

# Analysis on the Game-Playing Tendency of SNGs (Social Network Games) users by Gender

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**Abstract**—As the Social network game(SNG) is rising dramatically worldwide, an interesting aspect has appeared in the demographic analysis. That is the ratio of the game users by gender. Although the ratio of male and female users in online game was 60:40% previously, the ratio of male and female users in SNG stood at 47:53% which shows that the ratio of female users is higher than that of male users. Here, it should be noted that 35% in those 53% female users are the first-time users of game. This fact suggests that women who were not interested in game previously has taken an interest in SNG. Notwithstanding this issue, there have been little studies on the female users of SNG although there are many studies that analyzed the tendency of female users' online game play. This study conducted the analyzed how the game-playing tendency of SNG gamers was manifested in the game by gender. For that, this study will identify the tendency of SNG users by gender based on the preceding studies that analyzed the online game users by gender. The subject of this study was confined to the farm and urban construction simulation games which were offered based on the mobile application platform. Regarding the methodology of study, the first focus group interview(FGI) was conducted with the male and female users who had played games on Social network service(SNS) until recently. Later, the second one-on-one in-depth interview was conducted to gain an insight into the psychological state of the subjects.

**Keywords**—Social network Game, Gender, Play inclination, Game psychology

## I. INTRODUCTION

### A. Background & Purpose of Study

SOCIAL network games are a new media that converges the entertainment function of existing mobile games and Social network service(SNS), providing the connection to the users so as to stimulate the interaction among the users. The emergence of new media platform has led to the involvement of new users and has opened the door to the era of SNGs that encompasses all classes of people playing the online game, not the specific class of people. According to a demographic survey in 2011 which compared the difference between the traditional gamers and social network gamers, the ratio of male and female traditional gamers stood at 60:40%, while the ratio of male and female gamers playing the games on social network was 47:53%. In addition, the average age of gamers was 28 and the ratio of female gamers was higher than or similar to that of male females. [1] What is interesting about the female gamers is that 35% of the aforesaid 53% female gamers played the game for the first time.

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This fact implies that women who had not been interested in the games previously took an interest in games through the medium of SNGs which induced them to actively play games. The analysis of SNGs users by gender showed the results similar to those of demographic analysis on the smartphone users. According to the survey on the use of smartphones, which was conducted in 2011 by the Korea Internet & Security Agency, the ratio of female smartphones users and male and female smartphone users stood at 52.6% : 47.4%, respectively, suggesting that more women used the smartphones than their male counterparts. That was contrary to the common assumption that men would be more interested in new media than their female counterparts.

Playing games on the smartphones comprised 78.6% of all purposes of using the smartphones. The popularization of smartphones have speeded up the spread of SNGs and increased the utilization rate of SNGs. Resultantly, a majority of women using the smartphones are playing games on the social network service. [2] Notwithstanding those issues, the studies on SNGs have been confined to the analysis of users or the analysis of gender with respect to the online games from the perspective of communication. As female gamers have emerged as new user groups of SNGs, it has become necessary to segment the SNGs user class and identify the playing tendency of SNGs users by gender. The pattern of use and satisfaction vary, depending on the characteristics of group, whenever a new media emerges. Thus, studies need to take new direction in analyzing how the motive and satisfaction of users would interact with the media by segmenting the group that adept such new media. [3] This study will present the need for the game companies, which usually develop the games targeting male users, to analyze the female user group. In addition, this study will play a significant role in setting the game persona by analyzing the needs and playing tendency of female gamers.

### B. Scope and Methodology for the Study

This study will identify the manifested characteristics of male and female game users in the game by gender, who play the social simulation games. For that, this study analyzed the preceding studies that investigated the playing tendency of male and female users playing the games ranging from the basic play to the massively multiplayer online role-playing game (MMORPGs).

Furthermore, this study identified the tendency of users by gender, which was found in the preceding studies, and applied such tendency to the SNG users. For the methodology of this study, the first focus group interview was conducted with the male and female users to compare the playing tendency of male and female users.

