

The Communication Channels of *Farmville*

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Abstract

Studies show that video games have an enormous relevance in world societies and cultures today. In March 2010, one game alone, *Farmville*, achieved 83 million active monthly users--over one-percent of the world population. In an attempt to better understand this phenomenon, this paper studies a fundamental part of *Farmville*: its communication channels. Research shows that a large portion of new users entered the game because of friends' invites and notifications. Only three channels exist within the game to send these messages: sending presents, helping friends, and posting news to the Facebook Wall. Using the communication model proposed by Wilber Schramm, this text analyses each of these channels in detail.

Keywords: social games, social networks, communication in video games, social interaction

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1. Introduction

Johan Huizinga's seminal work *Homo Ludens*, originally published in The Netherlands in 1938, established the importance of games in human culture and society [Huizinga 1955]. In this book, Huizinga argues that games are older than culture itself (evidenced by animals, which participated in play experiences long before the appearance of man), and that culture could not have emerged without games.

In the area of social communication, Marshall McLuhan was one of the first to draw attention to games, calling them "the extensions of man" in 1964 [McLuhan 1996]. He conjectured that "games become faithful models of a culture. They incorporate both the action and the reaction of whole populations in a single dynamic image." McLuhan goes as far as to say that cultures need games to survive, that "a man or society without games in one sunk in the zombie trance of the automation" [McLuhan 1996].

The genre of game known as video games was introduced for mass consumption in the 1970s, and achieved an immense cultural importance toward the end of the century as the number of players radically increased. To give just one example, recent research shows that 97% of adolescents in the United States between 12 and 17 years of age play video games [Lenhart et al. 2008]. A number like this shows

complete ubiquidade in that age demographic, regardless of sex, race, religion, region, income, or any other factor.

This paper performs a case study of the video game *Farmville* using Wilber Schramm's model of communication from 1954 [Rüdiger 1998]. The intent is to understand the social communication which occurs inside the communication channels provided by the game, and possibly serve as a base for other studies in the area. *Farmville* was chosen because it is, at the time of writing, probably the most socially relevant video game, with tens of millions of players around the world. By studying the game's communication channels, this article hopes to understand how they facilitated the phenomenal user growth of this game in the second half of 2009 to the beginning of 2010.

2. Related Work

In recent years, a movement has been proposed to study games using the theories and techniques of social communication [Williams, 2005; Steinkuehler, 2006; Pinheiro, 2007].

An excellent example of the application of social communication techniques can be found in Rodrigues et al. [2007]. In that article, Rodrigues et al. researched the evolution of communicational tools available in video games throughout their history. This allowed them to study how these tools have affected social interaction and culture in those games.

In a case study similar to the one performed in this article, Müller [2009] applied the communication model proposed by Raymond Nixon in order to analyze the game *Maniac Mansion*. His work aided in the structuring of this study. The difference between the two articles, beyond the subject matter, is that Müller's article concentrates on the effects caused to the player by the game's narratives and other elements, whereas this study is primarily concerned with the interactions between players. Thus the difference is that Müller focuses on the unidirectional communication channels of creator to player while this article deals with the bidirectional channels between two players (however, this study also mentions the creator's desire in enabling each communication channel between players).

This article is part of a larger study being performed by the author on the social relevance of

multiplayer video games using the theories and methods of social communication.

3. Description of *Farmville*

The video game *Farmville* [Zynga 2009] consists of creating and maintaining a virtual farm (Figure 1). The player acts as a farmer within this world in the form of a customizable avatar. He fills his farm with plants, animals, and decorations. Each farm gains its own personality based on the selected elements and layout; the player chooses the location of all his objects in a personalized mixture of function and aesthetic. A farm which is highly developed or unusual when compared to others confers to its owner a certain reputation within the *Farmville* community [Liew 2009].



Figure1: A typical *Farmville* farm

Everything functions around a virtual economy of “farm coins” which the player utilizes to purchase seeds and trees to plant, animals to raise, and decorations. Every harvest of agricultural products aggregates more farm coins and experience points. With experience points, the player can achieve higher levels and unlock new items to purchase. Real money can also be used to buy farm coins or special items.

The other limit of progress, besides the virtual economy, is time. The player must return to the game at the right moment to harvest, otherwise he runs the risk of his plants wilting and dying. Because of this, the player must return to the game frequently to harvest crops with different life cycles.

