruption of ads. From developers’ view, advertising can generate significant revenue but only for the top-selling games [author’s note: this is because top-selling games have a large audience to watch the ads]. The model evolved into the F2P or micro-transaction model where the access remains free but revenues are based on the sale of in-game items using real-money.” (Myriam, 2014)

In-game purchases, or “micro-transactions,” generally fall into two categories: (1) character-upgrades that give the purchasing player an in-game advantage over other players and/or provide convenience to the player (extra lives, etc.), or (2) decorative or aesthetic items that allow the purchasing player to stand out socially and customize their gaming experience. Cosmetic upgrades usually have no impact on the gameplay itself (Lin & Sun, 2011).

Because only top-selling titles can sustain themselves on advertisements, that essentially leaves smaller and intermediate-sized developers reliant on micro-transactions for their revenues. Game designer and industry consultant, Pascal Luban, claims that in-game purchases are the main source of revenue for most F2P games, and that micro-transactions make up between 50-90% of a F2P game’s total revenue (Luban, 2012). But what if no one wants to pay for these add-ons, given that the low or zero cost was the

initial draw? If players do not want to pay to acquire the game, they probably do not want to purchase in-game add-ons either, which is a very real concern for F2P developers.

Within F2P games, because it is optional to pay, there are many users who never contribute to revenue generation (Myriam, 2014). Reports have indicated that “less than 3% of all mobile-game players make any in-game purchases” (Needleman, 2015). While mobile-games do not include all F2P games, most significant mobile games are F2P. In order to make such a system profitable, F2P games must function akin to a casino.

According to Hany Nada of venture capital firm GGV Capital:

“Fans are divided into three segments: whales, dolphins, and minnows... Minnows (or free players) on average account for 90-98% of the players in a free-to-play game... Dolphins usually get greater levels of customization and access to premium content that minnows don't. Dolphins usually represent about 50% of the revenue generated by a game... Whales typically represent 3-4% of the paying users for a game (or less than 0.1% of all users), according to game company sources, and account for about half of revenue. It is not uncommon for whales to spend thousands, if not tens of thousands, of dollars per month on a game” (Nada, 2013).

F2P game developers face a constant challenge: enough players must be attracted to comprise a large and active user base, and more free features are necessary to attract more players. However, too many free players (or not enough paying players) will make the game too costly to maintain:

“One of the main astonishing paradoxes of [the] F2P model is that the game can be a hit without being profitable (which is impossible with a paid model). Profitability depends indeed on the number of paying players and how much they spend independently of the size of the base” (Myrim 2014).

Because so few players spend any money, this makes the ‘whales’ critical to success.

Aaron Filippo, co-founder of Flippfly games, commented on the risk of ignoring the whales, and that making a F2P game “too free” would ultimately result in a popular title that is also a financial failure.

“The conversion rate [from free to paying player] was pathetic [in Filippo’s F2P game *Monkey Drum*], and the average revenue per paying user was low enough that despite its [*Monkey Drum*] download numbers and great review scores, we had achieved less than \$500 in revenue after several months...the truth is: free-to-play works in large part because of “whales” – users who spend significant money in your app...If you provide continual motivation to spend money, then the “burning core” – that subset of customers for whom this is the best app ever and part of their daily routine – will push up this LTV [lifetime value] to the point that it can start to make sense financially.” (Flippo, 2012)

F2P games must therefore find a balance between attracting a large player base, catering to paying customers, and finding ways to convert free-players into paying customers. From a practical standpoint, the only possible way to attract enough players to make such a business model sustainable is to leverage the combination of the internet and mobile computing.

Keeping product development costs as low as possible is also crucial to the success of F2P games, because there are no up-front purchases from consumers to cover these costs. Since many F2P video games are casual/social games, it is not as important for the developers to invest huge amounts of money into costly productions. For many F2P consumers, high production values may not even be important. This allows F2P developers to make relatively less expensive games quickly for mobile devices, which helps make the F2P model fiscally possible (Dredge, 2013).

However, though these companies are smaller, mobile games do not necessarily earn less revenue than their larger competitors. For example, some of the most successful F2P developers, such as Supercell, the creator of *Clash of Clans*, reported earning \$1.7 billion in revenues in 2014 – high revenues for any video game, F2P or otherwise (Needleman, 2015). As another example, consider King Digital Entertainment, creator of the smash-hit F2P game *Candy Crush Saga*. King was recently purchased by Activision

Blizzard for close to \$6 billion dollars (Auchard & Abboud, 2015). This purchase arguably assigns the full value to just that one title.

For mobile-gaming in general, in-game purchases were expected to total approximately \$23.4 billion in 2015. In-game purchases on mobile games in the U.S. were expected to be \$1.82 billion (Needleman, 2015). In 2014, Chinese gamers were estimated to have spent approximately \$3 billion on mobile games (Superdata Research, 2014). Because most of the top earners for mobile games are F2P (Think Gaming, 2015), we can assume that most of these revenues are being generated by F2P titles. These high revenues have attracted many firms to enter the F2P market.

F2P games are typically less expensive and faster to produce. As a result, the F2P market is naturally becoming saturated, and only a handful of games control most of the market. Consider that “about 750 new games are added to app stores every day...[and] the 10 highest grossing games rake in 43% of world-wide mobile game revenue” (Needleman, 2015). In September of 2015, only one title out of the top 50 grossing iPhone games required an up-front payment, the rest being F2P (Think Gaming, 2015). This implies two things: (1) the most popular/successful games on mobile devices are likely to be F2P, and (2) there are many options available to the F2P consumer, which has caused market saturation.

This saturation has driven marketing costs upward. Such expenses have created cost-barriers that many smaller firms cannot afford. Joost van Dreunen, CEO of Superdata, a technology research firm, shared the following comments with Develop magazine:

“Following the success of small [developers], larger publishers like EA, Activision, and Take-Two entered the market...the entry of all these big players



has changed the competitive environment: audiences expect higher quality games and marketing budgets have started to balloon...we have seen early signs of consumer spending reaching a plateau” (Dreunen, 2015).

Dreunen goes on to say that that this “spending plateau” is a result of video games becoming more mainstream and mature – no longer are we seeing the high payments offered willingly by the early adopters and ‘hardcore’ gamers. This will force F2P developers to focus even more of their budgets on marketing.

“Already the leaders in the space have raised the stakes with Supercell and Machine Zone [F2P game developers] spending big bucks on supermodels and Super Bowl ads. Companies that lack such budgets will, instead, look for more specific audiences and try to carve out a particular niche.” (Dreunen, 2015).

Nick Parkinson, an employee with F2P game developer SGN Games, shared the following insight when personally interviewed:

“The difference now is barrier to entry. It is a lot easier to get a game out than it used to be. Developers can get downloadable games on consoles, they can publish to Steam on the PC, and the mobile app stores and Facebook are even easier still. So what you end up with is a lot more games to choose from...Because now while the barrier to entry has been greatly lowered, the barrier to success is much higher...how do you stand out when there are so many others to choose from?...If you want to hit the top of the charts (and stand out) you need to be smart about the way you acquire players – and it isn’t cheap either. If you want players to see your game, you need to be towards the top of the charts. If you want to be at the top of the charts, you need to invest in getting there” (N. Parkinson, email correspondence, August 1, 2015).

### **Part B: The Design of Free-to-Play Video Games**

F2P game design standards are summarized in Table 4. The F2P design principles differ from and are often in opposition to traditional video game design standards.

Table 4: Design of free-to-play video games	
<ul style="list-style-type: none"> <li>• Games are designed to be quick, fun, and readily understandable experiences</li> <li>• Games are often unfinished or minimal in content when launched</li> <li>• Convenience is critical to success</li> </ul>	<ul style="list-style-type: none"> <li>• Games are updated and improved over time, resembling a service process over a product cycle</li> <li>• Monetization occurs throughout and at the end of the user experience</li> </ul>

Key characteristics of free-to-play video game design

F2P games utilize an entirely different product-creation and delivery cycle compared to traditional gaming products. According to Myriam (2014), the F2P design process is as follows:

- (1.) Acquisition: the player discovers the game and/or gameplay
- (2.) Retention: the player enjoys the product and continues playing over time
- (3.) Monetization: the player spends money on or within the game
- (4.) Development: the firm creates and/or refines the gaming experience

Instead of first trying to sell a product, F2P games focus on grabbing the player's attention early and getting him or her committed. Only then do the developers expect the product to start generating any revenues.

“The objective of [the] F2P business model is to put emphasis on experience before monetizing it. Since the game is free, the acquisition stage looks like an easy and automatic stage: players enter freely and generate network externalities on other players in acquisition and retention stages...Free is a means to accumulate a huge user base...If the player is addicted to the game, he is locked in and will not quit the game. Based on the theory of engagement, the longer a user plays, the more chances he buys virtual items.” (Myriam, 2014)

In order to be successful, the product must be instantly enjoyable. Game designer Pascal Luban argues that the key to success with F2P is to offer a product that is first highly entertaining. Only then will the product encourage future payments (Luban, 2011). Nick Parkinson expressed similar sentiments – a F2P game that is immediately fun is more likely to be profitable (N. Parkinson, email correspondence, August 2015). Games that are perceived to be enjoyable will earn positive reviews and will give users an incentive to keep playing. Likewise, the better a game's reputation is, the more likely players will try it.

Note that, in contrast with the traditional game development cycle, the ‘development’ stage for F2P is now the last part of the product development process. Since the goal in the F2P model is player retention, F2P game-makers must constantly be updating and improving their title to keep gameplay fresh and engaging. This helps to keep the player base active.

Due to the fact that monetization is no longer at the front-end of the cycle, it is important to get the game out as quickly as possible in order to cover the costs of initial development. This implies that F2P games can be largely unfinished at the time of the original launch and are instead completed over time. This change in the development process results in F2P games being more like a service than to a traditional product. (Griffiths, 2013).

Continual in-game updates give players reasons to keep coming back to a title over time, which helps build player retention. Many F2P developers agree that this “service approach” is important to the long-term success of any F2P game. Video game designer Pascal Luban stated the following on F2P content-creation:

“A free-to-play game does not require its full content to be created before its release, as most content is created gradually after the game launch. Thus Nexon [creators of F2P titles *Mable Story*, *Vindictus*, *Combat Arms*, etc.] estimates that a free-to-play can be released with only 50 percent of its final content, and for Playfish [social network game developer, owned by EA], the percentage is as low as 20 percent!” (Luban, 2011).

In our correspondence, Nick Parkinson also shared his thoughts on this issue:

“Launching is really only the beginning, and that means where in the past you might have launched a game and then the team moves on to something else, now a team launches a game and still continues to work on it. They’ve got to keep making it better, keep updating it and keep providing more content for their players. It sounds simple, but that represents a pretty big change from the older, traditional method of developing games. Knowing how to manage a live game is in many ways a much different skill set than creating and launching one... When

you have an idea for a new addition to make to the game, when it is already live you're putting a lot at risk when you make even the smallest of changes. If you do something that backfires or that players don't like, you could cause serious harm to your game." (N. Parkinson, email correspondence, August 2015)

A F2P title can only be successful if people keep coming back to play over long periods of time. In order to achieve this, developers must take active measures to keep their community engaged. F2P games, therefore, demand an on-going effort on the part of the developer if they are to remain financially viable. Such an approach indicates that F2P consumers value minor additional add-ons and improvements as opposed to singular, expansive content. While many traditional games are often harshly criticized for lacking in content<sup>2</sup>, this is a much rarer criticism to be levied against F2P games. It will be shown in later sections that, were a F2P game to launch with expansive content, the majority of its consumers would not have the time or patience to enjoy it. Large amounts of content at launch is not a value-added feature for F2P game consumers.

Pascal Luban (2011) notes several key features and design traits that are pivotal for a F2P product to be successful:

- F2P games should be immediately accessible and understandable to all players
- F2P games should be quick to start, with little wait time between opening the game and beginning to play
- Players of F2P games should feel guided, and their objectives should be obvious and clearly explained
- The user interface for F2P games should be easy to use and understand

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<sup>2</sup> Refer to Metacritic – Mario Tennis: Ultra Smash, 2015, and Metacritic – Star Wars Battlefront, 2015, for examples of professional and user reviews that criticize two traditional games for lacking in content.

Because these games are free to acquire, there is no initial monetary investment to encourage commitment. If players cannot determine what they are to do quickly and enjoy doing it, they will leave within seconds, and with them goes any potential earnings.