FGI analyzes the users of new media and is used for qualitative study that analyzes specific psychological factors, and therefore is suited for this study. Subsequently, secondary one-on-one in-depth interview was conducted to identify the psychological elements of the subjects, such as their opinion, values, etc. Finally, the interview results were compiled and analyzed to identify the playing tendency of SNG users by gender.

### C. Method

For this study, the following methodologies were designated:

1. What was the game-playing tendency of users by gender before they played the social network games (SNGs)?
2. What is the game-playing tendency of the SNG users by gender?
3. Do the satisfaction with the games and royalty to the games vary, depending on the game-playing tendency of SNG users by gender?

## II. SOCIAL NETWORK GAMES

Social network games (SNGs) are the digital game that combine the social interpersonal network elements on the social network service platform - such as Facebook, Twitter, Blog, etc.- with the entertainment elements of social games. SNGs are not restricted very much by the geographical and location factors and enable the asynchronous game playing.

Asynchronous games play to allow many people to enjoy games together and log-into games at the desired time. Thus, the users can select the time to play games and do not have to wait until other players finish games. Users are not restricted by the temporal and spatial constraints, and therefore SNGs are called "Time-kill game". In fact, it was found that the use of SNGs could help alleviate the loneliness and SNSs were found to play a significant part in developing the interpersonal network. [4] What makes SNGs set itself apart from other games are that it helps strengthen the interpersonal network. In the massively multiplayer online role-playing games (MMORPGs), thousands of players log-onto games on the same server simultaneously with the users of similar level and take adventure together in group. [5]

The figure below is a social network platform services is a typical social network game.



Fig. 1 FarmVille serviced via the Facebook

Meanwhile, SNGs allow all people – who became friends on SNSs - to be invited to games and therefore helps expand the interpersonal network. Furthermore, SNGs expand offline relationship into online relationship and can expand online relationship into offline relationship. The interpersonal network, formed in that way, enables people to share the common hobbies, interest, i.e., the experience. Thus, such interpersonal network is not confined to the virtual world but enables the communication with the real world.[6] This interactivity is noticeable in the SNSs and game area, which is supported by the fact that Zynga is serviced to over 400 million users connected through the Facebook, the SNS.[7]

## III. PRECEDING STUDIES: ANALYSIS OF THE PLAYING TENDENCY, MANIFESTED IN GAMES, BY GENDER

Generally, gender is one of the elements that came under the basic category in the most demographic analytical studies. Gender enables clearest dichotomy compared to race, education background and culture. This gender categorization also appeared in the studies of game users. [8] Games have developed into board games, video games, online games, and SNGs thus far. Although the method and contents of play became different, the playing tendency of male and female users have shown similar tendency. It is found that this context shows clear contrast if we look into young boys and girls who have yet to reach the stage where they acquire social and cultural knowledge.

The study conducted by Brenda Laurel (1999) provides an insight into the difference in the methods that young boys and girls employ. First, young boys tend to play boss in the community. Boys who were the toughest and strongest became the leaders of the kids in the neighborhood and rose to high status within the community. By contrast, girls who had the most extensive and profound relationship within the community rose to the highest status, although they also had a sense of rivalry like boys. Their status was further recognized when the relationship was friendly. [9] Such difference by gender was manifested in similar way in online games.

As the game was considered to be monopolized by men, most game developers and game-adopters were men. The concept of game, story-telling, graphic, rules, etc., developed in such a way that suit the preference of men, and therefore, most game users were men.

Taylor (2003) conducted a study to analyze the psychology of female game users among the female who enjoyed the massively multiplayer online role-playing games (MMORPGs), Taylor questioned the common assumption that MMORPGs are exclusively for men and the fact that the proportion of female gamers was small, and claimed that male and female gamers had different playing tendencies. For example, he stated that women tended to enjoy the communication with others and were actively involved in communication through new media.