Since the game was launched inside the Facebook social network, the player can interact (asynchronously) with real friends inside his social network. The player can select as “neighbors” those friends of his which have activated the game and created their own virtual farms. After adding someone as a neighbor the player can, at any moment, move his avatar to a neighboring farm to visit. In this way, the player may check his neighbors’ progress within the game, watch how they customize their farms, and participate in activities which aid them. The

accumulation of neighbors is important to the player, because the game offers prizes to players with large numbers of neighbors, and it also increases experience points and farm coins.

4. *Farmville*’s Relevance

Farmville was launched by the company Zynga within the Facebook social network in June of 2009. The game launched shortly after SlashKey’s *Farm Town*, and similarities between the two games led to some criticism of Zynga [O’Neill 2009]. However, whereas *Farm Town* was a commercial success, *Farmville* became a cultural phenomenon.

Farmville’s relevance can be easily proven in numbers. By March of 2010, only ten months after launch, the game had achieved the surprising number of 83 million monthly active users (active users being the number of users who played the game at least one time that month) [Eldon 2010]. To put this number in perspective, more than one percent of the world population played *Farmville* in March 2010. If the users of *Farmville* formed a country, it would be the fourteenth largest in the world, larger than Germany (81,882,342) [World Population, 2010].

Farmville became so prevalent that it became a frequent reference in popular culture. When *Time Magazine* named *Farmville* one of the “Fifty Worst Inventions”, the author of the article lamented how the game had caused countless hours of lost productivity, including, he joked, many of his own [Fletcher 2010].

Once established the enormous relevance of the game, two important questions arise for our research: how did the game achieve so many users, and how did it retain them?

In regards to the first question, understanding how the game achieved so many users, we know that the social aspect of the game played a major role. It has already been established that within social networks, the network of friends forms the focus of games, and the players value most the games which have a higher participation of their friends [Rossi 2009]. Because of this, the games which better utilize this sentiment are the ones which grow most rapidly. One study performed in January of 2010 shows that 60% of the subjects (from Great Britain and the United States) choose games in social networks from friend recommendations, compared to only 11% who choose based on advertising [ISG 2010]. Because of this, our study of the communication channels of *Farmville*, where players send recommendations directly to other friends, is highly relevant.

The second question, that of retaining users, requires further study and user survey for a definitive

answer. At this moment, we can only make conjectures for future research.

First, we can attribute part of the game's success to its recreation of a facet of the real world, of which McLuhan explains "for fun or games to be welcome, they must convey an echo of workaday life" [1996]. People easily lose themselves in this world of simulated manual labor, where an agricultural session offers a short escape from daily pressures to what McLuhan calls an "artificial paradise".

Another part of the appeal lies in the avatar customization, where the player places his own personality within the game (Figure 2). McLuhan also has an explanation for this phenomenon: "a game is a machine that can get into action only if the players consent to become puppets for a time" [1996].



Figure 2: Avatar creation in *Farmville*

But a third part of retention should be attributed to the game's sociability.

First and foremost, the player is able to interact with friends from within his previously-established Facebook social network. The strength of this network is that it most often contains people with some form of real-life ties, as is implied by the name "friends" itself. The player gets to see his friends' progress within the game and have another reason for socialization with them.

This is a huge difference from many other online multiplayer games, where the player uses a server to find matches and thus often plays with complete strangers. Or many massive multiplayer games where "clans" are formed which may have no real-life link to the player; they can often be artificial or arbitrary constructions.

And there is another social aspect involved, where the player can use the *Farmville* communication channels to send messages outside the game, into the social network itself. These messages can serve as a reminder to their neighbors to return to the game, creating a higher attachment than a simple game reminder since they come from an actual friend. The

effect of the communication channels on this social aspect is also studied within this article.

5. The Facebook Medium

Before analyzing in detail the communication channels enabled by *Farmville*, it is necessary to understand the medium used by the developer, Zynga, in the creation of these channels. The medium, and thus the principal communication limit of the game, is the Facebook platform.

Although in-game communication is possible, most Facebook games take advantage of two principal means of communication, both of them external to the application itself. The first is the user's Facebook Wall, which the person typically uses for posting news to his social network. The user can enable Facebook game applications to also post messages to their Wall, side-by-side with any news the user himself posts there. Thus, the game application messages become visible to all friends within the player's network.

It should be noted that posts made to the user's Facebook Wall are typically viewed on the Home Pages of their friends, where people can find a summary of what their friends have been posting (Figure 3).



Figure 3: *Farmville* announcements appearing on a Facebook Home Page

The second means is the Facebook Requests Page. The Requests Page allows Facebook users to communicate among themselves in the form of requests, such as suggesting a friendship or recommending a group. The player can give the game application permission to post messages to his friends' Requests Pages. Contrary to the Wall, the Request Page is individual, visible only by the receiving party. So a message emitted to the Request Page becomes a type of personal invitation.

