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WRIT 1133

23 May 2017

## Personality and Gaming Style: A Meta-Analysis

### Introduction

Within the massive multi-player online role playing game (MMORPG) collection, one game has garnered a large amount of attention from researchers: *World of Warcraft*. This is evidenced by the many studies that have been completed on many different aspects of the game. Previous studies include topics from game playing motivations to character creation motivations.

Player motivations have primarily been studied by Nick Yee, but there have been others as well. From these studies, it has been discovered that players do not necessarily have to fall into one category of player type ("Motivations of Play"). Character creation motivations have also been studied widely by researchers such as Katherine Bessiere et al. and these studies have provided insight into what factors go into creating a character in *World of Warcraft*. Yee also studied why people play World of Warcraft (On Therapy and Dependency), and this has shown that people play the game for many different reasons, and the reasons may not be so clear cut.

Even with extensive research on a variety of game and player related topics, some aspects of *World of Warcraft* still remain with very little research done pertaining to them. Among those topics includes the real life personalities of *World of Warcraft* players. A careful meta-analysis on the relationship between gamer personality and their gaming experience can

provide more comprehensive data. A careful meta-analysis on the relationship between gamer personality and their gaming experience can provide more comprehensive data. Towards this end, the current article analyzes five studies on this topic.

The first study that is included in this meta-analysis is “Personality and Character Selection in World of Warcraft” by Ian D. Mosley. This study examined how “character, faction, or server relates to players’ personality” (Mosley 57).

The second study examined in this meta-analysis is “Trait and Symptom Differences Between Factions in Online Gaming: The Vulnerable Side of Evil” by Emily Orr, Craig Ross, and Robert Orr. This study examined personality traits such as depressive and avoidant traits. They then incorporate this into problematic usage of the game and the factions, Horde and Alliance (Orr et al. 741).

The third study that will be examined is “Video Gamers and Personality: A Five-Factor Model to Understand Game Playing Style” by Anthony Bean and Gary Groth-Marnat. This study acknowledges that there is a lack of research for the personality element of choice of character specifics and primary game play style, so they set out to examine how personality relates to character choice (Bean & Groth-Marnat 29).

The fourth study that will be included is “Personality Profiles Associated with Different Motivations for Playing World of Warcraft” by Lindsay Graham and Samuel Gosling. This study discusses player motivations in relation to the Big Five Personality traits (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) (Graham and Gosling 190).

Finally, the fifth study that will be included is “Defining the Virtual Self: Personality, Behavior, and the Psychology of Embodiment” by Michael McCreery, S. Kathleen Krach, P.G.

Schrader, and Randy Boone. This study discusses the Big Five Personality traits and people's real world personalities affecting in game behavior (McCreery et al. 977).

### ***World of Warcraft***

*World of Warcraft* is a massive multiplayer online role playing game (MMORPG). In order to play, players purchase a subscription to the game through Blizzard Entertainment. Once they have access to the game, players create a character to represent them within the game. With this character they complete quests, kill monsters, run dungeons, and compete against other players to level up and become stronger.

When players create their characters, they first choose between two factions, the Alliance and the Horde, and their race. Within the Alliance faction players can choose to play as a Human, Dwarf, Gnome, Night Elf, Draenei, or Worgen. Within the Horde faction players can choose to play as an Orc, Undead, Blood Elf, Troll, Goblin, or Tauren. There is one race, the Pandaren, that can be played for the Alliance faction or the Horde faction.

After players choose their race, they choose their class. Classes include the Warrior, Hunter, Paladin, Rogue, Mage, Warlock, Priest, Death Knight, Shaman, Monk, Druid, and Demon Hunter. Each race can only choose from certain classes. For example, Night Elves can be Druids, but Humans cannot be Druids (Blizzard Entertainment).

### **Methods**

#### *Gathering Studies for the Meta-Analysis*

To find studies for this meta-analysis, Google Scholar and University of Denver's Compass database were used, along with a suggested study by a professor from the writing department at the University of Denver. Specific keywords that were used in the searches were

“personality” and “World of Warcraft.” These keywords were used to be able to find scholarly studies based on these topics, and specifically how these topics are related. In order for studies to be considered important and that they should be read in depth, they had to involve some sort of personality measure, whether that was a survey or interviews, and the studies had to have results that related these personality measures to some aspect of *World of Warcraft*.

Once these studies were read in depth and reviewed, common themes between the studies were sought out. After looking at many studies, a total of five were ultimately selected to be included in this meta-analysis.