In other words, women draw satisfaction from psychological communication through the involvement in activities, such as the social interaction, participation in team, etc., in the process of MMORPGs. M.D. Griffiths (2003) also claimed that people had preference for online games because it allowed them to meet and help people and offered a chance to belong to a group.

It was found that those factors led women, who enjoy interaction with others, to draw greater satisfaction from games.[10] Men tended to armors and carry weapons to upgrade their level or increase their capability, while women tended to put an emphasis on how others would be impressed by the item that they wore in the game.



Fig. 2 The one of MMOPRG is the World of warcraft

Nick Yee (2006) also conducted a study that compared the male and female users of MMORPGs. Although the female users who enjoyed MMORPGs comprised approximately 15%, the desire of male and female users to play online game was found to be 87% in the survey. Such findings imply that only a small number of women translate their desire into action and there is a high barrier for women when they attempt to access the online game, despite the desire to play online game regardless of gender.

Yee stated that the social norms and perception restricted the women's game-playing and also claimed that the male-dominated game-playing culture led the women to restrict themselves. For example, female characters in MMORPGs are often dressed in sexually-appealing clothes preferred by men, and female users are often considered relatively incompetent. Finally, men were motivated by the advancement, mechanics, and competition, while women were motivated by relationship and customization when they played games. Among such motives, no difference was found to exist between men and women in terms of the socializing motive. Male users were also found to love chatting and small-talks, like their female counterparts. [12]

By far the game-playing tendency through preceding studies that analyzed from Alley games to MMORPGs. As a result, play and psychological behavior patterns of men and women were equally carried forward. The characteristics of masculinity and femininity as a gender, as seen in playing games will be presented. Men enjoy compete in a battle game to occupy a high position to win among their friends from early childhood. The other hand, women enjoy games to spend time with friends. However, with the advent of male-dominated games for women was difficult to enjoy the game.

Preceding studies about game about analyzing on the game-playing tendency of game users by gender is presented in the Table below.

TABLE I  
GAME-PLAYING TENDENCY BY GENDER

Researchers	Type	Men	Women
Brenda Laurel (1999)	Alley/ playing the house	Those with high ranking in the community win	Those with extensive interpersonal relationship in the community win
Taylor (2003)	MMOPRGs	Those with enhanced ability and higher level	Paying attention to how they will be perceived by others
Nick Yee (2006)	MMOPRGs	Advancement, Mechanics, Competition	Relationship, Customization

The analysis of those preceding studies suggested the similarity in the game-playing tendency by gender. Thus, we will look into the game-playing tendency by gender in SNGs by the following studies.

#### IV. DESIGN OF STUDY

For this study, male and female users, who were in their late twenties and played games mainly on the social network, were interviewed based on the demographic data of Flurry. Those male and female users, the subject of this study, played two or more SNGs, and also had played the SNGs for more than 2 hours a week over the last 1 month. The SNGs that they played was confined to the farm and urban construction simulation games based on Smartphone applications.

In relation to the social simulation games, the following characteristics were found:

First, users can upgrade their levels by enhancing the farms or expanding the city.

Second, users can compete with one another by comparing their levels and territories with friends involved together in the game.

Third, users can form relationship with online and offline friends and play games together.

Lastly, users can give the leeway to enhance or arrange their own space/territories in the game. To achieve the objective of this study, the users who played the SNGs as described above were brought together as the subject of this study, and the profile of the subjects is presented in the Table below. They own spaces/territories in the game.

To achieve the objective of this study the users who played the SNG as described above were brought together as the subject of this study. Regarding the methodology of study, the first focus group interview (FGI) was conducted with the male and female users who had played games on Social network service(SNS) until recently. Later, the second one-on-one in-depth interview was conducted to gain an insight into the psychological state of the subjects. The profile of the subjects is presented in the Table below.