These two means exist only within the metaspaces of the Facebook social network, outside of the game application. *Farmville* utilizes both of these resources

in its communication channels, as this article shows in Section 7 below.

6. Schramm's Communication Model

The fact that *Farmville's* communication channels are well-defined and closed within the limits of the Facebook platform greatly aids in their study. This article concentrates on the games *virality*, the way in which the game propagates among users, and its *retention*, the way it uses communication channels to keep users playing. Because of this, we require a theory which takes into account the *bidirectional communication* involved and the *feedback* caused by that communication. In light of these conditions, Schramm's model serves our purpose well.

The communication model described by Schramm chosen for this study was originally proposed in the 1954 book *The Process and Effects of Mass Communication*. Like most models, it is based on *source/receiver* message passing. However, unlike some models where the receiver can never respond to the message, the Schramm model is interactive. Message trading is bidirectional, allowing the receiver to become a source and return feedback about the message received (in the form of a new message) to the original source [Rüdiger 1998]. In this way, the source and receiver can realize identical functions. Schramm allows that the exchange between the two sides can influence both.

The model also takes into account the interpretation of the received messages, in that the meaning of the message depends on who receives it. This is also dependent, to a certain extent, on the encoding and decoding of the message on each end.

Figure 4 illustrates this model in a succinct form.

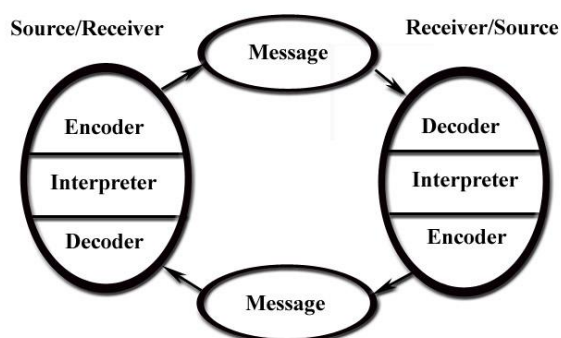


Figure 4: Schramm's communication model

7. *Farmville's* Communication Channels

Farmville provides three different communication channels for the player:

1. Send a gift
2. Help a neighbor
3. Post news to the Wall

Ventrice [2009] separates types of virality in social games into two types: direct and indirect. The direct type is a formal request, sent to a specific player. The indirect type is a broadcast, where the player spreads the message to every player within his network.

Farmville uses both types of virality within its communication channels. Of the three channels listed above, the first can be classified as direct, the third as indirect, and the second uses both techniques at the same time.

The subsections below describe and analyze each channel in detail. The first channel, that of sending gifts, is separated into two sections, since the intentions and feedback are different depending on the receiver, although the channel is exactly the same from the point of view of the source.

7.1 Communication Channel 1A: Sending Gifts to Neighbors

Perhaps the simplest *Farmville* communication channel to analyze is that of sending a present to a neighbor. Every time the player enters the game, he is given the option of sending gifts to his friends within his Facebook network (Figure 5). The player decides which friends should receive presents (within the daily limit established by the Facebook platform), and can choose one present for each of them per day. These presents normally consist of *Farmville* plants or animals, but other special objects appear when the player reaches higher levels of experience.



Figure 5: Example of gift-giving system in *Farmville*

When the receiver of an offered present is a *Farmville* neighbor to the player, that friend receives a notification on his Requests Page. The notification

advises that the neighbor sent a gift and that he may choose to accept or ignore the present. To receive the present, the receiver must enter the game. Afterwards, the receiver may place the gifted object within their farm.

The message also includes an extra text, which reads: "Could you help me by sending a gift back?" This text suggests a desired response for the original message (Figure 6).



Figure 6: Message reporting a pending gift

Based on this information, we may begin our analysis using Schramm's model.

In this case, the player who sends the gift acts as our source. The player selects a virtual *Farmville* present and chooses a neighbor, who becomes our receiver.

Independent of the source's desired meaning, the message is encoded by the *Farmville* communication channel as a solicitation to receive a gift. It arrives on the Request Page of the receiver, decoded as a binary choice of accepting or ignoring the offered gift, with the added request of sending a gift back.

By requiring the binary feedback, the channel now forces the neighbor into the role of being a source for a new message. His first two feedback options are clear: accept or ignore the present. After making that choice, the neighbor may choose a second feedback as well, such as sending a return present or performing any other action he feels appropriate.

