

Facebook Games: A Content Analysis of Users' Comments

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Despite tendencies towards repetitive game action and simple 2-D graphics, social games have brought online gaming to an unprecedented mass audience. Social games are typically accessed through social networking sites and are the predominant form of gaming both in the U.S. and U.K.. In 2010, 83% of social games were played within the Facebook environment, (Ingram, 2010) and as of March 2011, approximately 260 million users played Facebook games produced by the company Zynga (Pham, 2011). According to a study by Inside Network, an organization conducting market research about Facebook and social gaming (“Inside Network - Providing news and market research to the Facebook platform and social gaming ecosystem,” n.d.), 28% of players of FarmVille use the game at least once a day and 62% play multiple times a day, and while only 10% of social gamers generally spend money to buy virtual goods, this same 10% spends 10 to 20 times more than the other players combined (MacMillan, 2010).

Compare this to home consoles systems: the Wii system sold over 34 million as of January 2011(Wauters, 2011) while Xbox sold 50 million(Aldrighetti, 2011). Even hugely popular virtual worlds for children like Club Penguin and WebKinz, which have created their own subculture for pre-pubescent play, do not offer numbers comparable to social games. As of 2009, Club Penguin had almost 15 million users while WebKinz had almost 40 million (Meyers,

2009).

Other online platforms have not achieved anywhere near this level of popularity. Only a little more than 12 million play World of Warcraft (Nagata, 2010), while Second Life has “only” 23 million residents, with just 1.3 million having logged in within the last 60 days (Second Life, 2011). If graphically rich and complicated spaces like World of Warcraft and Second Life are limited to a niche audience, does the future of online gaming lie in the retro graphics and repetitive clicking of Zynga’s industry-dominant gaming empire?

In March 2011, Zynga had 7 of the 8 most popular games on Facebook (Osborne, 2011); CityVille alone had over 94 million users. Most of these games involved some sort of simulation-like gameplay (CityVille, FarmVille, FrontierVille, Café World, Mafia Wars, etc.). However, these games offer simple game play and animation that fail to represent the cognitive effort that goes into such real activity (e.g., owning a farm, running a city). While this may seem an extreme critique, countless examples of elaborate and challenging (albeit not entirely “realistic”) game play exist throughout the history of video games.

In FarmVille users buy seeds and plant them by repeatedly clicking on square plots of land. These crops then need to be sowed with the same clicking procedure performed in a timely manner at the risk of seeing them wither. These crops are then sold for profit that can be used to buy more seeds and other farming supplies.

Many of the other games follow a similar repeating pattern; they also have elements that make them merge in both philosophy and design with social networking sites. The users have their own play space (a farm, a restaurant) just as social media users have their own page; they also can find/acquire neighbors among their Facebook friends to share duties, inventory, etc.. Also, continual action exists regardless of any individual players login status (just as the

Facebook feed always flows.) The temporal persistence of these games requires users to sign in and play, regardless of the inconvenience and time away from other online or offline responsibilities. With built-in loyalty created by the rules of the game, users find themselves spending considerable time maintaining their role in the game to prevent virtual failures. Furthermore, this real/unreal connection creates a sense of responsibility for virtual good and creatures. A player does not want to see his or her crops, fish, etc. suffer from neglect, and so is driven by a sense of duty.

Literature Review

One thinks of virtual simulations as offering some sort of sensory and kinesthetic connection to the environment. From the VR helmets seen in popular magazines in the 1990's to the science fiction representation typified by the "holodeck" on Star Trek, the success of the spaces seems to be dependent on immersion. That said, complex spaces like Second Life, which don't offer game play as its main function (although users have created games within the space) have become more of a niche environment. While its initial promise of being a ubiquitous variation on social media has not come to pass, SL still offers a significant social component for its active users, and is also used by companies for meetings and training and by colleges and universities for synchronous classes and activities for online and hybrid courses (Papp, 2010).