TABLE II  
THE FIRST AND SECOND INTERVIEW PARTICIPANTS PROFILE

Interview section	Participants	Sex	Age	SNGs they have played
The first FGI interview	MP1	Man	29	Farm Story, Playfish, Tiny Farm, The Smurf's Village
	MP2	Man	28	The Smurf's Village, Farm Story
	MP3	Man	29	We Rule, Farm Story
	WP1	Woman	29	Rule the Sky, Tiny Farm, Farm Story
	WP2	Woman	25	The Smurf's Village, Farm Story, Bakery Story, Restaurant Story
	WP3	Woman	29	We Rule, We Farm, We City
	MP4	Man	29	FarmVille, We Rule, Rule the Sky
	MP5	Man	32	The Smurf's Village, God Finger
The second one-to-one in-depth interview	WP4	Woman	26	Farm Story, Bakery Story, Restaurant Story, We Rule, The Smurf's Village
	WP5	Woman	26	Farm Story, Bakery Story, Restaurant Story
	WP6	Woman	28	Tiny Farm, Restaurant Story
	WP7	Woman	25	God Finger, We Rule, The Smurf's Village
	WP8	Woman	25	Rule the Sky, Bakery Story, Restaurant Story

In this study, male and female participants interviewed include common farm simulation game Zynga's Farm Story, Beeline's The Smurf's Village, include construction and urban simulation game for Korea was the JCE's Rule the Sky.

Finally, a restaurant management simulation game play was TeamLava's Restaurant Story. Therefore, these farms and cities in the interview, a restaurant simulation game was based on the answers to frequently asked questions.



Fig. 3 The Social Network Games game users have played

The interview contained about 15 questions that could be answered within 1 hour. Subsequently, the second in-depth one-to-one interview was conducted to gain an insight into the psychological state of the subjects in detail. Finally, the game-playing tendencies by gender were identified with more clarity. The interview questions were concerned with the items pertaining to the advancement, competition, and relationship based on the different game-playing tendencies of male and female users playing MMORPG as found in the study conducted by Nick Yee (2006).



Fig. 4 The 1<sup>st</sup> FGI interview



Fig. 5 The 2<sup>nd</sup> In-depth One-to-one Interview

## V. ANALYSIS OF THE GAME-PLAYING TENDENCY BY GENDER IN SOCIAL NETWORK GAMES

### A. Advancement

Both male and female users were found to attempt to employ a variety of methods to upgrade their levels in SNGs. Commonly, they stated that they were motivated by the desire to increase their levels and obtain the items that they desired. For that, they analyzed time-efficient items and were involved in strategic behaviors like forming friendship with many people and collecting the game money, etc. Meanwhile, they also stated that the fun of game was boosted by the events and the sound activated when they obtained the game money.

*“I strategically find out the time-efficient items and harvest the crops all day long. That is how you can make money fast. And then I begin to decorate the garden only after the highest level.”(MP5)*

*“I made friends with those who had better buildings or more money than I did. In that way, I can make more profits.” (WPI)*

The participants all the crops planted or when clipped money from the city to allow the game is to click bubbles. Bubbles appear when gamers click the event and the melody for gamers to play the game affects to persist. It also allows gamers to play as soon as is to lead. So gamers harvest their crops in time to come in. Even if they access a smartphone to check their farm and city game frequently.



Fig. 6 Gamer can harvest items with event rings melody

*“Just press the item and you can hear the sound informing that you’ve got extra money and experience. I focus more when I think, Oh, I got the capital!”(MP3)*

However, some women who were the first-time gamers sometimes showed different game-playing tendency. They did not have special purpose for the game itself, but had preference for easy-to-operate games with low difficulty level and simple story. That kind of games, which did not take much effort to master, increased the motivation for playing and increased satisfaction.

*“I thought that the game was difficult, but when I was playing the SNG, I found that it was fun. It is simple and does not need much thinking. I was motivated by the sense of achievement after having spent much time on the game.” (WP8)*

The first-time female gamers showed somewhat low confidence, which implies that women had more “fear of success” than their male counterparts. That can be explained based on the “theory of the fear of success” extrapolated by Horner (1972). [13] The fear of success means individual’s anxiety about success despite the aspiration for success. It was found that the ‘fear of success’ was the stumbling block to women accessing the games. Thus, the fear of success was inherent in women who thought that the game was exclusively for men.