Luban goes on to say that social connectivity and player retention must be fundamentally built into the game itself. He claims that F2P games are at their best when they are built upon a never ending cycle of feed-back loops that the player can engage in (Luban, 2011). Game developer, Aaron Flippo (2012), provides similar insight when discussing the ways in which F2P video games commonly fail:

- The F2P game fails to give users a reason to continue to play or to pay
- The F2P video game has an ending
- The game developers fail to test and improve the gaming experience over time
- The game developers fail to understand the core audience

Andrew Sheppard, president of Kabam Studios, claims that the design of F2P games offers a more “democratic” gaming experience than traditional games.

“Part of why F2P is so democratic is you give away your game for free and the market only gives you money back if they like [it]...You’re giving people content for free and there are so many people doing that that after a certain while only the best games rise to the top” (Brightman, 2014).

Due to the fact that F2P games are successful only if people continue to play over time (and decide to pay while doing it) it effectively allows the F2P community to vote with their wallet.

This democratized, service-oriented approach to game design attracts a new and specific kind of user that is separate from the traditional market for video games. This new market-segment has allowed video games to become a global entertainment industry.

### **Part C: The Market for Free-to-Play Games**

The market for free-to-play (F2P) video games exhibits few of the traits that were common within the traditional gaming market. Similar to the design principles of F2P games, and as shown in Table 5, many of the defining characteristics of the F2P market are in opposition to the traits of traditional game consumers.

Table 5: Traits of the F2P Market	
<ul style="list-style-type: none"><li>• Gender neutral; possibly skewed towards female consumers</li><li>• Price-sensitive; not likely to spend money on video games</li><li>• Enjoys simple, quick games</li></ul>	<ul style="list-style-type: none"><li>• Not likely to self-identify as gamers</li><li>• Likely to be balancing time between family and career</li><li>• Prefers game content that is not graphic or violent in nature</li></ul>

Key characteristics of free-to-play video game consumers

PlaySpan, an e-commerce and digital payments firm, found in a survey of tens of millions of respondents that women prefer F2P games over men, and that women prefer playing games on smartphones and tablet devices. The study found that male gamers prefer playing video games on dedicated consoles, and that men were noted to be “nearly three times more likely than women to cite pay-to-play or subscription based games [games that require a regular and continual payment to play] as their favorite” model for playing games (Business Wire, 2013). An article published in Marketing Magazine also listed smartphones as a top gaming device used by female gamers, whereas, for males, smartphones were not even considered (Androich, 2012). The survey of UMaine students yielded similar results: the majority of respondents who play F2P video games were female (68%), and the majority of respondents who would only play free video games would prefer to use mobile devices (see Appendix C). This information shows that the user base for F2P games is more gender diverse than the traditional market for video games, and that this market is less likely to use expensive gaming platforms.

The fact that F2P is appealing to female consumers is not particularly surprising when one looks at the history of video games. Women in video games have been displayed as victims, sexualized objects, or have simply been absent from games entirely. However, most F2P titles are noticeably gender-neutral. Social games like *Farmville* do not feature the bravado of male protagonists, and puzzle games such as *Candy Crush* are almost devoid of any gender roles at all (Jayanth, 2014).

The study conducted by Playspan also found that men were three times more likely to play shooters<sup>3</sup> than women, a difference of 48 percent to 17 percent (Business Wire, 2013). Despite the male preference for shooters, analytics firm Think Gaming reports that a large portion of the top grossing iPhone games are puzzle or strategy titles (Think Gaming, 2015). Shooters, however, are less likely to be popular on mobile devices. This indicates that female preferences may have more weight in the F2P market.

While there are some F2P games that are more in-depth and violent, most violent games will not be able to sustain themselves using a F2P model. Electronic Arts (EA), for example, suffered losses trying to maintain F2P titles with complex, graphic, and/or adult-oriented content. EA's more casual and "family-friendly" F2P games, however, have been continuously successful (Handrahan, 2015). By looking at what genres are popular, we can see that the majority of F2P users are looking for gaming experiences that are fun, accessible, and family-friendly.

It is therefore unsurprising that Up-Front Analytics, a market-research firm, found that mobile game consumers are often family-oriented people. Summarized in Table 6,

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<sup>3</sup> "Shooters" is a common-term for "First-Person-Shooter", a genre in which the human player sees from the in-game avatar's perspective. This genre is commonly, but not always, used for military-themed war games, and is often a more violent and difficult genre of video games than alternatives.

their research indicates that 63% of average mobile gamers<sup>4</sup> are actually in a relationship, and only 28% claim to be completely “single” (Upfront Analytics Team, 2015).

F2P consumers are busy people, and video games may not be a primary concern, or even a predominant hobby, compared to the other aspects of their lives. These consumers therefore have less time or incentive to spend money on video games.

Table 6: Demographics of mobile video game players	
<ul style="list-style-type: none"> <li>• 63% are in a relationship</li> <li>• Over 50% of players are responsible for buying groceries in their home</li> </ul>	<ul style="list-style-type: none"> <li>• 61% of players are parents</li> <li>• 13% are grandparents</li> <li>• 44% watch what they eat</li> <li>• 16% exercise regularly</li> </ul>

Common traits and demographics of mobile video game players, provided by Up-Front Analytics

F2P consumers may not be as willing to invest what time they do have into lengthy gaming experiences – especially not experiences that require an initial fee. This is why the most successful F2P games are frequently titles where the in-game goal (and how to pursue it) is immediately obvious. It allows consumers to enjoy playing a game without sacrificing significant amounts of time to do so.

Due to the fact that F2P consumers may not have a lot of time to play video games, it is reasonable to think that many of these consumers do not self-identify as “gamers”. A study conducted by Deal News, a pricing research outlet, found that 88% of respondents who play games mostly on smartphones and 85% of respondents who play games mostly on tablets do not self-identify as gamers<sup>5</sup>. Respondents who play video games on smartphones and/or tablets were found to spend less time per week playing video games than individuals who play video games predominantly on dedicated consoles (Ramirez, 2012).

<sup>4</sup> Not all mobile games are F2P, but most of the successful games by both player count and revenue are. It is therefore a safe conclusion that mobile game-users are playing F2P games.

<sup>5</sup> Smartphones, tablets, and mobile devices cater primarily to F2P gamers.



Financial data for the gaming industry shows that most F2P consumers are unwilling to spend money on games. These users would probably find being pressured into purchasing expansionary content to be frustrating (recall that “less than 3% of all mobile-game players make any in-game purchases” (Needleman, 2015)). Game designer Pascal Luban has written that, for F2P games (mobile or otherwise), only five to ten percent of a F2P game’s registered users ever make any purchases (Luban, 2011).

Similarly, in the study conducted by Deal News, it was found that, for players who use predominantly mobile/tablet devices, 27% of respondents would not pay any money to acquire the game, and another 27% would only pay up to \$0.99 (Ramirez, 2012)<sup>6</sup>. In a separate study, Up Front Analytics found that a large portion of mobile game players would choose real cash over in-game purchasable items. For example, it was found that 63% of survey participants would prefer to receive \$25 in cash instead of a \$50 Google Play gift card (Up Front Analytics Team, 2015). Google Play gift cards could be used for in-game purchases in F2P games or to buy games on the Google app store. This indicates that mobile gamers value having cash more than having video games<sup>7</sup>. By effect, these users likely do not appreciate games that try to force purchases.

The market for F2P games is quite different from the market for P2P games. F2P users are often career and/or family oriented, are interested in simple and fun games, and the consumer-segment is more gender diverse. F2P consumers are not likely to identify as gamers, and are not as passionate about gaming as are traditional game consumers.

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<sup>6</sup> It is the author’s opinion that this survey was skewed towards “gamers” already, and these results actually represent a higher willingness to spend than may really be the case.

<sup>7</sup> This same survey also found that more people would choose a \$400 console over \$100 cash. However, this could also just be because of the huge value gap in this example. Not to mention that consoles appeal to a different market which is more passionate about video games. A person could conceivably take the console and immediately sell it, and get more than \$100 in cash in the end.

## 2-2: THE FREE-TO-PLAY VALUE PROPOSITION

### Part A: Value Function Overview

Based on evidence about the video game market, industry, and product design, it was possible to draft a qualitative value function for F2P game consumers. This model breaks down the benefits that F2P game users derive from video game products. This function provides a conceptual framework to help one better understand the consumers of F2P video games, and also helps fill the literature gap on the video game industry and its various markets.

This thesis asserts that consumers of free-to-play (F2P) video games derive value from these products based on the following function:

$$\text{Value of F2P Games} = (\text{Benefits}) - (\text{Costs})$$

$$\text{Where Benefits} = (G + T_F + M + S) \text{ and } \text{Costs} = (C_B + T_C)$$

$$\text{Therefore, Value of F2P Games} = (G + T_F + M + S) - (C_B + T_C)$$

Key:

BENEFITS:

G = Gameplay

T<sub>F</sub> = Time Freedom

M = Mobility

S = Social Connectivity

COSTS:

C<sub>B</sub> = Additional Costs

T<sub>C</sub> = Time Commitment

F2P game consumers derive value from these products as a result of the gameplay experience, the timeliness of the user experience, the mobility of the product, and any social features. However, the value provided by F2P video games is eroded if the

product's in-game store and pricing is perceived to be unfair, or if the video game requires too much of a time commitment to enjoy.

It is important to note that this is a qualitative model. The variables have not been tested for their statistical significance, nor has there been any testing to determine the correlations between the variables. Because of the nature and level of analysis for this thesis, as well as limitations on available resources and tools, it was not viable to attempt to take these steps at this phase of research.

This does not mean that the value function is without merit. Much of the evidence to support the function is substantial and relative, and the conclusions drawn to create the function are logical. The function provides a clear and concise model for how F2P consumers value F2P video games. It could also provide a gaming company with a basis for creating a valuable gaming product. As very little literature has been written about the F2P consumer segment, this preliminary value function provides new insight into one of the largest entertainment media consumer groups.

When creating qualitative theories, it is important that the existing data lends credence and evidence to the theory. Explanatory theories should only be developed from data as it pertains to the subject as a whole. Otherwise, if the theory is developed first without context or information, data gathering will be self-serving and will cause any model to be of dubious quality. This value function was created as a means to explain existing facts about video game consumers. What started as general research into the F2P industry led to the conclusions expressed in the value function.

Because the model is composed of multiple variables, each will be addressed in turn.

## **Part B: G = Gameplay**

The first benefit variable to be discussed is Gameplay (G). Since the gaming industry is an entertainment industry, products must be entertaining to be successful. The variable, G, includes all aspects of game design that relate to gameplay and entertainment value, such as narrative complexity, immersion/escapism potential, production value, gameplay design, user interface, etc.<sup>8</sup>

F2P games are generally successful when they are simple in premise, easy to understand, and quick and informal to play. For these reasons, a game that is by some objective measures “simplistic” or “derivative” can still be entertaining for players.

In our correspondence, Nick Parkinson stated that making a fun and enjoyable to F2P game is one of the basic tenets of success in the F2P industry<sup>9</sup>. Pascal Luban, when describing key design principles of F2P games, wrote that F2P games should be immediately satisfying, designed for new audiences who may not be “gamers”, launched as soon as possible, be easy to use, and be made in such a way as to encourage repeated play sessions (Luban, 2011).