Offering an experience closer to the kinesthetic expectations of virtual reality, commercial products like the Wii and Xbox Kinect allow for user control based on increasingly natural motion, eliminating the need for a joystick style controller or in the case of Kinect, any controller at all. Theoretically, there seems to be a gradual move toward Jean Baudrillard's

suggestion that the gamer “is a traveler into our future of total immersion in virtuality” (Coulter, 2007, p. 362). However with social gaming, players do not have this kind of control over the action. While computer simulation can be “an experiential learning activity that allows learners to visualize situations and see the results of manipulating variables in a dynamic environment,” (Feinstein, Mann, & Corsun, 2002, p. 741) social gaming only offers a relatively inflexible and precisely controlled space.

In their defense, interactivity may be defined along different frameworks. Myers suggests that in the past, interactivity has been defined through comparison with the function of traditional one-way media (television, newspapers), and therefore any interactivity offered greater engagement. However, he promotes a shift to a text-based definition where the content of the interactivity is more important than the mere presence of interactivity. He then suggests that a semiotic reading allows for a more comprehensive understanding of interactivity (Myers, 2003). This approach allows us to consider the limited interactivity of Facebook games as still offering meaning to the user with its emphasis on the social aspects of the game. Papp suggests that the actions required by the games may influence the player; farming games suggest a Marxist theme of cooperation and sharing of goods and crops, while other games promote less desirable behaviors: Sorority Girls promote a “narcissistic culture” while Mafia Wars celebrates violence. (Papp, 2010, pp. 3-4)

Regardless of the morality of the themes, an overall preference for cooperation may be a motivator for the wider demographic of social game players. In studying the reasons why older gamers (ages 35 and up) participate with games, Quandt, Grueninger and Wimmer suggest that these players value “*social contact*, such as negotiating the game’s objectives, mutual help during the game, sharing found objects, chatting about everyday topics...” (Quandt, Grueninger,

& Wimmer, 2008, p. 43). Many of these same elements can be found by combining Facebook games with the overall Facebook environment—certainly “mutual help” and “sharing” are present in many social games. The popularity of Facebook games has also served as a gateway for women to increase play, with many of these Facebook games’ demographics being predominantly weighted toward that gender (Ennis, 2011). Although some of the games may fit stereotypical interests, Taylor suggests that women, contrary to popular assumptions, use online gaming as a way to explore violence and typically masculine pursuits, thus explaining their playing of games like Mafia Wars. Again considering the content of the games, an article in Advertising Age suggests the irony of Americans “getting...to obsess about fake food, fake business and fake real estate” in a nation already obsessed with wealth and material goods at a time of high unemployment (Dumenco, 2010).

Social games may not offer a significant level of personal connection, despite their name. Looking at LAN (local area network) events, Jansz and Martens studied the reasons behind their popularity, focusing on the efforts that gamers will make to create a social experience (packing up and moving equipment, etc.) that is both real and virtual, finding that regardless of the game itself, the social component is a strong motivator (Jansz, 2005). Likewise, the ability to explore an expansive environment and the myriad choices built into virtual worlds like World of Warcraft and Everquest offers satisfaction to users. Gee suggests that engaging with other players occurs partly to access the knowledge base that exists within and outside of the gaming environment, leading to a form of distributed knowledge (Gee, 2007). According to Gee, “affinity groups” form which encourage sharing of both “extensive” and “intensive” knowledge (comparable to looking at the breadth and depth of a particular problem) (Gee, 2007, p. 206).

However, the limited game play of social games generally does not require this level of knowledge, and so there is less of a necessity to engage with others to share information.

Social games on Facebook do create a form of distributed knowledge, but with an informational rather than a learning-based model. Users of Facebook-positioned social games can post both their progress and need/desire for assistance and communal play to Facebook friends on the newsfeed. While possibly functioning as a distraction to non-players, these notifications allow for a form of Gee's affinity groups to form, although the required action is typically based on cooperative game play rather than increasing knowledge of the game play.