However, since in times and circumstances Fear of Success, along with gender, because otherwise appeared (Canavan-Gumpert et al, 1978, McClelland, DC, Atkinson, J. W., Clark, R.W., & Lowell E. L, 1953, Karabencij, S. 1977) Currently applied to all women who play the game and to think Can see that there is some limit. However, such barrier hindering women’s access to the games descended after women actually played the game.

Meanwhile, men quickly lost interest in games by the time when they became familiar with the games, although they play the games with strategy in the early stage.

*“It seems to me that there are not many elements appealing to men. At first, I became interested and played many games. However, I become sick and tired of the game, like a girlfriend. You have no reason to continue if you conquer it.” (MP5)*

The men were able to enjoy a fierce battle over online game social network game, because they thought the rubbish games compared to women who feel SNGs is great fun. However, women were easier to manipulate the game to learn, to achieve results in little things that the game was very fun.

Also, men like computer games which the large size of the machine to play with the small size of the phone that something was frustrating. However, women carry around anywhere in my spare time to play games that are more often.

As a result, men and women can increase their levels and possess the items that they want to have. One of their game behavior is to obtain the game money by investing time-efficient items.

Also they tried to add many social friends to game friends on SNGs. But men prefer strategy and spectacle game than easy-to-play game. However, SNGs have not difficult level, it is easier for women were able to lower barriers to entry. Therefore Women than for men to do their best and were playing a game.

The tendency of advancement among the male and female users in SNGs is presented in the Table below.

TABLE III  
TENDENCY OF ADVANCEMENT AMONG THE MALE AND FEMALE USERS IN SNGS

Tendency	Advancement	
	Men	Women
Factors leading the users to play the games continuously	Increasing their levels and possessing the items that they want to have	
Game behavior	1) Obtaining the game money by investing time-efficient items 2) Adding many people to friend lists	
Preference	Strategy games	Easy-to-play games and games with low difficulty level
Stimulating elements	Less motivated when they become well familiar with the games	Motivated to play the games when they can play well with less effort
Others	Less fear of success	Much fear of success

### B. Competition

The competition in SNG arises from the desire to raise their levels or decorate farms more fantastically than others. The level number and items stimulate the competition.

Women tended to consider their game mates as friends and colleagues, rather than competing with them. Thus, they put less focus on increasing their levels. Additionally, women tended to be motivated to play the games with greater focus when they were playing game with friends at similar level. By contrast, they sometimes lost motivation to play game with players who has far higher levels.

*“As I visit my friend’s farm or city, I don’t feel like continuing the game when I see all friends have higher levels than I do. The game is not interested any more. I need to feel that we are developing together.”(WP2)*

The women tend to think that SNGs with friends is as a tool to strengthen their relationship. They did not feel the need to compete to win or devote a great deal of effort SNGs. In fact, that is the purpose to start SNGs. Also playing SNGs is easy to learn and operate game. So, most women can play SNGs very well. For this reason, women who didn’t try to play online games get start the SNGs. After then they prefer to participants the SNGs together than with competitors.

Therefore Playing SNGs is a good tool for them like chatting or be deepen their relationship with friends. Women are playing a game with friends is give meaning to action.

By contrast, men were found to have a tendency to enjoy competition with friends.

*“When I am playing game, I think that I am given a ranking. If I have a higher level, I feel as if I became a king among my friends. Friends are envious of me for my high level, and they seem to be lower than I.” (MP5)*

*“When I was my game level was 22, my friend’s level was 19. But the next day and then I woke up, and my friend’s level is 22. I suddenly got angry and nervous. I overnight to the level of the game and made 23. And then I felt relief and sleeping.” (MP2)*

*“If I obtain a rare item to build in my farm, I just update news on Facebook and I'm proud of. And then my friends update their game news on Newsfeed as well, we complete a game each other.”(MP4)*

In other words, competition increases the immersion in games for both genders. However, the goal of women is not overtaking the friends with higher level because they play SNGs to have a pleasant time with their friends.