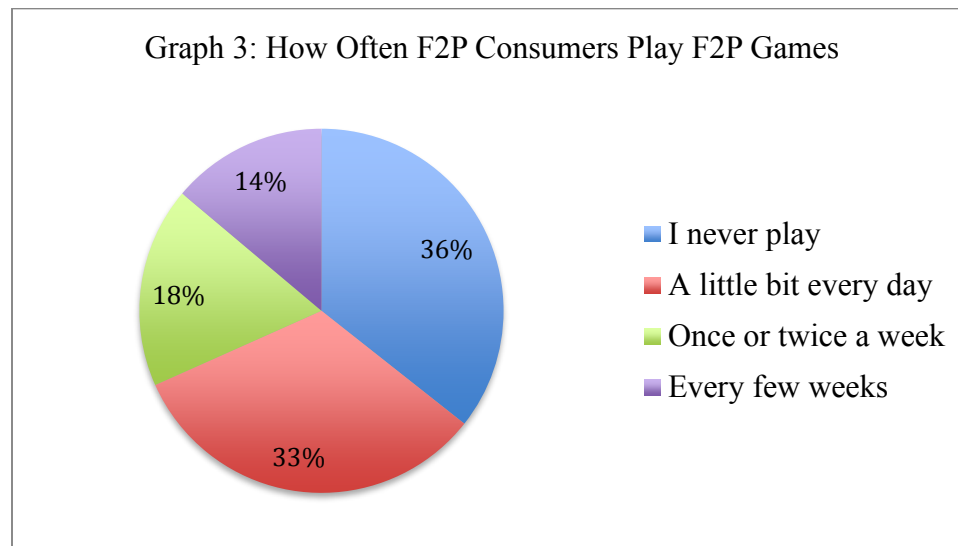
Entertainment value is therefore found in a F2P game’s ability to create fun, quick, and repeatable playing experiences. F2P games should be instantly enjoyable and encourage the player to log back in and play on a regular basis. Detailed in Graph 3, the survey of UMaine students found that those respondents who answered that they would “usually only play a video game if it is free” play video games frequently, sometimes

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<sup>8</sup> Free-to-play games are not “better” or “worse” than traditional games, nor are traditional games of “higher quality” than are free games. Quality is subjective. F2P gamers perceive value in gaming products in alternative ways. A F2P game can be less technically impressive than a P2P one, but it can still be high-quality if the users find it to be enjoyable and fun to play.

<sup>9</sup> It may surprise some readers to know that “being fun” may not be a goal of various traditional games. Such games may be trying to be more artistic or to deliver an innovative story-telling experience.

even daily (see Appendix C). F2P users are not likely to be dedicated gamers. Therefore, it is probably important to them for the game to be as immediately enjoyable as possible; they likely do not have the patience that is required of traditional and self-identified game players, even if they are playing regularly.



By percentage, how often do free-to-play consumers from the UM Community play free-to-play video games

The following illustrative example provides context for the kind of gameplay that F2P consumers are looking for. In 2013, a F2P game titled *Flappy Bird* was released onto Apple's iOS app store. The game was incredibly simple. To play *Flappy Bird*, the player was required to tap the screen in order to guide a cartoon bird through a series of obstacles (Kushner, 2014). This is a very common design premise for F2P games.

*Flappy Bird* became quite popular, topping download and revenue charts. It made the sole designer tens of thousands of dollars in a short amount of time. However, the game itself was accused of stealing art, and many people on social media and in gaming journalism declaimed *Flappy Bird* as a scam, a fraud, and as an annoying and generally

uncreative, poor-quality game. The online harassment became so severe that, despite the creator's newfound wealth, he decided to take the game offline (Kushner, 2014).

By most objective measures, *Flappy Bird* was not an exceptional game. Its visual style was clearly derivative of the *Super Mario Brothers* series, and it was similar to dozens of other titles. It was very simple without much purpose beyond beating friends' high scores and posting them online. However, this was more than enough to provide adequate entertainment for the intended users. The developer himself said that he wanted to create a simple game that would be fun for busy people on the move – players riding the bus to work, for example (Kushner, 2014).

*Flappy Bird* did not have a story, it did not have voice acting, and, because of frequent advertisements, the gameplay experience was often interrupted. Regardless, it was still valued by many users. For the intended user-base, features such as a detailed and lengthy narrative or innovative and complex gameplay were neither required nor wanted. *Flappy Bird's* quality was in its simplicity.

The *Flappy Bird* example is in no way unusual. Many successful F2P games have almost no narrative, and their designs are simple when compared to traditional gaming titles. Also, the gameplay of F2P products is often derivative. *Candy Crush Saga*, one of the most famous F2P games, is what is called a 'match-3 puzzle game'. Dozens – if not hundreds – of titles with almost identical gameplay are available.

Successful F2P games, while they have lower production values overall, still have tight, clean, and intuitive interfaces. The graphical fidelity of F2P games may not be as high as traditional games, but smart and aesthetic presentations are critical to F2P

products, because accessibility and positive first-impressions are necessary to entertain the users. Many F2P consumers may not even be concerned with impressive graphics.

Beyond the gameplay itself, many F2P games feature female protagonists in some form. F2P games that do not promote gender stereotypes seem to be of higher value to the F2P market (as evidenced by the large amount of women playing F2P games as opposed to traditional games).

Admittedly, not all F2P games could rightly be described as having “simple” gameplay experiences. Some F2P titles have more complicated gameplay than the illustrative examples given. However, because they deliver on the other value metrics, they are still of value to many F2P users.

For the F2P consumer, even the most minimal game can provide entertainment value through the gameplay experience. Readily understandable gameplay is a virtue, if not a necessity, for F2P games to be entertaining. Value is found not in exclusivity or innovation, but in accessibility and pleasure. F2P consumers appreciate regularly updated content and care more about having a consistent and fun gameplay experience than an original one.

### **Part C: T<sub>F</sub> = Time Freedom**

Time Freedom (T<sub>F</sub>) refers to a player's control over both the timing and length of gaming sessions. Sources indicate that games that allow users to play for short segments of time throughout their day or at their leisure will be more valuable to the core F2P consumer.

By the very nature of the games themselves, we can observe that timeliness of gameplay – being able to jump in, play for short bursts of time, and then stop without consequence – is valuable to the consumer. Recall that those games that are designed to be simple and that allow this behavior are often more successful in the F2P market and are also more entertaining for the users. Expressed in Graph 4, the UMaine student survey found that F2P consumers are not looking to actively pursue F2P games, but rather they view F2P games as a fun diversion to be enjoyed throughout the day (Appendix C).

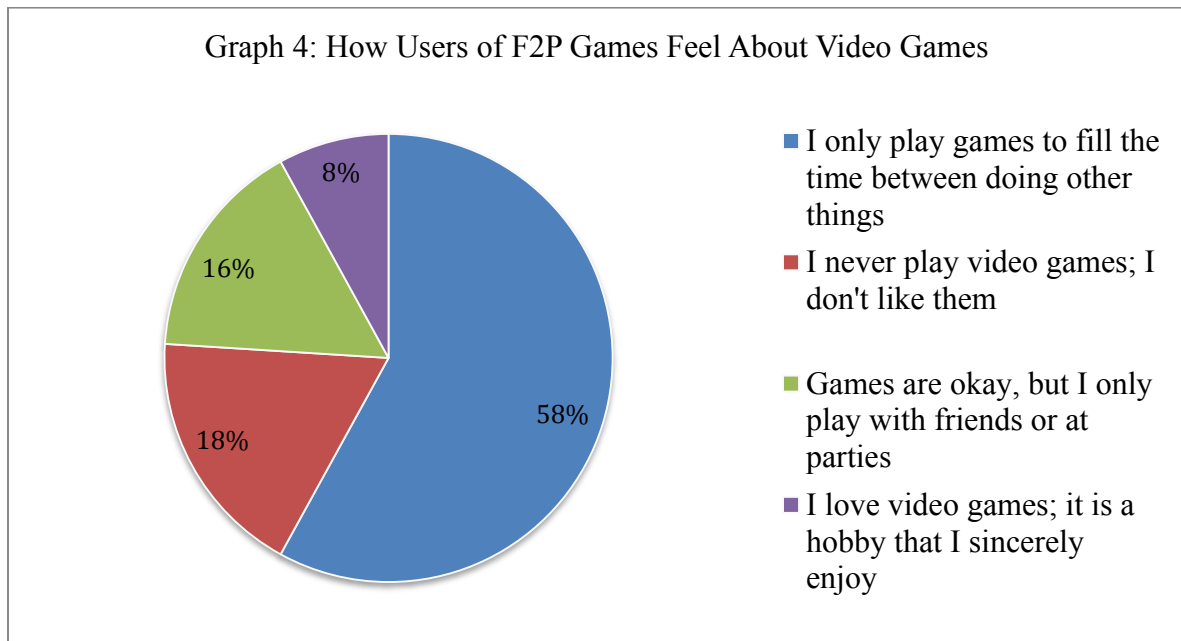
It is not surprising that some of the most popular F2P titles are those that require minimal time commitment on the part of the player. Consider immensely popular titles like *Cookie Jam* or *Candy Crush*, each of which can be played in very short bursts of time, perhaps even under one minute, and both of which have millions of regular monthly users. For a busy, working parent waiting to pick their child up from school, or for a corporate officer commuting back and forth to work, video games like this are perfect. Such games work around consumers' time constraints and are convenient to use.

Many busy people do not have the time or patience to play traditional video games. *Fallout 4*, one of 2015's biggest traditional video game releases, is estimated to take over 100 hours to finish all available features (How Long To Beat – *Fallout 4*, 2016).



This is too much of a commitment for the core F2P consumer.  $T_F$  is especially relevant to adult women, many of whom feel that they have to balance work life with family life:

“For time-compressed women, many of whom are balancing two jobs – one outside the home and one inside the home as primary caregiver – mobile gaming allows participation on an individual’s own schedule, independent of cords, consoles, and long-term time commitments. In many cases, two or three minutes is all it takes for players to get in a quick round and feel satisfied...the takeaway for marketers is this: regardless of industry, we’re all competing for people’s limited time and attention. And even though just about everyone says they have no time for anything, there are in fact ‘hidden’ pockets of time throughout the day that represent exciting business opportunities. In the case of the gaming industry, the ability to play anywhere, at any time, for a few minutes at a time, has made the notoriously time-intensive pastime more accessible, scalable and convenient” (Brennan, 2015).



By percentage, how do F2P users from the UM Community feel about video games in general

F2P users can now experience video game entertainment on their own time, rather than setting aside time specifically for gaming. This value-factor works hand-in-hand with the gameplay factor, as those games that are quick and easy to pick up and play are naturally less time-demanding.  $T_F$  also coincides with the value provided by mobility, and will be discussed in more depth in a later section.

Keeping player retention high is a primary objective for F2P developers. In his article for Gamasutra, Pascal Luban writes that getting players to “play a little at a time, but return for a long time” is critical to the long-term success of a F2P product (Luban, 2011). F2P titles succeed at retaining players when they allow the user to ‘close loops’ (accomplish goals) relatively quickly, but continue to provide new goals and objectives for the player to complete soon after. Therefore, F2P game-players are not necessarily putting less total time into F2P games than traditional games, but the length of time spent playing in single sessions is shorter than with traditional games.

A sub-genre of F2P called “clicker games” illustrates this point. Within clicker games, players have to accumulate resources in order to purchase in-game upgrades. The player acquires resources by clicking on a button which gathers the resource. As resources are collected, upgrades can be purchased to automate the process and make resource gathering faster. New upgrades eventually become available, which require increasingly higher amounts of resources. This process goes on indefinitely. Monetization occurs through the real-money purchase of super upgrades. Super upgrades allow players to acquire resources much faster (Davis, 2013). In practice, once automation of the gameplay occurs, the player does not need to actively engage with the game. Players can simply check their progress at their leisure. Such a gaming experience provides users with a lot of freedom and therefore a lot of value.

Clicker games present an endless cycle of micro-objectives to the player, and the game can be played in sessions lasting from just a few seconds up to several hours. Steam, one of the most significant digital distributors of video games, lists *Clicker Heroes* as having over 30,000 daily players (as of November 30, 2015). A similar title,

*AdVenture Capitalist*, had over 15,000 daily players on the same date, and this is not counting the players that may be accessing these titles through alternative platforms or portals (Steam and game stats, 2016).

Because the industry has become saturated and many games provide substitute experiences, market saturation helps players to save time. Many skills are transferable between games, and this lessens the time it takes to teach the user how to play a ‘new’ title. This time-savings adds value to the playing experience and enhances the  $T_F$  factor.

This could make it beneficial for developing firms to copy features from past popular games. Players may be drawn to those experiences most familiar to them, because games that are similar to past experiences are easier to learn and therefore take less time to enjoy. Making a game that is comparable to popular titles may therefore increase its chances of being played.

Many F2P games are designed to be played for short periods of time, over many repeated play sessions. For people who are busy with careers or family, or for those who lack the interest or prerequisite skills necessary to play traditional video games, F2P video games provide value through their convenience and accessibility. However, not all F2P titles are as time efficient as the titles that have been discussed. Many can actually be time consuming, and such titles will be discussed in a later section.

## **Part D: M = Mobility**

As previously stated, it is becoming more and more common for an individual's first computing device to be a smartphone or some other mobile device. This has opened up a huge market for video games (Gaudiosi, 2015). The most popular games available on these devices are F2P. Adult females, who make up one of the largest demographics of the growing F2P consumer-segment, prefer to play on mobile devices over most dedicated consoles (Business Wire, 2013; Androich, 2012). This makes mobile a natural home for F2P.