In their textbook, *Studying Videogames*, McDougall and O'Brien suggest that the psychological concept of "flow" might be an important concept to use to understand engagement with all video games (McDougall and O'Brien, 2008). Csikszentmihalyi presents the conditions where flow may occur and what constitutes "the elements of enjoyment":

1. "A Challenging Activity that Requires Skill"
2. "The Merging of Action and Awareness"
3. "Clear Goals and Feedback"
4. "Concentration on the Task at Hand"
5. "The Paradox of Control"
6. "Loss of Self-Consciousness"
7. "Transformation of Time" (Csikszentmihalyi, 2008, pp. 49-67)
[numbering done for this paper]

Most of these elements correspond to the playing of video games generally. However, despite the relatively simple tasks and primitive graphics in social games, flow may also explain the satisfaction of playing social games. Beginning with the second characteristic, these games may indeed require focus and constant decision-making. Furthermore, with each decision comes a required click that leads the player to receive either immediate feedback or the fulfillment of an expectation. ("The vegetables have grown.") This required concentration leads players to have a

feeling of control (although the parameters of the games are in fact quite limiting), leading to greater focus on the game and the potential loss of a sense of time passing.

Consider now the first characteristic: “a challenging item that requires skill” is the requirement that may or may not be satisfied. Shivel suggests that stories that are created arise from the tasks performed. But what if the tasks are overly repetitive? She also suggests that regardless of the fantasy elements added, that meaningful game player comes from a resemblance to real life. (Shivel, 2010) Yet social games tend to take very real events (e.g., taking care of fish) and create artificial and sometimes mundane behaviors to complete these tasks virtually.

In order to better understand why players of social games play, and what determines whether they continue to play or lose interest, an open-ended survey was taken by 297 Facebook social game users. The following research questions were considered:

- 1) What are the motivations for people to play Facebook-style games?
- 2) What characteristics of the games keep people engaged or cause them to stop playing?

Method

A survey was created (Appendix A) to query Facebook game users with a small number of questions. Given the impossibility of creating a random sample size that would be representative of the millions of Facebook social game users, a convenience sample was used. The survey was sent out to the researcher’s Facebook friends (many of whom are academics) requesting that the survey be shared out to as many people as possible. The survey also was sent out to undergraduate and graduate students as well as all faculty at St. John Fisher College. Finally, a budget of approximately \$100 was used for Facebook advertising to broaden the

demographics of the respondents. Given the distinct timing of the ad campaign following the other methods of reaching participants, approximately half of the respondents likely chose to take the survey after seeing and clicking on the ad.

All respondents were asked if they currently or in the past have played games on Facebook. Those answering in the negative were thanked for their participation and the survey ended. For the other participants, they were asked what games they played and whether or not they still played any of them. After being divided into two groups, those still playing were asked what determined when they played and what their state of mind was when they played. Those who had stopped playing the games were given the same two questions (in the past tense) and also were asked to explain why they stopped playing entirely.

Respondents answered these open-ended questions that led to a content analysis of the answers. Two coders analyzed the answers and based on the findings, reduced the information to as few categories as possible. In this way, primary researcher bias was avoided at this early stage. After this, the categories for each question (whether or not it was phrased in the present or past tense) were compared and commonalities were found, leading to a fixed set of categories for each of the three main questions. Subsequently, the coders went through the data a second time with these established categories.

The questions concerning which games were played, as well as demographic data of the respondents, was primarily in the multiple choice format. Results are discussed immediately below, although a deeper analysis of the demographics will be addressed in a later version of this paper.

Results

369 surveys were completed between December 2010 and February 2011. 322 of those surveys were completed in their entirety.

Demographics

With regards to age (n=246) 41% were between 18-22 with a gradually decreasing percentage up to age 60, at which point it dropped off significantly (Figure 1). 74% of respondents (n=245) were female and 25% were male, with one respondent choosing “self-identify as [blank].” 46% submitted that they had completed some college (including current undergraduates), with an otherwise diverse range of educational levels. However, the results are certainly different from a normal population, as only one respondent who was over 18 lacked a high school diploma while 17% of the respondents had a doctorate (Figure 2).