So women do not simulate their friends’ higher level and need show off the level to others. By contrast, men were found to put an emphasis on the hierarchical level in the virtual world where the game is played, and therefore tended to show off their superiority by achieving higher levels and good items.

The tendency of competition among the male and female users in SNGs is presented in the Table below.

TABLE IV  
TENDENCY OF COMPETITION AMONG THE MALE AND FEMALE USERS IN SNG

Tendency	Competition	
	Men	Women
Factors leading the users to play the games continuously	Friends who enjoy the game, level number and item	
Other players	Perceived as competitors	Perceived as friends or colleagues
Preference	Game with hierarchical structure	Game for co-growth and development
Stimulating elements	Friends with higher level	Friends with similar level
Others	Show off the level to friends	Do not show off the level to others

### C. Relationship

While playing the social network games (SNGs), users can make friends, leave messages in the bulletin of friend’ sites and provide useful help in relation to the games. These behaviors have decisive effect on raising the level and increasing the money collection, and therefore, users make many friends and have more funned when they have more interaction.

*“I had never talked with her offline, but have naturally kept in contact with her since we started playing SNG together. At first, we talked about the game. But later, we talked about other things.”(MP2)*

Men and women showed different game-playing tendency while they maintained the relationship. Women said that they starting playing SNGs because of their friends’ recommendation or because they found that the games looked interesting. In addition, they said that they started playing SNGs to participate in the talk as they game become one of the most-talked subjects in the group which they belonged. That kind of formation of relationship has an effect on the continuous game-playing.

*“I started the SNG mostly because of my friends. They ask, ‘Did you plant the carrot?’, and I wonder what that means. I became curious and started playing the game, it was interesting very much. I kept talking with friends even when I was not playing the game. I feel isolated when I do not play the game.”(WP8)*

*“We play the same game with friends. We talk only about the SNG whenever we gather together. We make friends and the friendship gets solid. Without game, there is no solidarity with friends. It is the same case with drama. You speak the same language as we play the same game.”(WP7)*

Women should talk with a common theme because it tends to feel a sense of intimacy with friends playing a game that was preferred. So women tend to form and cement the friendship while playing the SNGs. As we have seen this thing about women who are reluctant to compete with friends to form a good relationship can be seen to prefer.



In other words, the purpose of the game itself, rather than playing a game more focused on the process itself is based.

However, they take different approach in dealing with their old friends and those whom they made friends while playing the game.

*"I added a person to my friend list. We keep this relationship by reciprocating benefits. We help each other in relation to the game. I feel that this ID is friendly to me when we've been giving and taking several times."*(WP2)

*"I don't like the idea of keeping close relationship with someone I don't know just because we play the game together, although we can exchange some useful tips."*(WP5)

Some female participants met in the game with online friends who want a good relationship each other. Others for personal reasons they were reluctant to have intimacy and deep.

Men tended to have fun when they offer their friends some useful tips to conquer the game while playing the game together. Playing SNGs with friends occupy the leisure activities because of the important role. Instead, they meet to talk or play games together and spent a lot of time to share targeting. However, they were not affected very much when their friends gave up playing the game.

*"It does not matter whether my friends give up playing the game or not. I don't care. I just play the game."*(MP5)

*"My online friend does not reply so often. I just think that he is busy. I don't mind."*(MP2)

It was found that male and female users had fun when they played the SNG with friends. Women like men with whom it was not important to the game. Also what level of their farms and cities, and a nice question of ownership were important. So the game with a friend who quit playing the game even though he is not affected at all. Even if you quit the game when your friends around the game, sick of So sick because his response was not.