In the UMaine survey, about a third of all respondents claimed that they played games predominantly on mobile devices. Of the UMaine respondents who play predominantly F2P games, over half play on mobile devices (see Appendix C). While the UMaine survey only provides limited evidence for the value of mobility, there are many other sources that support mobility as being a value-added feature to F2P consumers. For example, the survey conducted by Play-Span found that respondents who were most likely to favor F2P games (typically women) were also more likely to prefer mobile devices as their gaming platform of choice (Business Wire, 2013).

However, mobility is not limited to the device itself (though that certainly is part of the mobility value variable). Three separate mobility factors give value to the F2P consumer:

### **Mobility 1: Mobility of Device**

First, there is what has already been mentioned: the device itself. Smartphones, tablets, and laptops are much more portable than dedicated gaming consoles, home entertainment systems, and desktop computers. This allows mobile users to effectively take video

games with them wherever they go. This helps maximize the value of T<sub>F</sub>. Being able to play video games during those short moments of free time throughout the day is only beneficial if the video game itself can be accessed. Being able to take the game with you is therefore crucial to actually playing it. This idea was mentioned in an article by The Kernel, an online magazine that writes about technology issues:

“Among the most important of those qualities is playability on the go. In traditional gaming, you might dedicate an hour, or several hours, to playing through a level or at least a sizeable chunk of the game to feel like you’ve accomplished something. Mobile gaming, designed to be played in short, satisfying sessions, better meshes with a busy schedule, especially as yesterday’s gamers grow up into today’s parents and career-minded adults.” (Scimeca, 2015)

A large potential market for F2P games is people who enjoy video games but have become too busy to afford to spend a lot of time pursuing this hobby. Mobile combined with F2P allows these consumers to still enjoy video games. In the same Kernel Article, Florian Schwarzer, producer at Paradox Interactive, suggests that:

“We can view the gaming audience not by the types of games but by how much time people have to play games. Even with limited time, there are players who want to enjoy titles that have the sensibilities of what we traditionally have called hardcore games. We’re increasingly seeing developers who are making mobile games targeted specifically at this ‘casual, hardcore audience.’” (Scimeca, 2015)

F2P games feature online updates and digital distribution. This means that a player can acquire the game through their device without going to a store, as long as they have an internet connection. Consumers can download the game from the luxury of their home, at work, or on the train. Purchases made within the game follow the same idea: users make the purchase directly through their device, no matter where they are physically. This means that with F2P not only is the gaming device itself frequently portable, but so is the acquisition and shopping experience as well.

## Mobility 2: Mobility Between Devices

Second, there is mobility across and between devices. Many F2P games can be played through a wide variety of platforms, and the same game is often available on tablets, smartphones, PC's, and sometimes even consoles. F2P products are frequently available across operating systems as well as devices. That is, they work equally well on Apple or Windows machines. This accessibility means that the F2P consumer can access their favorite game regardless of where they are or what device they have with them.

F2P video games also allow players to keep persistent online accounts, so that progress and scores are not lost by switching between devices. This is similar to a Gmail account that allows users to access their personal email inbox and schedule from a variety of devices, without losing any data.

This accessibility contrasts with traditional games, where the playing experience and game progress is often isolated to a single device or console. In an interview with Fortune, Peter Warman of video game research firm Newzoon, stated that:

“Smartphones and tablets have given gamers two new screens to play games on in addition to their TV and PC screen. Because U.S. consumers use all four screens, mobile gaming does not replace console or PC gaming. Moreover, it gives gamers the possibility to play games anywhere at any time, pushing overall time spent on games in the U.S. up 40% in only two years” (Gaudiosi, 2015).

F2P does not require any additional cash outflows to purchase a new console, because the device necessary to operate a F2P title is already owned by the common consumer. This means that F2P games provide many options for potential new players, because the games are available on a wide variety of devices. Moreover, the playing experience is secure and consistent, regardless of which device is eventually chosen.

Because F2P consumers do not want to spend money on video games, being able to play video games without needing to acquire additional devices is a value-added feature.

### Mobility 3: Mobility of Choice

Third, because the games are free, the player can be “mobile” across the titles themselves. Consumers are not bound by cost or psychological constraints into playing a limited number of different titles, because so many of the games available to choose from are free. If the player does not like one game, they are welcome to move to another.

This third mobility factor, while valuable to the consumer, can pose some issues to game creators. Data gathered from analytics firm, Delta DNA, suggests that half of all F2P users never return to a game after playing it only once (Spina, n.d.). While this presents a challenge for the developer, it does show that it is common practice for the F2P consumer to jump between titles until they find one they like, or to keep changing games so as to continually have ‘new’ experiences.

## **Part E: S = Social Connectivity**

Social interaction is a key motivational factor for why people play video games. Research done by Chung-Ang University of Seoul, Korea, found that socialization and self-presentation (a subset of social activity) are primary motivations for playing social network games<sup>10</sup> (Lee, Lee, & Choi, 2012). A study conducted by Nick Yee of Stanford University presents much of the same results: socializing is a major reason for why people play online games (Yee, 2006). Like sports, many feel that video games are best enjoyed with other people. If socializing with other people is a motivation for playing F2P games, then titles that provide social features should be more valuable.

While it is possible to play F2P games individually (for example, one could choose to never post their scores or interact with other players), most of these titles have social connectivity designed into the gameplay itself – whether the user realizes it or not. Social connectivity is obvious in MOBA's<sup>11</sup> and MMORPG's<sup>12</sup>. These are genres where the gameplay experience directly relies on there being other players. Video games like this cannot sustain themselves if there are not enough people playing them.

Socializing is a key part of casual F2P titles as well. Even when players are not meant to directly compete against one another, casual F2P games allow players to post their high scores to Facebook and other social media outlets, challenging their friends and getting other people involved. *Candy Crush Saga* is an example of a F2P game that is connected through social media. Multiple F2P games are delivered directly through social media platforms, such as Zynga's *Texas Hold'em Poker* or *Farmville*. Users of these

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<sup>10</sup> This would be games such as *Farmville* or *Mafia Wars*. Social games are almost always F2P.

<sup>11</sup> MOBA is short for "Multiplayer-Online-Battle-Arena". *League of Legends* is an example of a MOBA

<sup>12</sup> MMORPG is short for "Massive-Multiplayer-Online-Role-Playing-Game"



titles (and many others) access and play them via Facebook. This allows players to easily connect with friends, who may or may not even be playing.

The F2P business model only succeeds if the player base can grow to be very large, so that the small portion of players who pay grows in proportion to the total. Because of this, some have described the social aspect of F2P as being a design necessity, as well as a value-added feature.

“In the context of a game like Farmville the social connections play multiple roles. You mention they help build community and that is absolutely true, but the primary purpose when those sort of mechanics started finding their way into games was to increase the *virality* [emphasis added] of the product. Which is to say, to help bring more people into the game. Community building is usually more focused on retention rather than acquisition, and asking your friend for a life or to help water your crops or whatever can help retain an existing player but it can also get someone [to] monetize [who] hasn't played before [or] to log in to fulfill your request...generally speaking I think all games benefit from that sort of thing. *Free to play just sort of uses it more by necessity* [emphasis added]. Skyrim players have already paid the price of admission to get that gaming experience. There will be fewer of them but they've all paid to be there. With the free to play model, that won't be the case. So anything you can do to get more people in there so that some might pay becomes super important.” (N. Parkinson, email correspondence, November 2015)

As the free-players make up a majority of the user base, they are the ones creating the in-game community. Any game that is competitive, cooperative, or involves any interaction with other players whatsoever requires an active user base. Without other people to play with, the game loses value, even for those willing to spend. Therefore, even the “free riders” in F2P games are valuable, because of the community they provide:

“Free riders refer to those who use the service without directly contributing to the firm's revenue. Nonetheless, they are a significant source of value due to network effects...an optimal number of un-accessorized players exist, maximizing the firm's revenues. Un-accessorized players help form the base of network effects, but having too many of them tends to erode profitability” (Wu, et al, 2013).

F2P video games with in-game stores become both more profitable and more popular when there is a large and active community. As more people join the in-game community, there is more incentive to socialize and ‘show off’ purchased items. Therefore, having many users can be valuable for both players and developers (Wu, et al, 2013). Such network effects make monetization more likely, and make the gaming experience more enjoyable.

The rise of F2P games coincides not only with the rise of mobile, but also with the growth of social media. Online communities allow developers to link thousands of players together into a single gaming experience. Social interaction and feedback within and between gaming communities and social platforms allow players to ignore games that do not interest them and get to the ones that do. Consumers can easily find out which titles are most popular or find recommendations. The S-variable therefore relates to the  $T_F$  and M variables, as communication makes deciding what to play next faster, simpler, and more convenient:

“The rise of social media also might have far-reaching implications. Social media in general and micro-blogging in particular seemingly could reduce the effectiveness of a buzz-release approach. Social media (e.g., through *Twitter*) enable consumers to share quality-related information immediately after or even during their consumption experience with a large, global group of followers and friends, which lessens the information asymmetry between producers and consumers that is an inherent element of the buzz-release approach...same games, such as *The Ville* by *Zynga*, have become integral to popular social networks...these games help consumers keep up with their friends online by playing together or communicating about the games” (Marchand & Hennig-Thurau, 2013).

One can find evidence for the value of social connectivity directly on social media websites by looking at the online communities of certain video games. Shown in Table 7, in December of 2015, F2P games were much more active on social media than traditional

games, as measured by “Facebook Likes” and Facebook activity. This implies that F2P players are more involved in online communities and/or that F2P games have a stronger social media presence.

Table 7: Facebook Likes of F2P v. P2P Titles	
Free-to-Play Titles	Pay-to-Play Titles
<ul style="list-style-type: none"> <li>• Candy Crush Sage: 75 million</li> <li>• Texas Hold’Em: 67 million</li> <li>• Farmville: 35 million</li> <li>• Clash of Clans: 17 million</li> </ul>	<ul style="list-style-type: none"> <li>• Call of Duty (entire series): 24 million</li> <li>• Grand Theft Auto V: 8 million</li> <li>• Mario Kart (entire series): 1.8 million</li> <li>• Skyrim: 1 million</li> </ul>

Approximate number of Facebook 'Likes' for high-profile video games as of 12/3/2015

Social features within games give players opportunities to create value for themselves. Interacting with others allows gameplay to become personal and more important to the user through the development of meaningful relationships:

“Gamers can be, and often are, geographically dispersed all over the world. An important aspect within the industry is therefore the platform that is used for communication and interaction between those involved. The communities – via web forums and fan sites on for example Facebook – serve as the agora of the contemporary video game industry, allowing for interaction among users, and between users and developers. Communities are in general typical meritocracies; networkers who invest the most resources (time, effort, skills and knowledge) have the most influence within the specific community. Members become influential by being skillful in helping other users within the community, or by helping the developing firm with suggestions as regards game improvements” (Gidhagen, et al, 2011).

For the UMaine Survey, while over 30% of respondents who were predominantly F2P users claimed to use social features in some regard, many more claimed not to care about social features. This is likely a result of the flaws of the survey itself. The overwhelming majority of secondary sources indicate that F2P consumers are in favor of socializing at least to some degree.

There is substantial support for the idea that F2P users care about socializing through video games. If F2P consumers are motivated to play video games because of social pursuits, then in-game social features should add value to the consumer experience.

Larger and more active gaming communities provide incentives for players to return to the game and make the playing experience more rewarding. F2P video games with a strong social-media presence help make it easier to connect to other players and improve convenience of use, which in-turn impacts value through the  $T_F$  and M value factors.

## **Part F: C<sub>B</sub> = Additional Costs**

While F2P products are by their nature free to acquire, most still feature an in-game store with purchasable ‘items’. Evidence indicates that different in-game pricing mechanisms can lead to different value for the customer. Although very few players will actually spend money within F2P games, the purchasable items that are available can impact the enjoyment of all players, paying or otherwise.