Gamers

All 369 respondents answered the question of whether or not they currently play or have played Facebook games. 72 never played and were removed from the survey. Of the remaining respondents, 57% of the remaining respondents are currently playing Facebook games and 43% have quit playing.

Games played

The list of games played runs the gamut from simulations to game shows to card games. The majority are simulations created by Zynga and there is not a significant difference between the list between those who currently play and those who have quit playing (Figures 3 and 4).

The remaining questions were open ended and coded by two students at St. John Fisher. The Pearson correlation coefficient between the coders was 0.87. For the purpose of the

discussion that follows, the scores of the coders were averaged in the cases when they were not equal.

Time of Play

Both sets of respondents were asked when they play the games. The results were coded, and the percentage of users in that overall group (current players or past players) was computed. The top four reasons included playing at a specific time (after breakfast, before going to sleep); having free time; being required by the game (so as to not let crops wither, etc.); or being bored (Figures 5 and 6). The percentages are sufficiently close to each other that a significant difference cannot be found in the two groups. It is noteworthy that being required to play by the game was ranked as high as it was given that the results or the failures are ultimately ephemeral, and suggests a worthwhile phenomenon for future research.

State of Mind during Play

Respondents were asked to answer the following question: “How do you feel, what is your state of mind, what is your emotional state, or what are you thinking when you play Facebook games?” Again, answers were coded for both current and past players of the games (Figures 7 and 8). Interestingly, the top five answers partly reversed order. People who continue to play are more likely to use the games to “zone” or relax, while those that have stopped playing are more likely to have been bored or felt competitive in their play. The difference between the group who are currently playing and the group that stopped playing most likely did not occur by chance: the probability of the resulting chi-square value ($\chi^2_{(8)} = 21.458$) is 0.006, so $p < .01$ (See Figure 9 for details).

Lastly, the respondents who had stopped playing were asked why they had stopped playing (Figure 10). Only the top two answers are given, as all other answers applied to less than

4% of respondents. A significant majority report that they were simply too busy to play, followed by the assertion that the games became “boring or no longer fun.”

Discussion

While a more comprehensive discussion of specific respondent comments will be forthcoming in a longer version of this paper, we will focus on the notion of “zoning” as it is described as a mental state both for players who are currently playing and have stopped playing.

Some of the specific statements made were:

- “Typically do not think of anything while playing the game. Almost blank out.”
- “I am either zen like or excited depending on the game”
- “I am thinking about nothing that is why i’m playing a game”
- “Kind-of spaced out, relaxed, peaceful...Knowing that I’m doing something useless, mindless, and not productive in any way”

In trying to determine why people choose to play social games that are, as stated above, less complex both in terms of narrative and graphics than other casual games, we can return to Csikszentmihalyi’s concept of flow. While the term “zoning” has a negative connotation, suggesting an inappropriate disconnection from reality, the notion that it also may serve as a form of relaxation correlates with two of the requirements of flow: loss of self-consciousness and a transformation of time. It may be suggested that players who are able to “lose themselves” in play achieve a “Zen state.” If Zen is defined as “total focus,” ongoing players may be able to find that level of concentration through the repetition of play. Conversely, those who find themselves bored with the games feel that way as they are unable to lose their sense of self-consciousness, thinking that there is something else more productive, more useful, or more entertaining that could be accomplished instead. Furthermore, those respondents who stopped playing were more likely to see the game as something to succeed at or “win.” Possibly, this

perspective (reminiscent of a typical “Type A” personality) is ultimately futile given the artificiality of the games. People who keep playing ultimately tend to not be motivated by a desire to succeed, but simply play for the sake of playing.

