Motivation of Gamers

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Abstract

The present article is devoted to the empirical study of game motivation among gamers. The study is conducted in two stages. The first is an interview (30 respondents) followed by the qualitative analysis of the respondents' answers and then it is a questionnaire (90 respondents) and factor analysis of the results. We have been able to identify and describe the main groups of the gamers' motives in videogames and compare them with other studies motivation.

Our research has shown that in video games, gamers are looking to meet basic personal needs such as the need for control and security, the need for belonging, the need for recognition and respect and even self-actualization. In the result of our research, we have established an empirical classification that divides motives into four main groups: story and exploration, intellectual and creative, social and destructive. Based on the results of the study, we can assert that computer games are a multi motivated activity and can play an important role in the development of the personality of gamers.

Keywords: Computer Games; Videogames; Motivation; Needs; Game Activity; Achievement Motivation; Personality Motives

Introduction

The development of digital technologies poses important tasks for scientists to study the impact of this new category of reality on people's lives [1,2]. One of the components of this new digital reality is computer games. Over the past decades, this type of activity has turned from a marginal hobby into a widespread hobby, especially among children and young people. There are millions of people in our world who play videogames, people of different ages and different nationalities. They spend millions of hours playing. What makes them play games? Why are games so attractive? Why do people prefer games to work, communication and other types of recreation? This fundamentally new kind of activity deserves close attention of psychologists, because it contains both the potential for development and the threat to the psychological well-being of users. Studies on the negative effects of computer games indicate that this preoccupation may be associated with increased tendencies to violence, the reduced psychological and physical well-being, reduced levels of achievement and productivity and the degradation of personal and family relationships [3-6]. At the same time, there are a number of studies that demonstrate the positive impact of computer games on the development of cognitive abilities of users [7,8] and other aspects of the human psyche. For example, there is evidence that games help fight depression [9]. It is important to study how computer games influence the psyche of a particular person and society as a whole, what are the psychological mechanisms of the player's interaction with the gaming cyber space and what causes such strong attractiveness of computer games for the users.

Computer games are very different both in content and in quality of game process. In fact, they have in common that they are all perceived by users as a "game" and, in all of them, the action takes place in the virtual space with which the user interacts via a computer

or other device. Moreover, different people prefer different types of games. Among game designers, there are various attempts to make classifications of players according to their gaming interests and preferences. The most famous is the Bartle classification [10], which divides players in multiuser dungeon (MUD) into four groups: "Killers" confronting with other players, "Achievers" striving for success in the framework set by the game, "Researchers" whose interest is the study of the game world and "Socializers" enjoying the cooperation and interaction with other players. Unfortunately, this classification is purely empirical and does not have any theoretical justification. In addition, it is limited to a certain class of games. In psychology, however, the issue of differences in the gaming motivations of players in computer games unfortunately has not been given due attention.

To find a psychological approach to this problem, we think, it is necessary to consider the issue more broadly and turn to the research of games in general and not just videogames.

Traditionally, games have always been considered a children's activity. In psychological literature most of the texts about playing are dedicated to children's games. This area has been actively studied for many years. When it comes to adult games, psychologists usually write about them mainly in the context of pathology. It may look like playing is an abnormal behavior for an adult. An adult should work, communicate, create a family and so on and spending time on games is considered frivolous, optional, or even deviant. Most psychological literature about adult games is devoted to ludomania, the gambling addiction, or the harmful effects computer games have users, or the way games make people less effective in real life. The studies that explore the positive role of adult games are often found outside of the psychological science-some say they belong in cultural studies [11].

But video games are played not only by children, but also by teenagers and adults.

This line of research linking the attractiveness of computer games with the quality of direct experience and experiences obtained during the game [12,13]. The theory of flow of M. Csikszentmihalyi serves as a theoretical model for this research [14].

The theoretical basis of another large number of works on this topic is the theory of self-determination of the motivation of Desi and Ryan [15]. These studies demonstrate that the pleasure received by players from computer games is the possibility of satisfying such basic needs in the game as the need for self-determination (autonomy), the need for competence and the need for interaction with other people [16].

Nick Yee, in his study, sets the goal of creating an empirical model of motivating of gamers. He does not proceed from any theoretical model of motivation [17]. He identifies three main groups of motivational factors for players in the MMO RPG: achievements, social interaction and immersion.

In the Russian psychological literature devoted to the motivation of gaming activities, the vast majority of works consider the game as an activity inherent exclusively in children's age [18-21]. The authors analyze the children games, while the games of adults remain behind the scenes. It is assumed that games disappear from the life of an adult person or remain as a kind of unimportant, optional rudiment that does not deserve research interest.

Most researchers hold by an opinion that some kind of universal "play need" or "play motivation" exists (and it is peculiar to children) and disappears away in a more adult age, giving way to others [21].

