

Scheme of reasons and modifiers of aggression in MOBA games

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Computer games have become an important social and economic objects in recent decades. Online games are especially interesting in this vein since it is during the communication and interaction of players with each other that the most interesting phenomena, from the point of view of both developers and psychologists, appear. Over the past 20 years, games have also become a sports discipline. MOBA (Multiplayer Online Battle Arena) games have become one of the most popular eSports genres. However, this imposes an additional task on the game developers, because the key issue is the problem of combining the needs of professional and average players, which now does not have a clear solution. This is one of the reasons for aggression, which exists in MOBA games like Dota 2, League of legends, and, to a lesser extent, Heroes of the Storm [4, 5]. The last game is aimed more at average users, rather than experts, like the two previous games [3].

This research consisted of looking at replays of nonprofessional users and analysis of messages from games forums, which included complaints on aggression, destructive behavior, or game situation, to establish a common theoretical framework causes of aggressive behavior, as well as the creation of areas for recommendations to reduce the level aggression and the creation of a methodological basis for further researches.

For the concept of aggression, the definition given by Enikolopov was taken: aggression is purposeful destructive and offensive behavior that violates the norms and rules of coexistence of people in society, damaging the objects of attack (animate or inanimate), causing physical harm to people or causing them psychological discomfort (negative experiences, states of tension, fear, depression, etc.) [9]. The only drawback of this definition is the purposefulness of behavior, which can be understood as the conscious actions of an actor, but it would be more likely to consider purposefulness as a process to achieve a certain goal, by analogy with the frustration theory, bearing in mind that the goal will not always be the act of aggression itself or humiliation of the feelings of others, but satisfaction, including unconscious needs, or the original goals, standing before the onset of frustration.

Thus, 4 reasons and 5 modifiers of aggressive behavior were identified, the game features affecting them, and theoretical recommendations were created to reduce the influence of each of the selected factors.

Reason

1. High level of stress - depends on the level of cognitive complexity of the game, experience, time since the last cardinal update, goals of the party [2]. It can be reduced by switching the goal and motivation of the game behavior, providing detailed game statistics, and assistance in the analysis of errors [3]. Also, this aspect can be reduced by clear systems of roles in the game, the possibility of a direct communication if you need to take quick actions (which is not facilitated by turning off the voice chat).

2. Situation of frustration - in-game situations associated with their actions and the actions of other players. To reduce the level, it is possible to recommend providing a clearer system of

statistical game information, providing characters with the possibility of game forms of reducing aggression from the moment of death to the resurrection of the character.

3. Assessment of the situation as unlikely to achieve the goal - the solution to this problem is a more complete system of statistics. For example, to provide not the number of kills of teams, as the main criterion, but some visual, not digital ratio.

4. Expressed negative emotional assessment of the forecast of satisfaction of needs - a negative assessment of the forecast of satisfaction of needs will depend on the goals of the player and the forecast of game interaction. Additionally, this factor can be influenced by changing the system of losses at the key points of rating changes.

Modifiers:

1. Personal propensity for aggressive behavior (level of aggressiveness) is not considered, since the game does not have access directly to the player's personality traits.

2. Existing and used by the community norms of expression of aggression - the key problem of this modifier will be the lack of regulation of existing norms.

3. The high value of the result of the action - this factor depends on the game situation, and its decrease, in our opinion, may lead to less interest in the game process.

4. The remoteness in time of the previous situation of aggression - this factor is important especially for those games where the basic game situation does not change from game to game (ex. map, intermediate goals). The result can be a more rapid accumulation of tension and the transfer of aggression from a real aggressor in the past to a new goal or situation. The way out could be a series of methods to reduce the level of tension between games by both creating in-game ways to reduce aggression (chests - piñatas as in Fortnite) and switching attention (the main screen of the game as a window as in League of Legends).

5. Assessment of the possibility and cost of punishment - the solution to this problem will be a system of punishments and rewards, which will react to the actions of the player in the party, track his behavior in a series of games, and present rewards for correct and competent play actions or a positive attitude towards other players.

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