Conclusion

Social gaming’s popularity grows as a result of the ubiquitous presence of Facebook around much of the world. These games have primarily made money through the sale of virtual goods to a small percentage of players. As different venues for distribution (and profits) emerge, these games will continue to dominate. For example, Angry Birds is a relatively recent addition to the gaming world, and focuses more on individual play and portability, being first available as a mobile app and later being made available on Facebook in May 2011. (White, 2011) While at least one comprehensive analysis of its popularity has been published (Mauro, 2011), the game also fits into the definition of “flow”: the game is unexpectedly challenging, and merges immediate “action” with “awareness;” feedback only takes a few seconds to occur, and players believe they have the ability to control and succeed in the game, despite its strict parameters. The game also requires concentration leading to a “loss of self consciousness.” Finally, there’s no doubt that many have lost track of (considerable) time playing the game.

For better or worse, this is a currently the primary model of gaming. Csikszentmihalyi developed the theory of flow to explain the satisfaction and happiness when discovers in artistic pursuits, meaningful work, and friendship. This same definition can be applied to what may be considered a more artificial and temporary means to achieve this state. Certainly those who wish to promote the social, educational and cultural benefits of more sophisticated virtual worlds may see social gaming as misguided. Nonetheless, given the current demand, social games will continue to function as an opiate of our technological future.

Tables

Figure 1: Age of respondents
(n=246)

Answer	Response	%
13-17	8	3%
18-22	100	41%
23-30	55	22%
31-40	30	12%
41-50	32	13%
51-60	16	7%
61-70	3	1%
70+	1	0%
Under 13	1	0%
Total	246	100%

Figure 2: Education level of respondents (n=241)

Answer	Response	%
Enrolled in K-12	6	2%
Over 18 but not a high school graduate	1	0%
High School graduate	11	5%
Some college	111	46%
Undergraduate degree completed	19	8%
Some graduate school	23	10%
Master's degree	24	10%
Professional degree (J.D., M.D., M.P.S., M.F.A.)	5	2%
Doctorate	41	17%
Total	241	100%

Figure 3: Games Played by Respondents who Currently Play (10 or more players) (n=162)

Answer	Response	%
FarmVille	72	44%
Bejeweled Blitz	52	32%
FrontierVille	41	25%
Cafe World	39	24%
Family Feud	34	21%
Mafia Wars	27	17%
Treasure Isle	22	14%
Farm Town	19	12%
Zoo World	14	9%
Happy Aquarium	14	9%
Texas HoldEm Poker	13	8%

Figure 4: Games Played by Respondents who No Longer Play (10 or more players) (n=126)

Answer	Response	%
FarmVille	72	57%
Bejeweled Blitz	32	25%
Mafia Wars	23	18%
Cafe World	23	18%
Family Feud	18	14%
Farm Town	16	13%
Happy Aquarium	13	10%

Figure 5: Discuss the circumstances surrounding when you choose to play Facebook games? (top 4 answers) (n=138)

Answer	Response	%
Routine at a specific time of day (year?)	35	25%
As free time, either random or purposeful	31	22%
When required to by game	20	14%
Boredom leads to playing	19	14%

Figure 6: Discuss the circumstances surrounding when you would choose to play Facebook games? (top 4 answers) (n=98)

Answer	Response	%
As free time, either random or purposeful	31	32%
Routine at a specific time of day (year?)	29	30%
When required to by game	22	22%
Boredom leads to playing	22	22%

Figure 7: How do you feel, what is your state of mind, what is your emotional state, or what are you thinking when you play Facebook games? (top 5 answers) (n=135)

Answer	Response	%
Zoning	27	20%
Relaxed of finding a way to relax	27	20%
Bored	23	17%
Competitive or needing to succeed	16	12%
Stressed or unhappy with game	12	9%

Figure 8: How did you feel, what was your state of mind, what was your emotional state, or what were you thinking when you played Facebook games? (top 5 answers) (n=97)

Answer	Response	%
Bored	20	21%
Competitive or needing to succeed	18	19%
Stressed or unhappy with game	16	16%
Relaxed of finding a way to relax	14	14%
Zoning	11	11%

Figure 9: Comparison of Figures 7 and 8 to computer chi-square and probability statistics.