For the more careful analysis of game motivation we apply the approach implemented by Russian theorists within the course of the cultural-historical theory. In this approach the game is viewed primarily as a special activity, specific to the very childhood age and playing a huge role in the development of the child's motivational sphere [18,22,23]. Little attention is paid to the game of adults. It is assumed that with age, the place of leading activity is occupied by, first, studying and then productive work. The gaming remains something of an unimportant rudiment in the life of an adult and does not deserve a close attention of researchers. Nevertheless, the potential of this theoretical model seems to us to be significant enough to try to transfer it to the games of adults.

Another point that we have to take into account is that in the tradition that has its origins in the works of Vygotsky and Elkonin, the role-playing game of children is studied primarily and little attention is paid to other types of games.

Elkonin describes a children's game as "an activity that has all the kinds of compensation in its main content, behind which lies the child's tendency to break out of this vicious circle into the world of broad social relations" [18].

Not all the computer games are role-playing, in many of them the role-playing component plays a secondary roleand in some of them, it is completely reduced (for example, in puzzle games). Rather, the vast majority of computer games are "games with rules". However, Elkonin believes that games with rules are a consequence of the evolution of plot-role-playing games. And in the role-playing game of preschoolers, there are actually rules in an implicit and unspoken form. So in terms of psychological analysis, there is no fundamental difference between these types of games [18].

Vygotsky, in relation to children's games, notes the importance of studying the motives and needs of the child behind the game. Vygotsky considers the main reason for the emergence of children's play to be the inability of the child to realize in real life the-already-existing and urgent needs for him [22].

According to Vygotsky, there is no certain universal "play need" that would stand behind the children games. The need for playing arises from the contradiction between the awareness of one's desire and the inability to directly implement this desire in everyday life. Children at play use their imagination to create „make-believe" situations in which these needs are met and their personality grows and develops as they do so.

 We presume that this idea can be transferred to computer games and adult gamers. Our previous studies have shown that users of computer games vary greatly in their game preferences and enjoy different aspects of games [24]. Following Vygotsky and Elkonin, we assume that one of the main factors behind the popularity of computer games is that they provide users with the opportunity to satisfy needs and realize motivations, whose realization in their real everyday life is limited and difficult or insufficient. Thus, games are a multy motivated activity and different users will satisfy different needs through the game.

There are many attempts in psychology to describe the whole range of human needs and compile their classification. The Maslow's hierarchy of needs [25,26]. seems to be very promising as a theoretical model. We will not dwell on the hitherto controversial question about the hierarchy of these needs and the dependence of the development of the "higher ones" on the satisfaction of the "lower ones". Let us consider the system proposed by Maslow simply as a set of fairly broad categories that fully describe the motivational sphere of an adult formed personality.

In any case, before applying theoretical models, it is necessary to describe which aspects of the game activity are attractive and motivating for the users of computer games. This is what our research is about.

When constructing a research plan, we relied on the position of A.N. Leontiev that emotions are a form of mental reflection of the connection between activity and its motive [27]. Consequently, information about the aspects of the game activity causing the most positive emotional experience in players gives us reason to draw the conclusions about the motives underlying their game activity..

Materials and Methods

The study included two stages.

At the first stage we interviewed videogame players and asked them what aspects of gaming or in-game situations they enjoy most. The study involved 30 people at the age of 16 - 35 years old (the average age is 22 years old). All of them were active users of computer games for the last year, at least. The average gaming experience was 8 years.

The results of the interview were further subjected to qualitative analysis and content analysis.

At the second stage we created a questionnaire based on the results from interview and asked the respondents to quantify how important and how fun different in-game situations were.

The study involved 90 persons aged 13 to 26 regularly playing computer games.

Results
Interview data

In total, 146 semantic units (statements) characterizing the subjectively important and significant aspects of the game were received in the responses to the interview questions from the respondents. Many respondents spontaneously gave more than one answer to a question; some gave the same answer to different questions. Statements without specifying ("get pleasure", "rest", etc.) were not included in the number of analyzed ones.

Of these 146 statements, in the further analysis and expert evaluation, 128 units were assigned to one of the categories listed below; 18 statements were not suitable for any of them. These statements related to the aesthetic design of the game, specific features of the plot of the game or favorite characters familiar to the respondent from books or films, etc.

In the process of analyzing the data obtained in the interview, we identified the following main groups of the sources of pleasure from a computer game:

- The excitement of struggle and victory over the enemy. The most expressed was in the case of the game against another player, but it could also be found in single-player games.

- A sense of strength and capabilities. The player received these sensations from the actions by means of which he might change the game environment. The actions could be either creative (building game objects, making plot decisions that significantly affect what the story) or destructive (killing monsters or destroying the game landscape).

- Completion of action. Completing a quest, passing a level, collecting a complete collection of game artifacts, etc.