Research published in *Games & Culture* states that in-game purchases that inherently change the gaming experience may break players’ perceptions of independence and/or immersion within the game world. Players are especially aggravated when they perceive available in-game purchases as unfair. Purchasable items that upset the balance of the game and give the purchasing player an advantage over those who are unable or unwilling to spend can ruin the overall gaming experience for all (Lin & Sun, 2011). These feelings are often shared by game developers as well as the players. Creators of noteworthy titles (including *Planetside* and *Mech Warrior*) commented on the fact that F2P games need to ensure that available in-game purchases do not upset the gameplay balance and degrade the playing experience in order to remain valuable to the customer (David & Miller, 2013).

The F2P audience may be forgiving of unfair pricing in certain circumstances, as long as the game continues to provide value in other ways. Hugely successful F2P titles like *Farmville*, *Mafia Wars*, or *Candy Crush* are known for allowing players to spend money on things that either boost performance or make the game more convenient – a pricing mechanism ridiculed by the traditional gaming community as “pay-to-win” (Madigan, 2015). While hardcore gaming critics bemoan this kind of pricing model, the

primary audience for these titles does not seem to particularly mind. Many pay-to-win titles are quite popular, and so the practice remains relatively common.

It appears that the impact of in-game pricing on consumer value is relative to the game. In social and/or casual titles, where “pay-to-win” is more prevalent, fair competition is probably not as important. Social/casual games are not intensively competitive, so the behavior of other players is not likely to be a major issue.

For F2P games that are skill-based or competitive, however, unfair pricing practices could ruin the consumer’s perception of value. Competitive F2P titles like *League of Legends* are regularly updated to ensure that gameplay remains fair and balanced, even for free players. In many hardcore F2P games, the only content that requires real money purchases is cosmetic in nature. If the in-game store were to be perceived as being unfair, users could easily move to another title, because of the low-to-nonexistent switching costs.

There may be other negative impacts from in-game purchases beyond upsetting gameplay balance. If too many features are locked behind price-walls, then the video game may begin to look a lot less “free”. Many F2P consumers are not interested in spending money on video games. Therefore, having more free content available to them creates more value. By association, if players feel like they are being forced or pressured to spend money, then they will probably find the in-game store to be annoying, reducing the perception of value.

In-game pricing for F2P games should be deliberate and cautious. Improper, excessive, or unfair pricing could worsen the gameplay experience and take enjoyment away from customers. This would make a product less valuable overall.

## **Part G: $T_C = \text{Time Commitment}$**

The consumers of F2P games are looking for gameplay experiences that are accessible and quick. As a result, games that require substantial time and effort will be perceived as less valuable, and more costly. Time may not be a direct monetary cost, but it does represent an opportunity cost. This cost is denoted by Time Commitment ( $T_C$ ).

It is worth relating this particular cost in terms of the entire function. Video games that require substantial time to play will naturally be more inconvenient to use than those titles that do not. F2P titles that have high  $T_C$  lessen the potential value provided by  $T_F$  and  $M$ . If the user must actively play a game for a significant amount of time, it thereby follows that it is more difficult to play the video game while on the move. Games with high  $T_C$  levels are also harder to fit within an existing schedule. Since part of the value of F2P games is their convenience, anything that takes away from this will reduce value.

That said, while F2P games with high time commitment provide less value through  $T_F$  and  $M$ , they can still bestow benefits through other means. Typically, video games that require more time to play also have more complex gameplay experiences. Some players may find this to be more entertaining and/or rewarding<sup>13</sup>. F2P games that demand more time often feature more social interactions. MOBA's and MMORPG's are common examples of this. For these games, the value lost from declining time freedom and foregone mobility may be earned back through enhanced  $G$  and  $S$  values.

*League of Legends*, one of the most successful F2P games of its type, boasted that it had 27 million daily players as of 2014 (Tassi, 2014). *League* is a game where matches

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<sup>13</sup> This is assuming that the player has the ability to enjoy these kinds of titles. Many F2P users do not identify as gamers, and so the potential value that "involved" gameplay could provide seems to apply to only a minor subset of the overall market for F2P games. Evidence indicates that, for the majority of F2P consumers, such complexities and skill-requirements would be a deterrent to enjoyment.

can take between 45-60 minutes, and it requires a significant time investment in order to become skilled enough to compete. There are many other hardcore-F2P titles that require similar time commitments.

While hardcore-F2P video games require a lot of time investment to either experience the title or become adequately skilled, almost all of them are still based on relatively short closed-loop intervals. In MOBA's, gameplay is divided into individual matches, while in MMORPG's the player seeks to complete singular and specific quests and adventures. While more complex, this still resembles typical F2P game design.

There may be psychological reasons that keep even the most time-demanding F2P title more time efficient than traditional games. If someone has spent money on a game, they are going to feel obligated to play it. Otherwise they may feel buyer's remorse at having wasted money on a purchase they did not enjoy. Conversely, because they were not required to purchase the game, F2P consumers only need to continue playing if they enjoy doing so, without risk of wasting money.

This does not change the fact that time-demanding F2P games require an accommodating schedule. This may be enough to make hardcore F2P titles less valuable than alternative F2P products that provide ample time freedom. It is possible that only a minority of F2P consumers would pursue games with a high  $T_C$  factor. It is also possible that those games with a high  $T_C$  factor are appealing to a separate and unique consumer segment within the overall market for F2P games. The primary consumer-segment for F2P products does not seem to be interested in such games, however, because  $T_C$  can detract heavily from  $T_F$  and  $M$ .



## **Part H: Summarizing and Applying the Value Function**

Based on observable market trends, user demographics, and professional insight, it can be argued that F2P video game consumers perceive value as a result of the gameplay experience, time freedom, mobility, and social connectivity. Excessive or unbalanced in-game costs or large time commitments may offset these values.

The value factors interrelate. A game that provides more time freedom is easier to play on the go, making a less time-demanding game also more mobile. Video games that are available across multiple platforms will reach more consumers and build a larger user base. Those titles that require less skill to play will be more attractive for first-time users and are more likely to get people interested in coming back to play again. This adds to the strength of the community and also builds the user base.

Alternatively, F2P games can be very time consuming, not very mobile, and only moderately social, but if the gameplay is perceived to be of exceptionally high value and the in-game pricing to be fair, then it can still be a very popular game. In such cases, the value provided by  $G$  outweighs the costs of  $T_C$  and loss of  $T_F$  and  $M$ . This scenario is most often observed in the more intensive F2P games. However, these titles appear to be serving a minority of F2P users who are actually capable and willing to play such games.

It is worth reiterating that this proposed function is based on qualitative study, and it is not statistically or empirically verified. There is ample evidence to support the model from both primary and secondary sources, but much of the information has come from news reports, professional periodicals, developer commentary, and existing surveys. This means that, while the evidence for the function is relevant and reliable, it is also limited and untested. The UMaine survey has its own significant limitations, some of which have

been mentioned already. For these reasons, though the proposed value function may provide a new and insightful conceptual framework, it should not be taken as absolute fact.

## **2-3: IMPROVING & EXTENDING THE VALUE FUNCTION**

### **Part A: Function Improvements & Opportunities for Future Research**

Empirical limitations to the value function could be addressed by future researchers and/or developing firms who wish to further refine the function. A researcher could, for example, determine the importance of each value characteristic among a sample of F2P users. In so doing, trends may become apparent that would help improve and refine the model. It may be found that alternative variables are also valuable to the user, or that F2P products may serve multiple consumer segments.

It may be beneficial to more clearly determine the value differences between hardcore F2P titles and casual/social ones. Those who predominantly play hardcore F2P games may fall in between the traditional gaming market and the primary F2P market. Additional information could also reveal that video game consumers can occupy multiple markets at once, thereby having multiple value sets.

Available information on the video game industry is often limited or restricted. Many video game products are owned by private companies, so much of the data pertaining to them is difficult, if not impossible, to acquire. In gathering evidence for this thesis, multiple game development firms were contacted. The firms that were contacted ranged in size from large corporations to independent studios. With the exception of Mr. Parkinson, all of the firms either failed to respond or declined to comment.

Some of the more famous titles, such as *Candy Crush* or *League of Legends*, have publically released their own information, or have had their data unearthed by research and data-mining firms. However, this is not the case the majority of the time. This is why only a few select titles are discussed throughout this thesis. The games that have been

discussed are generally the most popular and have the most information available.

Fortunately, this also tends to mean that such titles provide the best examples, because they represent industry standards and best practices.

While not publicly available, sales data and player-statistics can be purchased from data-mining and statistical analysis firms. Unfortunately, this data can be quite expensive to acquire. While some records are available for free, they are limited in scope compared to what is available for purchase. The full purchased reports from these companies could be very useful for future research. Firms such as Statista, Delta DNA, or Super Data may be of particular help.

The survey administered through the UMaine First Class portal has many limitations. The sample size (approximately 260) was small compared to mass-market surveys, and respondents were likely to be predominantly UMaine college students between the ages of 18-25. Considering how diverse the market for F2P games is in terms of gender, age, income, and background, this sample is not representative of the overall market for F2P video games, or video games in general. This survey can only serve as a basic tool for getting an impression of peoples' gaming preferences. However, results of the survey did on many occasions support claims by secondary sources.

Finally, because information on this industry is difficult to acquire, assumptions had to be compiled from multiple sources to reach any sort of conclusion about the value function. Conclusions were informed by multiple sources, but rarely did one source directly relate to the value function. Aggregation of multiple sources of information was necessary to develop the final value function.

## **Part B: Extending the Value Function to Other Industries**

There are opportunities for future research to see if the value function might be applicable outside the video-game industry. Some companies have already attempted to adopt a free-pricing model within other entertainment services. For example, Spotify, a firm that offers a free music streaming service supported by ad-revenues with the option to purchase an ad-free premium account, is set up very similarly to how older F2P titles functioned. Users must listen to ads or pay for the convenience of their removal (Spotify Explained, 2013).

It will be interesting to see if Spotify can sustain this practice going forward. Within video games, ads were largely replaced by in-game purchases, but it is hard to see how this could occur within Spotify's existing business model. Radio, television, and other similar mediums are still supported by advertisements, so it is possible that Spotify's consumers are more willing to accept advertisements than are consumers of video games (a medium historically free of advertisements). Perhaps Spotify could adopt a delivery system whereby music is streamed for free, but Spotify offers the chance for users to purchase discounted tickets to live performances, rare merchandise, exclusive singles or remixed songs, and other benefits.

Hulu is another company that uses a near-F2P business model, but with television. Certain shows and films are available for free online streaming, but entire catalogs of shows can be viewed only with a premium, paid account (Crawford, 2009). Hulu is starting to diversify this model by offering exclusive television programming that cannot be found via outside sources or via the free version. This gives users an incentive to spend (Hulu, 2016).

What is more exciting is the potential for the F2P business model to be applied outside of the entertainment industry, where its application may be less obvious. Consider the following hypothetical examples:

- A food-truck could offer one free meal at select locations. Users would have to need to have an account with the food-truck company, and they could get that one specific meal once a day. In return, registered users would receive advertisements from firms with which the food-truck has contracted. Alternative food items would cost an additional fee.
- Transportation services could allow passengers to ride for free, but amenities would be sparse. For example, a transportation rail might be standing-room only, but additional ‘tiers’ could be purchased to get improved space and comfort. A similar practice is already in use within airplanes, but the lowest available option can still be costly. Transportation hubs could theoretically make up the lost revenue from free users by providing a wide array of “premium” paid options and services, such as an extensive in-flight movie catalog, full-course meals, etc.

These ideas fit within the proposed value function, but it remains to be seen whether they would be feasible in reality. Video games have relatively few fixed costs – expenses such as equipment and machinery – to cover. A company with high fixed costs might not be able to cover their expenses using a F2P business model. Future research could explore industries where the F2P model might be applicable outside of entertainment.

## CONCLUSION

The video game industry has seen massive growth over the past decade, and it is well on its way to becoming the most dominant form of entertainment in the world. This marks a change from video games being a niche interest. It also means that the industry has become, and must continue to become, more inclusive, catering to the desires and personalities of a broader market. We have already seen this start to be the case with games designed to appeal to women. By incorporating new values into game design, the industry as a whole should grow and become more successful, and the games themselves should improve. After a certain point, the only way to become better is to innovate, and in video games that means bringing in new ideas and new players.

Traditional video games largely follow a typical product-creation cycle, where a ‘long’ development time is followed by product launch. Monetization is achieved through an initial fee required to use the product. The market for traditional games remains largely male-centric, and is motivated primarily by immersion/escapism and competition. Popular pay-to-play video games frequently feature mature content and are highly skill-based and time consuming.