Top Answers	% (still playing game)	% (no longer playing game)	X ²
Zoning	20.00%	10.82%	4.214
Energized	2.22%	2.06%	0.012
Happy	5.56%	9.28%	2.489
Bored	16.67%	20.10%	0.706
Relaxed or fining a way to relax	19.63%	13.92%	1.661
Stressed or unhappy with game	8.89%	15.98%	5.654
Competitive or needing to succeed	11.48%	18.56%	4.366
Procrastinating	5.56%	5.67%	0.002
Curious	0.74%	2.06%	2.355
Total	90.74%	98.45%	21.458

Figure 10: Why did you stop playing Facebook games?
(top 2 answers) (n=99)

Answer	Response	%
Took too much time or too busy	55	56%
Boring or no longer fun	28	28%

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Appendix A. The distributed survey with question logic included.

Facebook Gaming Survey

Q48 Do you currently play or have you ever played Facebook games (Farmville, Cafeworld, Lexulous, Mafia Wars, etc.)?

- I currently play Facebook games. (1)
- I do not currently play, but I have played in the past. (2)
- I have never played Facebook games. (3)

If I have never played Facebook... Is Selected, Then Skip To End of SurveyIf I do not currently play, bu... Is Selected, Then Skip To What games did you play?

Q59 What games do you play?

- FarmVille (1)
- Farm Town (2)
- Texas HoldEm Poker (3)
- Cafe World (4)
- Treasure Isle (5)
- Mafia Wars (6)
- Happy Aquarium (7)
- Zoo World (8)
- Bejeweled Blitz (9)
- Bejeweled Twist (10)
- NanoStar Castles (11)
- NanoStar Seige (12)
- Family Feud (13)
- Lexulous (14)
- FrontierVille (15)
- Solitaire (16)
- Terranova (17)
- Dragon Hunter (18)
- Country Story (19)
- Other games (20) _____

Q52 Discuss the circumstances surrounding when you choose to play Facebook games. (Is it a certain time a day, before or after a certain task, whenever the game requires it, etc.?)

Q53 How do you feel, what is your state of mind, what is your emotional state, or what are you thinking about when you play Facebook games? Please be as descriptive as possible.

If How do you feel or what are... Is Empty, Then Skip To What is your age? (optional) If How do you feel or what are... Is Not Empty, Then Skip To What is your age? (optional)

Q49 What games did you play?

- FarmVille (1)
- Farm Town (2)
- Texas HoldEm Poker (3)
- Cafe World (4)
- Treasure Isle (5)
- Mafia Wars (6)
- Happy Aquarium (7)
- Zoo World (8)
- Bejeweled Blitz (9)
- Bejeweled Twist (10)
- NanoStar Castles (11)
- NanoStar Seige (12)
- Family Feud (13)
- Lexulous (14)
- FrontierVille (15)
- Solitaire (16)
- Terranova (17)
- Dragon Hunter (18)
- Country Story (19)
- Other games (20) _____

Q55 Discuss the circumstances surrounding when you would choose to play Facebook games. (Was it a certain time a day, before or after a certain task, whenever the game required it, etc.?)

Q56 How did you feel, what was your state of mind, what was your emotional state, or what were you thinking about when you played Facebook games? Please be as descriptive as possible.

Q57 Why did you stop playing Facebook games?

Q25 What is your age? (optional)

- Under 13 (1)
- 13-17 (2)
- 18-22 (3)
- 23-30 (4)
- 31-40 (5)
- 41-50 (6)
- 51-60 (7)
- 61-70 (8)
- 70+ (9)

Q26 What is your sex? (optional)

- Male (1)
- Female (2)
- Self-identify as (3) _____

Q27 What is your highest education level? (optional)

- Enrolled in K-12 (1)
- Over 18 but not a high school graduate (2)
- High School graduate (3)
- Some college (4)
- Undergraduate degree completed (5)
- Some graduate school (6)
- Master's degree (7)
- Professional degree (J.D., M.D., M.P.S., M.F.A.) (8)
- Doctorate (9)