- The increase in strength/skills/abilities of a character or the development of a game object as you progressed through the game.

- Cooperation, productive interaction with other players. Feeling a part of the team acting as one.

- The investigation of the game world and the plot of the game. The interest in "what will happen if I do something".

- Role-playing-Immersion into the character and emotional involvement in events happening to him.

- Creation in the game world of something „mine", unique, according to his own design.

- The sense of control and predictability of the game situation. Confidence that quests were feasible, levels were passable, monsters were victorious - you just needed to find a way.

- Communicate with other players in game and beyond the game.

- Pride and joy for some game achievements, especially if the game is multiplayer and these achievements are visible to other players.

- The ability to „test yourself" - to perform a particularly difficult quest, to defeat a very strong opponent, to complete the level at the maximum difficulty. Sometimes, the players themselves created artificial challenges for the sake of these experiences.

- Calm relaxation and meditative state when playing simple games or performing simple game tasks.

- An opportunity to experiment with the game, test it, finding loopholes in the game mechanics and the program.

Questionnaire data

For the analysis of data of the questionnaire survey, we use the method of factor analysis (Varimax rotation). As a result, four major factors have emerged. The results of the factor analysis are shown in table 1 and 2.

Component	Initial eigenvalues			Rotation of the sum of squares loads		
	Total	% dispersion	resulting %	Total	% dispersion	resulting %
1	6,877	38,203	38,203	3,784	21,024	21,024
2	2,230	12,390	50,594	3,051	16,952	37,976
3	1,265	7,028	57,622	2,974	16,524	54,500
4	1,216	6,755	64,377	1,778	9,877	64,377

Table 1: *Explained cumulative variance.*

Story and investigation	Intellectual and creative	Cooperation-competition	Destructive
exploration of game world and story, making meaningful plot choices, building relationships with NPCs, developing characters / game objects playing simple mini-games	Puzzle solving, making collections, creating game objects using the player's own blue prints, getting achievements, playing simple mini-games	teamwork, victory over other players, high ratings; socializing with other players, getting achievements	Destruction of in-game objects, breaking the game rules and discovering exploits.

Table 2: *Meaningfull content of 4 factors.*

The first factor, which can be called „Story and research" includes such „sources of pleasure" as a study of the game world, making meaningful plot choices, interest in the plot, building relationships with non-player characters, the improvement of a character or game object and playing simple mini-games. We believe that this factor reflects aspects related to interaction with the virtual world of the game, assuming the role of the Hero responsible for other characters and the whole world, immersion in the game world and exploring it.

The second factor, which we call „Intellectual and creative," includes the pleasure of solving riddles and puzzles, collecting complete collections of game objects, creating and decorating game objects according to one's own plan, as well as getting achievements (icons for performing certain actions or achievements in the game) and play simple mini-games. This factor combines various types of pleasure from the actions themselves, from the process of achieving goals and carrying out activities.

The third factor "Social" or "Cooperation-competition" includes the pleasure of cooperative team play, victory over other players, ratings (success relatively to other players), communication with other players and getting achievements. This factor combines various types of social interactions with other players.

And finally, the last factor "Destructive actions" includes actions to destroy game objects and to cheat the rules of the game. We believe these motivations can be attributed to the attractiveness for players of the metagame position - "power over the game" expressed in the destructive form.

Three of the four factors, we have identified, describe interaction with the game as a whole, the virtual world of the game, its plot, game objects, or the game as a rule system. The third factor is associated with the interaction with other players and the game itself is only the background of this interaction or the way to implement it.

Discussion

The present study shows that the reasons behind the involvement of the players in gaming activities are very diverse. This confirms our hypothesis that a computer game is a poly-motivated activity, the motivation of players is irreducible to some kind of universal „game need" or just a „game motive". Based on Vygotsky's position that in the game, a person satisfy actual personal needs, whose satisfaction is difficult or impossible in the real world, we try to compare our results with one of the most well-known Maslow's classification of personality needs.

Satisfaction of basic physiological needs in a computer game is impossible. Using the method of expert evaluation, all the statements of the respondents regarding the perceived motives of the game are divided into categories formulated according to the theoretical ideas on the Maslow's classification of the motives and needs of a person.

The need for safety, control and the predictability of the environment: Statements in which users describe the game as the safe environment for experiments, the ability to control the situation, the clarity of the rules and the predictability of the results of actions fall into this category.

For instance, „In the game everything is simple and clear: friends are here, enemies are there, always know what to do". "If you have a quest in the game, it can be carried out. It is interesting if it is not immediately clear, but you are looking for a way and it definitely is. In extreme cases, you can read the manual or ask on the forum. "Even if I did something wrong and "died"- do not worry, I can try again and again until it works".

One may suppose that statements about destructive actions in relation to game objects or characters can also be assigned to this category, since destruction is one of the ways to assert power and control over the environment.

