*The differences in social behavior between player-bases across multiplayer game genres.*

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*Abstract*— Social interactions are an integral part of the human experience. Online multiplayer games have acted as social networks to host these interactions for decades and have only been growing in popularity. This begs the question of what the clustering of social behavior of players in these networks looks like. To investigate this question, we are going to scrape player data from two online multiplayer games of different genres with [1] serving as our inspiration. We will perform our investigation through the following research questions 1) What are the various types of player-exhibited social behavior? 2) How does a player’s social behavior change over time, and 3) What are the differences in player social behavior between the two video games? We expect that a variety of social behaviors will be exhibited ranging from the lone wolf to the social butterfly. A lone wolf is a player with very few connections at all while a social butterfly is a player with many weak connections.

# Introduction (*Heading 1*)

Though online multiplayer games serve as an art medium, they can also foster a rich social environment for players depending on the genre of game they play.  Much like the study of social settings in the real world, it is possible to observe players’ interactions and behaviors in a virtual world.  Our hope is to distinguish player behavior types across genres based on behavior clusters as defined in [1] to answer the following research questions 1) What are the various types of player-exhibited social behavior? 2) How does a player’s social behavior change over time, and 3) What are the differences in player social behavior between the two video games?  We will be comparing the social behaviors among players between these two games in terms of the defined social clusters in [1].

# Related Work

Our first paper is Finding Your Social Space: Empirical Study of Social Exploration in Multiplayer Online Games by Chandra et al. [1] which analyzes the social behavior of Sony Everquest II over a four-week period. The paper addresses through the scraping of player logs, the sociability of players whether they play alone, with a small group of close friends, or a large group of more distant friends and how the social connections of the players change over time. The authors scraped the player logs of Sony Everquest II for player data to analyze change over time in the number of group sessions and the number of connections to other players. A great strength of the paper is the large amount of data used.

Guns, Swords and Data: Clustering of Player Behavior in Computer Games in the Wild by Drachen et al. [2] explores the social clustering of two games of different genres and the resulting differences in social behavior of the two games’ players. The paper compares different trackable features for players in two games. The problem that the paper seeks to address is social habits of game players in order to guide developers to create features that improve player retention.

Interaction Forms and Communicative Actions in Multi-player Games by Tony Manninen [3] suggests a level of immersion present in online games that facilitates a legitimate social environment.  Though this environment is limited by many aspects, social actions are still observable.  This paper identifies different player action types based on in-game interactions between the player base, which helps the developer better cater to the social needs of their players.

##### References

[1] A. Chandra,  Z. Borbora, P. Kumaraguru, and J. Srivastava.  “*Finding Your Social Space*: Empirical Study of Social Exploration in Multiplayer Online Games,” in 2019 IEEE conference on Advances in Social Networks Analysis and Mining, pp. 1072-1080, IEEE, 2019.

[2] A. Drachen, R. Sifa, C. Bauckhage, and C. Thurau, “Guns, swords and

data: Clustering of player behavior in computer games in the wild,” in

2012 IEEE conference on Computational Intelligence and Games (CIG),

pp. 163–170, IEEE, 2012.

[3] T. Manninen, “Interaction forms and communicative actions in multi-

player games,” Game studies, vol. 3, no. 1, p. 2003, 2003.

**RESEARCH QUESTION:** Online multiplayer video games serve as a form of entertainment, but also as a social network for genuine interaction between players. There exist many genres of online multiplayer video games and this leads to our question of how the variances of a game’s design and genre lead to a different clustering of players’ social behavior. To investigate this question, we are going to scrape player data from two online multiplayer games of different genres with [1] serving as our inspiration. We will perform our investigation through the following research questions 1) What are the various types of player-exhibited social behavior? 2)How does a player’s social behavior change over time, and 3) What are the differences in player social behavior between the two video games? We expect that a variety of social behaviors will be exhibited ranging from the lone wolf to the social butterfly. These are both terms defined in [1]. A lone wolf is a player with very few connections at all while a social butterfly is a player with a large amount of weak connections. We expect these behaviors to change slightly over time with many players developing a circle of a few strong connections. We expect the two video games of different genres to have player-bases that exhibit distinct social behaviors based on the game’s genre and design.