#### *Methods of Chosen Studies*

In all the studies being analyzed, surveys were involved. In the Mosley study, a 172 item survey was administered on the university Qualtrics survey software. Thirty-two of these items were created by the researchers and 140 items were taken from the International Personality Item Pool (IPIP). The items created by the researchers were made specific to World of Warcraft. Within their survey, the Big 5 characteristics were used along with a subset of behavioral facets (Mosley 59).

Orr et al.’s survey was much different than the rest of the studies because the participants in this study took multiple surveys that took about an hour to complete. In this “battery,” there was a demographics questionnaire developed by the authors of the study, a questionnaire to assess players’ faction membership (i.e. Horde/Alliance) and establish basic *World of Warcraft* usage patterns, and several pre-existing measures of psychological traits and symptoms such as depressive personality traits, anxious personality traits, and avoidant personality traits (Orr et al. 740-741).

In Bean and Groth-Marnat's study, they used the Big Five Inventory, a demographics questionnaire, and a video game playing a preferences questionnaire (Bean & Groth-Marnat 30). Graham and Gosling's study was similar to Bean and Groth-Marnat's study. They also used the Big Five Inventory, along with a modified version of Nick Yee's "Motivation for Play in Online Games" survey, 3 new questions that they had made up themselves, and interviews (Graham & Gosling 190-191).

In McCreery et al.'s study, they used a short form of the NEO-FFI Personality Inventory along with a behavioral assessment checklist with partial interval recording, and participant demographic and interview questions (McCreery et al. 978). This was the only study to use this measure.

These studies are related because they all used various personality measures. A recurring measure that was used is the Big Five Inventory. These surveys are crucial parts of the studies, of course, because they provide the primary data for analysis.

There were 3,039 total participants across these five studies recruited in different ways. Mosley recruited 205 participants via postings on popular internet boards that were specific to World of Warcraft. The participants visited a URL for the online survey and were allowed to take it on their own time. To ensure ethics were followed, the participants were informed before the survey that their answers would be kept confidential and participation was totally voluntary. To achieve informed consent, participants were told the project was about explored themes and trends in character selection and play style in World of Warcraft. As an incentive, the participants were given the option to provide an email address so the completed project could be sent to them (Mosley 58-59).

In Orr et al.'s study, 33 participants were recruited whom expressed interest and were active World of Warcraft members at the time at a university. Once the participants had done this, they were emailed a link with log-in info to a survey that needed this info, even though it was on a public server. Each participant was given a unique identifier just in case they were disconnected from the survey. The participants completed the "battery" at their own leisure, and once they had completed the "battery," they were given partial course credit (Orr et al. 740).

In Bean and Groth-Marnat's study, 1349 participants were recruited through forum posts that were staggered throughout the day in 3-6 hour blocks with a maximum of 9 server posts per day. There was a link to a blog post included that explained the context of the study to achieve informed consent (Bean and Groth-Marnat 31-32).

In Graham and Gosling's study, 1413 participants were recruited through an ad on "WoW Insider," a popular news site for World of Warcraft (WoW) players. These participants filled out self-reports on motivations to play World of Warcraft and on their personality. Once they completed the survey, they were entered into a raffle for 25 gold, which is in-game currency (Graham & Gosling 190).

In McCreery et al.'s study, 39 participants sat in alternating computer terminals with headsets. They all played on identical computers. Participants first completed a demographic questionnaire about themselves. Then they completed the NEO-FFI Personality Inventory about themselves. After that, they played World of Warcraft and were recorded for the first 30 minutes of the 2 hours. Then, they completed a demographic questionnaire on their avatars.

Finally, they completed the NEO-FFI personality inventory on their avatars (McCeery et al. 977-978).

### **Results of the Studies**

Mosley's study compared in game to personality characteristics in their results section. It is important to note that although weak correlations were found, a larger amount of noncorrelations were found between personality traits and game choices. What he did find was that the joy of completing cooperative objectives positively correlated with extraversion, agreeableness, intellect, and dominance. These correlations were weak, but he still drew a distinction between those who play for cooperation and those who play for competition. Mosley also found that people who play for the joy of competition had correlates present in dominance, tolerance, leadership, masculinity, femininity, and narcissism. He also found correlations between tolerance, femininity, and narcissism scales and the amount of time engaged in player vs. player activity. Last but not least, it was found that a player's choice of faction is correlated with femininity (Mosley 60).

In Orr et al.'s study, they found that people who played Horde characters had more dependent traits relative to the people who played Alliance characters. They also found that Horde players had higher scores on all 3 problematic World of Warcraft usage scales. These scales consist of obsession, neglect, and control disorder (Orr et al. 742).