The need for affiliation and acceptance: This category include statements about the pleasure of working together with other players, mutual aid, the importance of belonging to a game clan/guild/group.

For example: "you are not alone there, we are a team", "it is cool when you helped some one and someone helped you and you really feel that they care about you".

The need for self-esteem, respect and achievements: Statements about the subjective importance of game achievements and the joy of them, the excitement of contest and the joy of victory, the recognition of your game achievements by other players.

Examples of statements: "The coolest thing is when there is a hard fight and you are already on the last hits and still manage to victory. And such: wow! I am cool!". "You get a difficult achievement and immediately give yourself a title for everyone to see," "look at the table and see your high rating and understand that you are the coolest of those below".

The need for self-actualization: In this category, we include statements about how the player sets additional tasks for himself, tries to expand his capabilities, find new ways to act in the game as well as the statements about the importance and pleasure of how the character's skills/abilities grow and develop or expand the range of possible actions and the sphere of influence of the player on the game reality.

For instance: „When a character finally gets a level and access to new spells, I just run for a while and apply them right and left because they are cool". "Sometimes I play hard without any saving. This is a risk and every time you do not know whether it is going work out. This is more real, you understand what you really can or not".

Our results show that in a computer game a person can "fell (in-play)" the satisfaction of the most of higher needs. That confirms our opinion that computer games are more than just a way of spending leisure time or the possibility of being disconnected from life problems for a while. In fact, they give the players the opportunity to live through situations and try themselves in activities that are inaccessible in everyday life, but important for the development of their personality.

The results of the second phase of the study enable us to identify four main groups of the players' motivations in the computer games. It is important to compare the resulting groups with the results of the research by Yee [17].

The summarized results of our research and Yee research are presented in table 3.

Achievement	Social	Immersion
Advancement Progress, Power, Accumulation, Status **Mechanics** Numbers, Optimization Templating, Analysis **Competition** Challenging Others, Provocation, Domination	**Socializing** Casual Chat, Helping Others, Making Friends **Relationship** Personal,Self-Disclosure, Find and Give Support **Teamwork** Collaboration,Groups, Group Achievements	**Discovery** Exploration, Lore, Finding Hidden Things **Role-Playing** Story Line, Character History, Roles, Fantasy **Customization** Appearances, Accessories, Style, Color Schemes **Escapism** Relax, Escape from Real Life, Avoid Real-Life Problems

Table 3: Subcomponents revealed by factor analysis grouped by the main component they fall under [17].

We see both similarities and differences in the resulting classifications.

As far as we can see, in contrast to the classification built by Yee, in our case all the points related to interaction with the other players fall into one group, including both competition and cooperative interaction. On the other hand, those components that Yee included in the "Immersion" group in our study clearly fall into two factors – story and investigation and intellectual and creative. In the Yee questionnaire, there are no items about destructive actions and breaking the rules. On the other hand, we do not include in our study the questions about technical aspects of the game, such as the quality of graphics or game mechanics.

The work of Yee was based on the classification of gamers by Bartle and Yee conducted his research on players in MMORPGs (Massive multiplayer online role-playing game). In our study, the respondents played a variety of computer games, from MOBA (multiplayer battle arenas) to visual novels. Moreover, many of our respondents regularly played the games of different genres and in interviews, they often noted that in different games they value and love different aspects of gaming activities. Thus, our model claims to be more versatile and universal, although undoubtedly it needs further improvement and inclusion in consideration of a wider range of aspects of the game activity.

It is also interesting to compare our factor model with some other classifications of motivations non-related to games in the virtual world. For example, the classification of the motives of the creative activity by Matyushkin [28], in which the author identifies three groups of motives: the motives of achievement, cognitive motives and self-actualization motives. We can see that these three groups of motives are also significant to computer gamers. This coincidence seems to us to be not accidental. Moreover, we can assume that computer games occupy the same place in in the lives of the people being not able to engage in creative work for one reason or another (in its narrow sense). They and are a kind of "virtual testing ground" where a person may go beyond the ordinary life and get experiences that are inaccessible in the their everyday environment. This is one of the functions of art in human life and in culture in general [29-33].

Conclusion

1. As a result of our research, we have established an empirical classification that divides motives into four main groups: story and exploration, intellectual and creative, social and destructive. It is noteworthy that computer gaming is a multi motivated activity, that is, the player motivations are not limited to a single universal "gaming motive" that encourages people to play.

2. The identified motives relate to a wide range of basic personal motivations. This data suggest that computer games play a much more important role in people's lives than merely entertainment and they can be a personal development resource. The possibility of experiencing situations inaccessible in the real life allows a person to obtain a subjective experience that may become a basis for the development of various personality traits. The next step in this research may be studying the relationship between individual gaming preferences and motivations and the characteristics of the motivational sphere of gamers'.

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