As claimed by Shim hye-ryen (2006), people have the desire to communicate with people, whether it is in real world or virtual world, and such desire is manifested in the same way while they play the games. Particularly, it proves that they can actively enjoy playing the games by forming relationship with people while playing the games. [15]

In conclusion, men and women simulate to interaction and strong relationship with friends who play SNGs together. It made identifying with friends and forming strong relationship with them while playing SNGs with friends and community. However, men did not affect by their game mates and women affected by them.

The tendency of relationship among the male and female users in SNGs is presented in the Table below.

TABLE V  
TENDENCY OF RELATIONSHIP AMONG THE MALE AND FEMALE USERS IN SNG

Tendency	Relationship	
	Men	Women
Factors leading the users to play the games continuously	Active interaction and strong relationship with friends	
Preference	Identifying with friends and forming strong relationship with them while playing the game with friends and community	
Stimulating elements	They are not affected by their game mates.	They are affected by their game mates.

#### D. Customization

SNGs allow the users to freely arrange or decorate their own space, such as farm, city, etc., using various items. Both male and female users spent a considerable amount of time on decorating their own space.

Other than that, but men and women showed different tendencies play. First, Women tended to focus on decorating their farms beautifully when they play the games. Even the purpose of start the social network simulation games are to have their own lovely garden and a restaurant.

*"I feel better when I see my farm decorated in a cute and beautiful way, and I am better motivated to play the games. I like decorating. So, I decorated my farm in a heart shape."*(WP4)

The figure of woman participant 4's farm is presented in the below. She felt fun to decorate her own farm herself. It can express her identity and she were proud of it her friends.



Fig. 6 WP4's farm on Farmstory

Furthermore they paid more attention to how others would be impressed by their space that they decorated. Sometimes, they visited the space of other users to get information on how to decorate. Some female participants of the other people visiting the city when their striking came refurbished part well.

*"I thought deeply about how I could make my identity distinctive. I wanted to make my space look interesting and special. I referred to the well-decorated farms when I decorated mine."* (WP5)

Women tended to decorate their farms in multiple ways, depending on their personal preference, and said that they could figure out the characteristics of their friends when they saw their farms decorated in distinctive style. Women participants in particular the appearance of flower plant, and only the construction of the building even gold and rare items were not only creating a collection of farms.

*“I found my personality or characteristics while decorating my farm. I am a realistic person and decorated my farm in a realistic way. When I visit the farms of friends, I can find whether they like keeping things neat and tidy or like pink color.” (WP5)*

It was found that female gamers drew fine line between the reality and game world when they decorated their space. Exactly as they figured out the characteristics of their friends when they talked with them, they could fathom their characteristics when they saw the farms or cities that they friends decorated. In addition, women tended to fulfill their desire to decorate while playing the SNG, even if they could not decorate their rooms in real world. Hye-ryeon shim (2006) stated that they made much effort and spent much time to decorate their space nicely in virtual world although they tended to keep their space in real world messy. Similar patterns appeared in SNG. [14]

Meanwhile, male gamers invested much time and effort to effectively arrange their items, unlike female gamers who tended to decorate their space in such a way that reflected their characteristics.

*“I arranged the fields with profitable crops. So, I can harvest more effectively and faster.” (MP3)*

Moreover, they used their space as a means to show off to others. He was trying to set up farms of their own factories to see what other people think about whether the farm. And other people to see their plants appeared to persist reaction games were a big influence.

*“I set up the fences that look like the word, “VOTE”, as I wanted to encourage the voting. Then, people say, ‘Oh, I have never seen a person like you! I was very happy, thinking what I could do next.’”(MP1)*

A few men also paid attention to decorating or re-arranging their farms like women did. He invested a lot of time decorating the farm, when he was visiting other people's farms, he laughed more if they were not well designed.

*“I spent a lot of time on decorating my farm nicely. I rearranged the farm next day if I did not like it. I focused on decorating, rather than upgrading my level fast.”(MP2)*

Meanwhile, a few women focused only on raising their levels fast, rather than decorating their space beautifully, unlike other women.