In relation to the desired effects of the original message, the most obvious interpretation (which the communication channel explicitly and automatically adds as text to the message), is that the source desires some present in return. However, the receiver may also associate other meanings to the message, depending on the situation and relationship between the two people.

It is also interesting to evaluate the desired effect of the game's developer in enabling this communication channel. Since the receiver can only see a gift message when they browse their Facebook Requests Page, by

definition they can only receive the message when they are not playing. Thus, by enabling the source (playing inside the game) to send a message to the receiver's Requests Page (which they will receive outside the game), the message becomes a reminder for the receiver to return to the game at a moment he is outside of it. It also provides a motive to return, since the receiver may only accept the present by returning to the game.

7.2. Communication Channel 1B: Sending Gifts to Friends Outside the Game

It is also possible to send *Farmville* presents to friends within a player's social network who are not their neighbors within the game.

The act of sending a present to a friend who is not a *Farmville* neighbor operates on the same channel as the previous section. The player chooses someone (typically who has never played *Farmville*) from his Facebook friends list and selects which present to send them. As before, the present offer will appear on the Requests Page of that friend. However, in this case, the message, intent, and feedback are all different.

The message offers the present to the friend under the condition they have a farm to place it in. Thus, they must enter *Farmville* for the first time and create a farm before they receive the gift. If this occurs they automatically become the neighbor of the player who sent them the gift.

As before, the source is the gift sender, and the receiver is the present's intended target. The message is once again the gift solicitation.

Since the receiver's only positive response to the message is to enter the game, it is clear that the source's intention is to use the gift to call the non-player's attention to the game. The desired feedback is to have the receiver enter the game and create a farm, gaining a new neighbor in the process. As noted previously, gaining new neighbors holds great value for the player in the form of opening new opportunities within the game and increasing experience and farm coins.

The developer of the game, in this case, has the same desire as the source in using this channel of communication: attracting new players to the game. For each new neighbor that the source brings into the game, the developer gains one new user and his entire network of Facebook contacts as potential users. This is an excellent example of the game's viral methods at work.

7.3 Communication Channel 2: Helping Neighbors

Another channel for analysis is that of aiding neighbors on their farms.

The first time every day (in real time) that a player visits a neighbor's farm, he is presented with a problem to resolve within that farm. For example, the farm may be messy and require cleaning (Figure 7), or it may be filled with foxes which need to be scared away. The simple act of "accepting" the task automatically resolves the problem.



Figure 7: Message requesting help in a neighbor's farm

After resolving the problem, the player is given the chance to post news about the accomplished task. The message describes what was done on the farm, and provides a space for writing an optional personal message (Figure 8).



Figure 8: Example of a post-help message

Once sent, this message appears on the player's Facebook Wall and, as a consequence, on the Home Pages of his friends within the Facebook network.

A second message is also sent in-game to the player who receives the help, the next time they enter the game. However, this message contains a different encoding than the other one. If more than one player has helped on that farm while the owner was away, the message becomes part of a generic group message which does not specify all members, for example: "Mary and three other persons helped on your farm". Thus, the player who receives the aid may not know it,

unless they see the specific message posted to the sender's Facebook Wall.

For this channel, the player who helps on the farm is the source. The message is that the source helped out on the receiver's farm. The receiver is not only the neighbor who received the aid but all the source's other friends within his Facebook network.

The source gains farm coins and experience for the simple act of helping on the farm, so it is possible in this case that no feedback at all is expected. However, it would still be desired that some friends might see the message and respond by entering the game and providing some type of benefit in return.

The receiver whose farm was affected can respond in any way desired, but for our study, it is interesting to divide the response into three choices: ignore the message, send feedback outside the game (for example, by commenting directly to the Facebook Wall post), or enter the game and send feedback through one of *Farmville's* available channels of communication (for example, send a gift).

For all the other receivers (the source's social network friends who read the post on their Home Pages), they may also choose one of the same feedbacks mentioned above, with one added addition: those who have never played before may be compelled to enter the game and play for the first time.

The developer's desired effects for this channel are to use the player's Wall as a type of free advertising for the game. The source's friends who already play the game will be reminded of it (once again at a time when they are outside the game), and those who do not play will see their friends playing and interacting among themselves. Thus the developers may potentially gain both repeat and new players from the source's social network.

And the player who received the help, if they see the Wall message, will also be reminded to return to the game, while at the same time having an extra incentive to do so (to return the favor in some form).

7.4 Communication Channel 3: Posting News to the Facebook Wall

The final communication channel available to the player is that of posting pertinent game news to his Facebook Wall.