Free-to-play (F2P) games, however, are a relatively new phenomenon. Companies using a F2P model follow a unique product-development cycle, and they target consumers that have been historically ignored by the gaming industry. Under the F2P model, games are offered without cost, and developing firms hope to become profitable either through ad revenue or through in-game purchases. Games are developed over time and are largely unfinished at launch. The F2P business model is based on the assumption

that, out of a very large pool of users, a minority will subsidize the majority and sustain the game.

Consumers of F2P titles have different demographic traits than do consumers of traditional paid games, and these consumers are responsible for the recent growth and success of the gaming industry. However, relatively little has been written about these consumers, and so we are left with the following questions: who are the core-consumers of F2P video games, and what kind of value are they looking for? This is important to know, because these consumers are driving recent video game sales and growth.

F2P game players are more likely to be female than are traditional game players. They are likely to have families or to be pursuing career goals. F2P users are looking for gameplay experiences that are social, instantly enjoyable, and more convenient than what is offered through traditional gaming products. F2P games are generally less violent or mature in their content than are traditional games.

This thesis argues that the value placed on video games by F2P consumers is a function of gameplay, time freedom, the mobility of the gaming experience, and social interactions. This value can be degraded if a F2P game requires large time commitments, or if it features an unfair or frustrating in-game store.

F2P represents an opportunity for video games to reach millions of people who would never consider themselves “gamers”. The F2P consumer-segment values video games that are, above all, convenient and fun, and the variables defined in the Value Function describe how video games can achieve this. By providing value through the G, T<sub>F</sub>, M, and S factors, video games have become far more inclusive. This has helped video games become one of the dominant forms of entertainment in the modern era.



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APPENDIX A – IRB APPROVAL FORM  
APPLICATION FOR APPROVAL OF RESEARCH WITH HUMAN SUBJECTS  
Protection of Human Subjects Review Board, 114 Alumni Hall, 581-1498

PRINCIPAL INVESTIGATOR: Connor M. Smart  
EMAIL: connor\_848@hotmail.com TELEPHONE: (207) 290 - 1960  
CO-INVESTIGATOR(S): N/A  
FACULTY SPONSOR (Required if PI is a student): Matthew Skaves  
TITLE OF PROJECT: Survey to Evaluate Demographics of Video Game Users  
START DATE: 1/12/16 ~~December 10th, 2015~~ PI DEPARTMENT: Business Student  
MAILING ADDRESS: 96 Jefferson Street, Old Town ME, 04468  
FUNDING AGENCY (if any): N/A  
STATUS OF PI:  
FACULTY/STAFF/GRADUATE/UNDERGRADUATE Undergraduate Student

1. If PI is a student, is this research to be performed:
- |                                     |  |                          |                        |
|-------------------------------------|--|--------------------------|------------------------|
| <input checked="" type="checkbox"/> | for an honors thesis/senior thesis/capstone? | <input type="checkbox"/> | for a master's thesis? |
| <input type="checkbox"/>            | for a doctoral dissertation?                 | <input type="checkbox"/> | for a course project?  |
| <input type="checkbox"/>            | other (specify)                              |                          |                        |
2. Does this application modify a previously approved project? N (Y/N). If yes, please give assigned number (if known) of previously approved project:
3. Is an expedited review requested? Y (Y/N).

Submitting the application indicates the principal investigator's agreement to abide by the responsibilities outlined in [Section I.E. of the Policies and Procedures for the Protection of Human Subjects](#).

Faculty Sponsors are responsible for oversight of research conducted by their students. The Faculty Sponsor ensures that he/she has read the application and that the conduct of such research will be in accordance with the University of Maine's Policies and Procedures for the Protection of Human Subjects of Research. **REMINDER:** if the principal investigator is an undergraduate student, the Faculty Sponsor **MUST** submit the application to the IRB.

\*\*\*\*\*  
**FOR IRB USE ONLY** Application # 2015-11-23 Date received 11/23/15 & Review (F/E): E  
12/10/15

Expedited Category:  
ACTION TAKEN:

X	Judged Exempt; category 2 on 12/22/15	Modifications required? Y	Accepted (date)
	01/12/2016		
<input type="checkbox"/>	Approved as submitted. Date of next review: by	Degree of Risk:	
<input type="checkbox"/>	Approved pending modifications. Date of next review: by	Degree of Risk:	
	Modifications accepted (date):		
<input type="checkbox"/>	Not approved (see attached statement)		
<input type="checkbox"/>	Judged not research with human subjects		

FINAL APPROVAL TO BEGIN	01/12/2016
	Date
	08/2015

## APPENDIX B – EMAIL CORRESPONDENCE WITH NICK PARKINSON

Email #1:

Hi Connor,

These are great, thoughtful questions. So for most of them, there are really two answers. One for mobile and social games and another for more complicated games like MMOs or MOBAs. While most of the concepts and ideas behind the F2P model are the same across both, often times the strategies are a bit different. So, unless otherwise stated assume I am referencing mobile/social in my answers as that is where the majority of the F2P revenue is generated (and will continue to be for the foreseeable future), so I assume that will be more relevant to your work. If I'm wrong, please feel free to let me know and I'll be happy to elaborate on other areas as well.

*1.) In the Free-to-Play (F2P) market, many of the games follow similar genre conventions. For example, many mobile games are match-three, brick-bursting, or infinite runner type games; all of which are quite popular. On computers, MMO's and MOBA's are also plentiful. How does a company design a game to stand above the competition, when there are so many games that appear similar from a casual perspective?*

Great question. Video gaming isn't really any different than any other area of business in this regard. If someone achieves a measure of success doing something new and innovative, there are almost assuredly going to quickly be a host of similar products trying to get a piece of the action. You see that same behavior everywhere outside of gaming as well.

You see it other forms entertainment (vampires), you see it in restaurants (Chipotle knockoffs), you see it in web/tech (at one point everyone was rushing out to be the next MySpace). It is everywhere. It also isn't a bad thing. Does it dilute the market a bit? Sure. But it also creates competition and ultimately leads better products.

Getting back to games specifically, not every new title has to be revolutionary. If you're working within an established genre, often the aim is to be more evolutionary. To put it a bit less formally, a common saying popularized years ago at one of the larger social gaming companies is to "+1" your competition. You take what is considered the genre standard and you add a little something on top of it to make it your own. Eventually, a lot of those "+1"s themselves will become genre standards. Take a couple cycles of the genre building upon itself like that and Point B is going to look a lot different than where you started at Point A, even if the core concepts of game play are the same. The games will usually be better for it as well.

It also isn't a new concept in gaming. When I was a kid growing up Dungeons & Dragons was my favorite game. For a while in the 80s, it was really popular. You saw a ton of other table top games spring up trying to get in on it too. Some added twists and ended up

doing well (Palladium, White Wolf and other publishers carved out good niches) and some didn't. Later on in the 90s when everyone had moved onto video games, it was side scrolling beat 'em ups. Golden Axe, Streets of Rage, Final Fight, etc. If you look through release date timelines on those games you can see features being introduced in one and then finding their way into every game of the next generation. It has always been like that.

Obviously the games themselves are different, but the idea is the same. The difference now is barrier to entry. It is a lot easier to get a game out than it used to be. Developers can get downloadable games on consoles, they can publish to Steam on the PC and the mobile app stores and Facebook are even easier still. So what you end up with is a lot more games to choose from... sort of.

Because now while the barrier to entry has been greatly lowered, the barrier to success is much higher -- which gets to the core of your question. How do you stand out when there are so many others to choose from? I already outlined part of it. You improve upon the genre standard. But then what? Everyone else is "+1ing" it too. The key then becomes user acquisition. Most games that are published to the app store, you're never going to see or hear about because they're buried somewhere outside of the top 100.

A game like Candy Crush, or Clash of Clans or our own Cookie Jam isn't just released into the app store and left to grow on its own devices. While there is a good deal of organic growth that does happen, if you want to hit the top of the charts (and stand out) you need to be smart about the way you acquire players... and it isn't cheap either. If you want players to see your game, you need to be towards the top of the charts. If you want to be at the top of the charts, you need to invest in getting there.

So if you want to stand out:

- 1 - make a killer game
- 2 - invest in growing it

If you can nail both of those points, you've got a decent shot -- but much easier said than done!

In terms of how you acquire those users, strategies on that are usually guarded pretty closely within companies, but I'd recommend doing some research on companies like Appia, Adquant and Ad-X (there are lots more too). They won't give the actual spending strategies but they'll give a lot of insight into *how* those spent dollars are put to work. To summarize them though, targeted marketing and intensive analytics.

I'm happy to go into more specifics on this stuff (where I can) if any of that isn't clear.

- 2.) *What is the product life-span of a F2P game? Since there are no hard copies to sell, how long can you expect the game to remain profitable, and how can you measure how the game is doing? How long do you anticipate a typical F2P game*

*to remain active, and what can be done from the company's standpoint to prolong that activity?*

I'll tackle the second question first, as that has the simplest answer. How can you measure how well a game is doing? Other things have an impact, but ultimately revenue is king. The three main categories that F2P games watch closely though are revenue, DAU (daily active users, how many people are playing the game per day) and retention (how many people who have played continue to play). Most updates and improvements to games are designed to improve at least one of those metrics. Good scores in all three are a mark of success.

As for life spans, there are a lot of different types of F2P games out there, and the life spans can vary wildly even within the same genre. As a general rule of thumb, an F2P MMO is probably going to stay active longer than an F2P social/mobile game. The more time a player invests into a game, the less likely they are to just up and leave it and MMOs require a lot of time. If you were to look at the average lifespan of a moderately successful game across each genre, MMOs probably have the longest -- assuming they don't bankrupt their developer first (more on that in a bit).

So for MMOs, going F2P is often exactly *how* you prolong the lifespan. Lowering the barrier to entry gets a lot more people willing to try it out and even if they don't all stick around... some will. As long as you keep getting people into that funnel and are able to maintain a core player base, you'll probably be able to at least keep the game running. That is why everyone is doing it.

The real trick with MMOs is actually launching a good game in the first place. They are notoriously expensive to make and require years of effort from specialized developers to make happen. Years ago, I worked on an MMO called *Vanguard: Saga of Heroes*. It took nearly 100 people almost five years to launch that game. It cost multiple tens of millions of dollars to make. And it bombed. For my money, large scale MMOs are a terrible investment.

Especially in the western market, there is only one *World of Warcraft*. So as far as mitigating risk and increasing the longevity of the game goes, I think the key factor there is scope. Giant virtual worlds supporting thousands of players are unwieldy to make. Providing a smaller scale experience that focuses on one element of core game play is a better approach. MOBAs seem to be doing this pretty well. Smaller scale, smaller development costs and smaller risk. Those types of games don't *have* to be active as long to turn a profit and be considered a success.

Social/mobile games shrink it down even more. So there's really not set standard for the lifespan. I'm going to narrow the focus of this response though down to social/mobile and go into a little bit more of the specifics.

The lifespan of a game isn't entirely in the developers hands, but they can do a lot to either shorten it or lengthen it. If you want to keep people around, get them interacting

with each other. Finding ways to increase how social a game is will do wonders for keeping your player base engaged and present. The trick is to do it in a non-intrusive way (nobody likes cancelling out a thousand random game invites when they log into Facebook).

The in game economy is also extremely important. I'd highly recommend checking out [this fantastic blog post](#), especially the portion on flash sales. It may sound small, but the impact is huge.

Finally, you've got to keep it fresh. If someone is playing a match three puzzle game and they run out of levels to play, well, there isn't much else to do. So you need to make sure you strike the right balance of keeping your end game power users happy (because as you'll see in the next question, they are super important) without at the same time burning them out. Finding the right update cadence is extremely important.

*3.) What is the sustainability of a F2P game? In your experience, once a game is finished and launched, what percentage of players actually contribute to revenues, and don't just play for free? How do you determine which games warrant more attention (i.e., are more "sustainable" into the future), and should be kept "alive", and which games should just be left as is?*

First, I should make an important distinction. "Finishing" a game and "launching" a game are two completely separate things. In this age of games as a service, no game is truly ever "finished" until it is abandoned by its developers. An F2P game that launches and is then left untouched is not long for this world. Launching is really just the first step.

Generally speaking, for most F2P mobile/social games the vast majority of the revenue comes from a pretty small portion of the players. Most people *do* play for free. I think the fact that such a large amount of revenue comes from so few players is one of the reasons (among many others) that the IPOs of high profile companies like Zynga and King weren't as successful as many had hoped they would be.