*“I did not decorate my space at all. Rather, I focused on making money and raising my levels. I did not buy any item for decoration.” (WP2)*

A small number of conventional gender roles as men and women to play the game to look, but availability is positive. In the modern world, men's and women's changing tastes and tendencies appearing in the game suggest that appearance. However, a total of 13 male and female participants, each only about one person found the courage to show such a tendency because it is hard to fully conclude.

In results, the tendency of customization among the male and female users in SNGs is different results.

First, men tend to decorate invest lots of time for re-arrange farm and city. Women love to decorate their own space themselves. According to women participants statements, the main purpose of playing SNGs is to have own space to decorate. Also they enjoy chatting about farms and cities how they adorn their spaces. It makes them happy to play game. They concentrate to ornament their space than others. However, male enjoy show off their distinctive space to others. The space he wants to be noticed by other people wanted to look more unique. It also have shown in decorating unusual propensity by gender. A man seems to focus on decorating his space looks good like woman. However, a woman focuses on raising their level and gaining game money, rather than decorating her space prettier. This tendency was previously a clear separation between men and women in modern society, from the days of people with positive inclinations with availability game-play can be shown that the tendency shown.

The tendency of customization among the male and female users in SNGs is presented in the Table below.

TABLE VI  
TENDENCY OF CUSTOMIZATION AMONG THE MALE AND FEMALE USERS IN SNG

Customization		
Tendency	Men	Women
Factors leading the users to play the games continuously	Investing a lot of time to decorate their own space	Getting vicarious satisfaction by decorating their space beautifully in such a way that reflects their identities
Game behavior	Efficient arrangement of items	
Preference	A distinctive space decorated with much effort	A distinctive space decorated beautifully
Stimulating elements	Showing off my distinctive space to others	Paying more attention to how their space would be perceived by others
Others	A few men focus on decorating their space beautifully	A few women focus on raising their level, rather than decorating their space beautifully



## VI. CONCLUSION AND LIMIT

This study identified the game-playing tendency of SNG users by gender by classifying such tendency into several categories: advancement, competition, relationship, and customization.

A polarization of game-playing tendency was found by gender in terms of the competition and customization. Female users recognized their game mates as friends when they were playing the games.

By contrast, male users tend to compete with their friends and form a kind of hierarchical society. In addition, women tended to draw satisfaction from possessing their own space and decorating it in such a way that suited their characteristics, while men spent more time on arranging the space in such a way as to increase the efficiency of the game-playing. The objective and basic tendency of game-playing were different by gender. However, both genders showed similar tendency in terms of advancement and relationship.

Women did not try playing the games previously because they thought that the games were difficult. However, they explored the strategies when playing the games after they started playing the SNGs. There was not a significant difference by gender when they formed relationship and actively interacted with others while playing the games. The only difference was that women had more fun and satisfaction when they were actively involved in interaction with others while playing the games while men were not affected very much by others. In other words, competition was the main driver for the motivation and satisfaction in the case of men, while customization was the main driver for the motivation and satisfaction in the case of women in SNGs. Moreover, both advancement and relationship increased the fun of game-playing for both men and women. Those findings were not consistent with the results of the study conducted by Nick Yee(2006) which had showed that the advancement and competition were the main drivers for the motivation and satisfaction for men and the relationship and customization were the main drivers for women in MMORPGs.

Thus, SNGs have more features that give satisfaction to both male and female users, compared to MMORPGs, and particularly, women tended to invest time and effort to decorate their space beautifully while playing the games. Hence, it is considered important to analyze the game-playing tendency and needs of SNG users by gender and develop various stories and patterns in order to ensure satisfaction of both genders. However, this study is limited compared to the quantitative studies because it conducted the qualitative study in order to identify the psychological state of female game users who had remained non-gamers thus far. Thus, preceding studies need to conduct quantitative studies using the analytical framework to research into the game-playing tendency of SNG users by gender.

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