In some specific cases, *Farmville* presents the player with the opportunity to publish news from inside the game to the player's Wall. These news messages exist in two forms: announcements and offers.

The announcements deal with the player's progress within the game. For example, when the player gains enough experience to level up, they may post the news to their Wall.

The offers consist of special game events which the player may broadcast to friends (the player may not accept the offer himself, only send it along). For example, the player may find an abandoned animal and have the opportunity to share the animal with friends (Figure 9). If none of his friends are willing to accept the animal, it will be lost.



Figure 9: Abandoned animal message posted to the Facebook Wall

Many believe the abandoned animal offers to be particularly compelling in calling attention to new players. They have a strong link to human compassion [Ventrice 2009].

For this communication channel, the source is the player who posts the news. The message is encoded as a news announcement emitted to the source's Wall. The receivers in this case include all of the source's contacts within his Facebook social network.

The result of the message is spreading *Farmville*-related news that the source deems relevant. The intent for broadcasting this news could be to gain greater prestige among the community of players, to attract more neighbors, a sense of pride at certain accomplishments, or any other personal desire.

If the news deals with the source's progress within the game, no automatic response is provided, and thus the receiver's feedback is completely open. In this case, the receiver has the simplest option of responding outside the game, by posting a comment directly to the source's posted Wall message. The receiver may also enter the game and play more, in an attempt to equal the source's progress or for whatever other reason. In fact, any feedback which the receiver thinks adequate (including no feedback at all) may be provided.

If the news deals with a special offer, the receiver may accept the offer in the same way that *Farmville* presents are accepted.

The intent of the developer in this case is once again to utilize a form of free advertising on the source's Wall. This advertising may attract new players or remind current players to return to the game.

8. Timeliness of the Study

In any study of viral, social games, it is important to state the time period of the research. In this case, the *Farmville* communication channels studied were those available in early December of 2009.

Unlike video games distributed on physical media, where a single version of one point in time can be captured and analyzed, social games are organic. Even the most basic rules of their gameplay are often changed over time, and players must adapt to rules changes on-the-fly. To complicate research even further, the games are held only upon the host servers, with no way to access older versions.

Farmville is no exception. As the game runs on the Facebook platform and is not directly installed on the user's hardware, the developer has the capability of changing the game at any moment. As with many other social game developers, Zynga uses this ability to make constant modifications to the game.

Thus, *Farmville* is in a constant state of change, and because of this any study performed is impossible to replicate once the basic "rules" are modified. In particular, Facebook made drastic changes to the means of communication available to games in March 2010. These changes caused radical realignment of the communication channels in *Farmville* and other games.

For example, after March 2010, applications could no longer solicit players to make any form of invitation to other people right after entering the application. This was, in fact, the exact way that the sending gifts channel of communication of *Farmville* analyzed in this study functioned. This communication channel no longer exists in the same form, and has been replaced by other systems.

After the March 2010 Facebook application changes, many games lost players. *Farmville* alone lost more than 12 million players in April and May of 2010 [Mack, 2010].

Thus it is important to emphasize how speed and timeliness are critical when researching social games. Data must be captured at the correct moment in order to study the desired interactions.

Farmville itself is an extreme example of this phenomenon. The game has already passed through a large number of modifications, tens of millions of players (both gained and lost), and has only existed since June of 2009. Future studies can never replicate what has been performed before, only elaborate on new conditions and trends.

9. Final Considerations

Using only two Facebook means (Request Pages and the Wall) and three channels of communication (sending gifts, helping neighbors, and posting news), the developer Zynga managed to create a simple yet efficient system for attracting and retaining users in the video game *Farmville*. The viral characteristics of the game contributed in large part to its explosive growth.

By offering players the option to send presents and help their friends, the developer managed to align the players' desires with their own: those of attracting more friends from their social networks to play, and calling their neighbors to return to the game to pay back favors. Each new neighbor represents another social network to be tapped for new users.

In this way, social communication became fundamental to the growth and success of the game. Even more impressive, is the way this was implemented within a game where the players communicate only through pre-written, asynchronous messages.

This research hopes to open opportunities for other studies. More studies can be made about *Farmville* itself, for example, analyzing the communication channels available after the March 2010 changes, or comparing the in-game virality to the effects of external virality, such as cross-marketing with other games within the Zynga network.

Alternate studies can also be made of the communication channels of other games which did not have the same success as *Farmville*, to better understand the differences. Studies of the psychological aspects of player attraction and retention would also be interesting, to understand how the communication channels fit within the context of other parts of the game, such as theme, artistic style, etc.

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