The metric called ARPDAU (average revenue per daily active user) is what is used to measure how much money each player is bringing in per day. You're usually measuring this stat in pennies, nickels and dimes. It isn't a high number. But when you have millions and millions of players per day, you don't necessarily need it to be.

Anyway, to get back on topic when you're getting ready to launch a F2P mobile/social game you are generally going into it with some metric goals already set. For instance, you can say that your goal for ARPDAU is \$0.20 (a very aggressive number). It may be higher on iOS (fewer users but they spend more) and lower on Android (more users who spend less) but that is the average you're going for across platforms. So great, you've got goals.

Next, build the game. Fast forward to when you're ready to "launch" -- you do. Only you don't really launch. You'll start with what is called a "soft launch". This is when you pick

a smaller market to launch in first to test how your game will perform. Maybe you only launch it in Canada, or Australia or the Philippines first. Then you can get real numbers on how the game can be expected to do before you show it to the entire world. If you're not hitting the numbers you want to, you make adjustments to the game until you are. If players aren't spending enough adjust your prices or add new things for them to buy. If they aren't playing enough, find some kind of mechanic that gets them coming back every day and so on. Then you can do a worldwide launch.

If you don't hit your goals, then you can either decide to launch it anyway or just scrap the project and move on. But either way, you'll have a good idea if the game is worth continuing to invest in before you even truly launch it.

*4.) Some of the most profitable and popular games in the world are F2P games, and the vast majority of gamers are people playing free games on their mobile devices and computers. If such a trend continues, do you see a future for the more traditional video game model? – that is, a long-term development cycle that ends with a physical (or digital) product, that has a fairly high cost of entry. Can the AAA Blockbuster titles survive with so many F2P games available?*

I absolutely see a future for the traditional video game model, a very bright one. F2P games and big AAA traditional games often provide very differing experiences. I heard a comparison once that I liked, even if I didn't completely agree with it. Someone told me that free to play and pay to play games were like fast food versus fine dining. They're both food, and one isn't inherently better than the other, they're just different experiences and fulfill different demands. It is a very simplified look, but I like the general idea behind what it is saying.

As long as there are gamers who desire those AAA experiences, there will be developers there making games for them. Now, that isn't to say each "side" can't influence the other in same way or another, but I don't think either is going to ever actually go away.

I love both types of games, but I'll give you an example of what I mean by different experiences. I'm currently playing a lot of the wonderful F2P Bethesda game *Fallout Shelter*. I enjoy it. But I mainly play it when I have a few minutes to kill. I'm not going to sit down and play it for hours on end... and Bethesda isn't expecting me to either. I'm just looking for a quick, fun escape.

Now, when Bethesda's next big game, *Fallout 4* comes out this November, I'm going to lose a lot of sleep playing that one. I'll get deep into the story, get lost in the world for hours and really get immersed into the game. And that last part is key. What appeals to so many people about larger AAA games is just that, the immersion. Part of that, I think, for a lot of people is the lack of micro transactions. I don't dislike micro transactions, but I also don't want them surfaced to me when I'm deep into the story of something. I'd rather just pay up front and continue playing without restrictions, especially if it is a game providing me that many hours of entertainment.

Earlier I mentioned that I do see F2P continuing to influence aspects of AAA titles though. Look at a game like *Mass Effect 3*. Fantastic AAA title. Huge hit. The main game campaign was strictly pay to play but then in the multi-player mode they introduced a lot of F2P elements (even though you still had to pay for the base game). That is a trend I see continuing (and it definitely has since then).

I think where it'll get really interesting is the smaller to mid-sized indie games that are going to be faced with the choice of which way to go. I think it'll even out, but that's where you're going to see a lot of the more original experiments in how to get more with less.

*5.) I've read that F2P games mark a transition for video games from a product to a service; where it is not so much about finishing something, but rather about continually updating one, and trying to keep players around and interested for as long as possible. What are your thoughts on this? Do you agree or disagree with this idea? If you agree, then how does this change of thought impact the goals and operations of a business?*

I absolutely agree with this. I think I covered a lot of my answer here in question no. 3 but there are few things I can add as to how it changes the operations of the business.

I mentioned before that launching is really only the beginning and that means where in the past you might have launched a game and then the team moves on to something else, now a team launches a game and still continues to work on it. They've got to keep making it better, keep updating it and keep providing more content for their players. It sounds simple, but that represents a pretty big change from the older, traditional method of developing games. Knowing how to manage a live game is in many ways a much different skill set than creating and launching one.

A major part of managing a live game that I've yet to talk about is experimentation. This seems like a good opportunity to go a little into that. Some companies called it A/B testing, others call it running experiments but it amounts to the same thing. When you have an idea for a new addition to make to the game, when it is already live you're putting a lot at risk when you make even the smallest of changes. If you do something that backfires or that players don't like, you could cause serious harm to your game.

Likewise, even if you add something players love, you may not be getting as much out of it as you potentially could. What if that \$5 item you added for sale would get just as many purchases at \$10? Or \$20?

Dilemmas like these are what has led to the rise of experimentation. Basically, what that entails is that instead of adding something to the game for everyone, you build a new addition and then release it only for a small, usually randomly selected portion of the players. Then you let them interact with it for a while, measure how successful it is by whatever criteria you put forth and then you can decide to enable it for all of the players, to continue to make changes or to scrap the idea all together.



An example of this would be, let's say I want to add a feature to my game designed to encourage players to log back in at least once per day. The feature would give them some kind of in game bonus (whether it is a power up or an extra live or anything else) for each consecutive day that they logged in.

I could run an experiment with a subset of players where I could try out all sorts of different combinations of bonuses and different frequencies in which they'd be awarded. Some people may get extra lives every day. Some people may get coins every day. Some people may get coins one day and lives the next. Or different amounts of coins or lives. I could then measure the success of each different variant on that experiment and choose the one that performed the best to then enable for everyone.

Just about every free to play game you can play these days has some element of that kind of experimentation going on, and for good reason. It takes a lot of the guess work out of development and goes a long way towards reducing risk.

*6.) Video games are becoming the most profitable entertainment industry in the world with the largest pool of customers. Do you feel that F2P games have had a role in that change? If so, what kind of responsibility does that put on the F2P gaming companies as more people become active gamers?*

I think F2P games have definitely had a lot to do with it. The model has brought gaming to the mass market and given it mainstream awareness. I think it is the quality of the games (across all different types and genres) that is keeping people around though. There are a lot of developers out there, both in F2P and P2P, doing amazing work.

As for what kind of responsibility game developers have, that is an interesting question. My personal opinion is that I think it is up to each person to control how they interact with the world. Just about anything can be abused when presented with someone who is determined enough. However, I do think being purposefully predatory is wrong. Presenting someone with a straight forward option of making a purchase is fine. It is up to each person to decide how to spend their money. Tricking someone or misleading them with the intent of getting them to make a purchase is most definitely *not* fine. I do feel a responsibility to draw the line there.

Not everyone is savvy enough to know when they are getting ripped off and the developers who engage in that sort of deceptive behavior only make it tougher for the majority of the developers out there who are just trying to make fun, profitable games.

The good games out there will put more effort into educating their audiences who may be newer to the gaming world, so that they can make informed decisions.

*7.) What are some of the basic challenges inherent to developing a F2P game, or perhaps just video games in general? When you look at the current video game market, where do you see room for improvement, or areas where things could be*

*done differently? Where do you see the future of the gaming industry headed? Likewise, what do you see that impresses you as an industry insider about video games, or makes you proud of the work you've done?*

I think the biggest challenge to developing F2P games is really the core of my answer to your first question -- how do you stand out? There are a lot of great games out there, and many of them nobody has ever heard of. It is a tough one.

As a professional developer:

For mobile gaming, I think tablets are going to be the future. I'm continually amazed at the quality of games that I can get to run on my iPad. Games that not too many years ago would have taxed even the best gaming PCs are now for sale in the iOS app store. We've got a ways to go yet, but there will come a day when the difference between what you can do with a tablet and what you can do on a PC is negligible (and the same with phones, to an extent). You're going to see a lot of cross platform interaction too, I think.

VR is still in its infancy and while I think things like the Oculus Rift are neat, we're still several generations away from a truly mass market product there. That said, I'm excited that we're taking the first steps towards it and twenty years from now I can't wait to see where we've wound up.

As a gamer myself:

To me, games are the ultimate storytelling medium. Don't get me wrong, I love movies. I love books. But games are the only experience that is two way and interactive. I think you can do so much more that way and as the games themselves continue to get deeper and more complex you can tell much richer stories. I'm a total RPG geek and the feeling I get from finishing a game like *Dragon Age: Inquisition*, or *The Witcher* is even more satisfying than when I finish up my favorite series of books because I didn't just read about a group of characters, I *was* a character. That's huge.

Being able to reach players like that is really limited to PC and console gaming right now (with a few exceptions) but as tablets and phones are able to do more and more I think you're going to start seeing those deeper experiences get more into the mainstream and more legitimized as a real form of art. Games are often looked down upon as works of art right now, which is a shame, because there are some real masterpieces out there. That attitude is starting to change, and I'm looking forward to it continuing to do so.

As for what impresses me? A polished experience. Whether it is a AAA console/PC game, or a match-three in the app store. If you provide a finely tuned, sharp, bug free player experience with compelling visuals... I'm impressed. It is a lot easier said than done.

Finally, when I look back at the work I've done that makes me proud I like that in some small way, I've helped influence the direction of genres of games and even of gaming itself. You go back to the whole concept of "+1s" and then seeing things that are gaming standards now that I helped originally introduce is incredibly rewarding.

That and things like seeing the person ahead of me in line at the grocery store playing my game and enjoying it. Hard to beat that!

Email #2:

Hey there Connor,

Happy to help out! Another good set of questions. My answers are in line below. Let me know if I can clarify/expand on anything!

Thanks,

-Nick

“Dear Nick,

I wanted to thank you again for your help a couple months ago. Your comments and answers to my questions regarding the Free-to-Play video game industry certainly helped to provide a strong foundation to base my initial research on. I was hoping that you might be willing to answer a few new questions regarding the industry? I know that you are incredibly busy, and if you do not have time I completely understand. I appreciate any help you can give me, and I am grateful for the assistance you've already shown me.

Now that I've done some initial research, I've refined and narrowed my topic a bit more. Previously, I had intended to only write about the sustainability of a F2P model. However, much has been written about this already in some regard or another, and it appears obvious based on the success of many F2P titles that it is, in fact, a sustainable practice if approached correctly.

However, understanding this has helped me to shift my focus. Thus, my new argument is as follows: The evolution and adoption of a F2P Pricing Model has changed how companies create and offer value to their customers, and these changes have caused a shift in the market for video games. As a result, F2P games have essentially paved the road for a new market of gamers who find value in games in different ways than traditional games would allow. I predict that the value this new audience perceives in games is based on a function of mobility, time, and socialization, with the quality of game play being a constant carried forward from the traditional model. Of course, outside of the questions, if you have any thoughts on this argument (agreements or dissents), I would love to hear them.

Based on this idea, I had some questions that I was hoping you would be able to answer. As someone who does this for a living, your opinions and insights are very valuable and helpful. Naturally, feel free to answer any or none of these questions to any degree that you feel comfortable or have time for. Naturally, a lot of these questions could probably be answered with, "it depends on the player". That being said, any insight at all is incredibly valuable.

*(1.) Why do you think people play F2P games? Do you think it is for the same reasons as traditional games - that is, high scores, competition, great stories and so on? Or do you think there are other motivations at work? Do you think games (especially free games) now encourage people to play for alternative reasons as they've become more accessible and easy to acquire? In other words, with the world so full of games on most every device, what are the main reasons you can think of for why people want to play them?*

I think the answer here is a pretty straight forward one. F2P games have a lower barrier to entry in that there is no initial monetary investment. So there is much less of a risk in picking up a new game. Of course, the flip side is that it also means players won't stick around as long as they might if they plopped \$60 dollars down on a game. If it doesn't draw them in pretty quickly, they're off to the next low entry barrier option.

*(2.) Because these games are free, the player has no cost commitment to play - they can leave at any time they choose. Likewise, the majority of F2P games are offered on devices that are mobile in some way or another, be they phones or tablets, or even laptops, which are more portable than a home console system. Do you think that the mobility of these games - that is, the ability of the gamer to not only switch between games easily but take the games with them - is something inherent to F2P games, or are the two concepts mutually exclusive? To be successful, does F2P have to be "mobile" on some level, or do you not think of this as a major factor?*

I think mass market mobile games are best served being free to play for the reasons outlined in question number one, but I think that there's no reason free to play HAS to be mobile. If you look at all the MMOs and MOBAs out there that are free to play and thriving (maybe moreso MOBAs) it proves as much. I think free to play is a major factor in the success of mobile games, but the same reasons why it works for mobile can allow it to work for console and PC gaming as well.

As an side, I also think there's a completely valid market for paid mobile games. It certainly is more of a niche audience, but with a market that large that still includes plenty of folks. Tablets today are roughly equivalent to a console a couple generations back. We're seeing plenty of older PC games get re-released on iPad now (particularly older RPGs) and I think there's no reason that trend (and new dev games) can't continue. It is just about keeping expectations appropriate and development costs reasonable.

*(3.) Many F2P games tie-in to social media and build large communities around the game, even if its just something like posting your high score to Facebook or Twitter. However, more traditional "hardcore" games don't really have this, at least not in the same depth. For example, games like The Elder Scrolls or Super Mario Brothers are huge, great games, but are largely individual experiences (outside of forums and the such). However, something like Farmville is constantly connecting thousands of people who are playing. Do you feel that F2P games need to have this socialization aspect to it? How important is community building and connection to the F2P experience, both in developing a game and from the player perspective? There seems to be a big push in the*

*industry now to constantly build social media, community, and socialization into games. Do you feel like this trend is here to stay, and how responsible do you think F2P is for it?*

In the context of a game like Farmville the social connections play multiple roles. You mention they help build community and that is absolutely true, but the primary purpose when those sort of mechanics started finding their way into games was to increase the virality of the product. Which is to say, to help bring more people into the game. Community building is usually more focused on retention rather than acquisition, and asking your friend for a life or to help water your crops or whatever can help retain an existing player but it can also get someone who monetize hasn't played before to log in to fulfill your request.

To answer the question though, generally speaking I think all games benefit from that sort of thing. Free to play just sort of use it more by necessity. Skyrim players have already paid the price of admission to get that gaming experience. There will be fewer of them but they've all paid to be there. With the free to play model, that won't be the case. So anything you can do to get more people in there so that some might pay becomes super important.

*(4.) Because these games require no cost to play, there are virtually not barriers to entry other than skill and time commitment. How long do you feel you have to "hook" a player before they jump to a new game, considering this lack of entry costs and plethora of other free titles available? How much time do you expect people to spend playing these games? Do you anticipate the players to be putting in long hours at a single time into F2P titles, or just quick rounds now and then (for example, as they're waiting in line or between classes) that aggregate to lots of time?*

That depends completely on the type of game. Free to play encompasses many different genres of games across every gaming platform. For a simple match three puzzle game on your mobile device, the average play session can usually be measured in single digit minutes. For an MMO, it is much longer. So there is a lot of variation there. Generally speaking though, you've got between one and three play sessions. That may be on the same day, or it may spread out over a week but if players are back to play for a fourth time you've generally "got" them.

*(5.) While it appears that the majority of F2P games are designed to be friendly, welcoming, and immediately fun, there are other titles which stand out as being exceedingly more complicated and geared more towards the "Hardcore Gamer". These are titles like League of Legends, DOTA 2, or Lord of the Rings Online; games that, while free, require a lot of skill and time. Do you feel that titles such as these, while still F2P, deal with the same kind of challenges and problems that the more casual games face? What kind of value do you think players find in these F2P games vs. the quicker, pick-up-and-play F2P titles?*

They do face a lot of the same challenges, but maybe to differing extents. The big difference would be cost of development. A game like Candy Crush Saga is a lot "easier"

(in terms of man hours) to make than a game like League of Legends, or any of the free MMOs (like Wildstar, or SWTOR). On the flip side, they also tend to monetize better (meaning the users that do pay, generally pay more per person). To speak specifically to your question though, players picking up a new "hard core" game are usually a little more willing to invest a little more time in their new game than someone who just spent a minute downloading a game from the app store. That said, this is true for players who are more or less familiar with the game already. If you're looking to expand to casual browsers you start to run into the same problems as the mobile games.

It is a balancing act, but generally speaking I think one of the few things all game devs can agree on is that the faster you get a player into the game and playing, the better.

*(6.) I've read some data reports that state that adult females make up the largest demographic of paying video game players, and are also one of the fastest growing segments of the market. Do you think this is a natural evolution of the industry, or do you think F2P is responsible for this. In other words, if games were not so easily accessible and easy to get (i.e., free and available on most devices), would the market have evolved in the way it has, or would these new people be drawn to games regardless? How do the games themselves need to adjust in order to better provide value for this new market segment, or can value be provided in essentially the same way as before?*

This is a big question. There are a lot of sociological aspects at work here. This could be a paper all in of itself. My answer can really only scratch the surface on what is a large, complex issue. However, I think that both possible causes you mention are correct. Historically, gaming has been a male dominated industry... both in creation and consumption. As the industry matures, it is only natural that game makers are going to start to realize that they're missing out on a giant portion of their potential market. Now, the types of games that males and females tend to play are a little different. There are a lot of reasons for this and a lot of debate about those reasons but the end result is the same - guys and girls generally like different stuff. So is it a coincidence that the rise of the mobile free to play games coincides directly with the rise of the female gamer as a target demographic? Probably not. If you want to bring in new players, a super low barrier to entry is the way to do it.

## APPENDIX C – SURVEY QUESTIONNAIRE

Which of the following best describes how often you play any sort of video game? Games can include titles on mobile devices such as *Candy Crush* or *Clash of Clans*, or titles such as *Call of Duty* or *Skyrim*.

1. I usually play games at least a little bit every day
2. I usually play games at least once or twice a week
3. I might play a game every few weeks or so
4. I never or almost never play video games

When you think of the video games that you play, which of the following devices do you most often use to play video games?

1. Mobile phone and/or tablet device
2. Dedicated video game console (Xbox, Play Station, etc.)
3. PC and/or Mac computer
4. Dedicated video game handheld device (Nintendo 3DS, PS Vita, etc.)
5. I never or almost never play any sort of video game

Which of the following best describes your behavior and attitude in regards to video games?

1. I love games. Playing video games is a hobby that I sincerely enjoy
2. Games are okay, but I only really play with friends or at parties
3. I only play games to fill time between doing other things, like when I'm waiting in line or between classes. Otherwise, I don't really care about video games or play them
4. I never or practically never play video games, and I don't really like them

Think of a video game that you really want to play and own. How much would you be willing to spend to own and play that game?

1. \$40 – \$60
2. \$20 – \$40
3. \$0 – \$20
4. I'll usually only play a video game if it is free
5. I wouldn't choose to play a video game, even if it were free

Which of the following best describes how you feel about socializing with people within video games?

1. I actively enjoy talking and interacting with others players, meeting new people from within the game, and trying to beat other peoples' high scores
2. I enjoy playing games with other people, but only people I know personally and who I've met in "real life"
3. I'll play games with other people and maybe read comment boards, forums, or leader boards, but I don't directly interact with other players or talk with them
4. I only play video games by myself, but I will try to beat other players' high scores or post my own
5. I only play video games by myself. I never or almost never play video games with other people, and I don't care about what other people are playing
6. I never or almost never play video games. I wouldn't want to talk about them, or play them with other people.

With which gender title do you personally identify?

1. Male
2. Female
3. Other
4. Unsure

#### TABLED RESULTS OF SURVEY

Socialization Preference Sorted by Willingness to Spend				
Amount Willing to Spend on Video Games:	<u>\$40-\$60</u>	<u>\$20-\$40</u>	<u>\$0-\$20</u>	<u>Free</u>
Total Respondents	58	72	36	73
I enjoy playing with and meeting new people online	29%	10%	3%	5%
I play with people, but only those I know in real life	38	50	36	11
I'll play games online; I won't interact with others	17	10	11	5
I play games by myself; I'll post high-scores	5	11	14	11
I only play alone; I don't care to play with others	5	14	31	42
I never play video games	5	6	6	25



Responses to all questions, all respondents, by percentage	
Q1: How often do you play video games?	
A least a little bit every day	36
At least once or twice a week	24
I might play a game every few weeks or so	14
I never play video games	26
Q2: Which of the following devices do you most often use to play video games?	
Mobile phone and/or tablet device	30
Dedicated video game console	33
PC and/or Mac Computer	16
Dedicated video game handheld	3
I never play video games	18
Q3: Which of the following describes your behavior and attitude towards video games?	
I love games; it is a hobby I sincerely enjoy	37
Games are okay; I only play with friends	19
I only play games to fill the time between doing other things	27
I never play video games; I don't really like them	16
Q4: How much would be willing to spend to own and play a video game?	
\$40 - \$60	22
\$20 - \$40	27
\$0 - \$20	14
I'll only play video games if they're free	28
I wouldn't play a video game, even if it were free	9
Q5: How do you feel about socializing with other players within video games?	
I actively enjoy talking and interacting with other players	11
I enjoy playing games, but only with people I know personally	30
I'll play games with people, but I won't directly interact	9
I only play games alone, but I'll try to beat others' high scores	9
I only play games by myself, and I don't care about others	21
I never or almost never play video games	19
Q6: With which gender title do you personally identify?	
Male	47
Female	52
Other	0
Unsure	1

Responses to Questions, Sorted by Gender Identity, by Percentage		
	Male	Female
Q1: Which of the following describes how often you play any sort of video game?		
A little bit everyday	46	26
Once or twice a week	25	23
Every few weeks or so	14	15
Never or almost never	15	36
Q2: Which of the following devices do you most often use to play video games?		
Mobile phone and/or tablet	18	39
Dedicated game console	51	16
PC and/or Mac Computer	18	15
Dedicated gaming handheld	2	4
Never or almost never play	10	26
Q3: Which of the following describes your behavior and attitude towards video games?		
I love video games	48	28
Video games are okay	23	16
I only play them to fill time	20	34
I never play video games	9	22
Q4: How much would you be willing to spend to own and play a video game?		
\$40 - \$60	38	7
\$20 - \$40	28	27
\$0 - \$20	13	15
I'll only play if it is free	17	37
I never play games	4	15
Q5: How do you feel about socializing with others within video games?		
I enjoy talking and meeting new people	13	10
I only play with people I know in "real life"	42	21
I'll play games with others but I don't directly interact	13	6
I'll try to beat high scores	6	12
I only play games by myself	14	26
I never play video games	13	26

Responses from participants who selected “4 – I’ll usually only play a video game if it’s free” to question #4 for all questions, by percentage	
Q1: How often do you play video games?	
A least a little bit every day	33
At least once or twice a week	18
I might play a game every few weeks or so	14
I never play video games	36
Q2: Which of the following devices do you most often use to play video games?	
Mobile phone and/or tablet device	64
Dedicated video game console	5
PC and/or Mac Computer	7
Dedicated video game handheld	1
I never play video games	22
Q3: Which of the following describes your behavior and attitude towards video games?	
I love games; it is a hobby I sincerely enjoy	8
Games are okay; I only play with friends	16
I only play games to fill the time between doing other things	58
I never play video games; I don’t really like them	18
Q5: How do you feel about socializing with other players within video games?	
I actively enjoy talking and interacting with other players	5
I enjoy playing games, but only with people I know personally	11
I’ll play games with people, but I won’t directly interact	5
I only play games alone, but I’ll try to beat others’ high scores	11
I only play games by myself, and I don’t care about others	42
I never or almost never play video games	25
Q6: With which gender title do you personally identify?	
Male	29
Female	68
Other	0
Unsure	3

## AUTHOR'S BIOGRAPHY

Connor Smart was born in October of 1993 to his two loving parents Margaret and Jeffrey Smart. He grew up in Lincoln, Maine, where he attended and graduated from Mattanawcook Academy at the top of his class. Connor began his enrollment at the University of Maine in the Fall of 2012, where he eventually decided on pursuing a degree in business administration with a double-major in accounting and finance. At the University of Maine Connor participated in Black Bears Men's Chorus and the Institute of Management Accountants. He has also worked as a student ambassador and as a tutor for the Maine Business School.

Connor plans to obtain his CPA license and pursue a career in public accounting after graduation. He hopes to live in Portland Maine, and he continues to be an enthusiast of accounting and financial practices, jazz music, healthy living, and video games.