In Bean and Groth-Marnat's study, they found that females scored statistically significantly higher on agreeableness, neuroticism, and openness compared to males. The difference for agreeableness and openness was of average degree, and the difference for neuroticism between females and males was of a large degree. When a T-test was performed

to see if faction choice was significant between males and females, there was no significance shown (Bean & Groth-Marnat 32).

Graham and Gosling ran many statistical analyses. These analyses focused mainly on the Big Five Factors and their relation to gaming motivation profiles. For socialization motivated players, extraversion, agreeableness, neuroticism, and openness appeared to be high while conscientiousness appeared to be low. For achievement motivated players, extraversion and neuroticism were high while conscientiousness, agreeableness, and openness were low. For immersion motivated players, openness, neuroticism, and agreeableness were high while extraversion and conscientiousness were low. For leadership motivated players, extraversion, conscientiousness, and openness were high while agreeableness and neuroticism were low. Finally, for independence motivated players, openness was high while extraversion, agreeableness, conscientiousness, and neuroticism were low (Graham & Gosling 191).

In McCreery et al.'s study, they found that avatar personality in neuroticism, extraversion, openness, and conscientiousness did not predict in-game behavior. On the other hand, this means player personality predicted in-game behavior better than avatar personality. Agreeableness was also found to be significant in predicting in-game behavioral patterns (McCreery et al. 978-979).

### **Comparison Between Studies**

#### *Big Five Factors*

Comparing the results of these five studies, four of them explicitly mentioned looking at the Big Five factors and what they found in their results. In one study, playing cooperatively was found to have a weak correlation with extraversion and agreeableness (Mosley 60). This shows

a connection between playing style and personality. For example, if a person is highly extraverted and agreeable, then they probably find more enjoyment in the game by completing tasks that require other people to help.

The above study relates to Bean and Groth-Marnat's study, where they studied the gender differences of personality relating to World of Warcraft players. Female players were found to score higher on extraversion, agreeableness, and neuroticism (Bean and Groth-Marnat 32). This could point towards females potentially playing more for the cooperation aspect than the competitive aspect when applying these principles to Mosley's study.

Cooperative playing and competitive playing are different styles of play, but what motivates people to play this way? How is this connected to their personality? In Graham and Gosling's study, they looked at how Big Five factors and motivation intertwined. Since socialization motivated people had high levels of extraversion, agreeableness, neuroticism, and openness, while conscientiousness was low (Graham & Gosling 191). It makes sense that these are the people who most likely play cooperatively. In terms of achievement motivated people, extraversion and neuroticism were high and conscientiousness, agreeableness, and openness were low (Graham & Gosling 191). When this is applied to how someone might play the game, they could be a mixture of both cooperative and competitive. An example of this may be a player who will run dungeons with others to obtain the gear they want, but they are only doing this to fulfill their goal, not because they want to play with other people. The people who were motivated by leadership had high levels of extraversion, conscientiousness, and openness with low levels of agreeableness and neuroticism (Graham & Gosling 191). When applying this to play style, a person may have a mixed style of play between cooperative and competitive.

They know what they want, what they're goal is, how to reach that goal, and how to talk to people. This leads to them getting what they want because they know how to interact with people in ways that will get them there. People who played to achieve their own independence had high levels of extraversion, while extraversion, agreeableness, conscientiousness and neuroticism were low (Graham & Gosling 191). When this is applied to play style, this would most likely be a person who plays competitively. This person probably has no interest in playing with other people, hence the independence, which leads to the person trying to get through the game without the help of other people.

An important issue that only one study looked at was avatar personality compared to player personality. McCreery et al. tried to find which Big Five factors were important in predicting in-game behavior, or in other words, playing style, in relation to the avatar's personality and the player's personality. They found that the only significant factor in avatar personality that affects gameplay is agreeableness. As a result, this showed that player personality was more important in predicting in-game behavior (McCreery et al. 978-979). From this finding, it can be assumed that no matter how a player creates their character, their own personalities is what affects how they behave in the game. This relates to all of the previous studies discussed in this section because it strengthens the findings that were found about how important player personality is when it comes to playing style.

#### *Other Personality Factors*

Although the Big Five personality traits are the most well-known, there are still other traits that are just as important when it comes to a person's playing style in World of Warcraft. For example, in Mosley's study, cooperative playing style was also correlated with intellect and

dominance (60). A person who is cooperative is probably low on dominance because they want to get ahead by playing with others who will help them and who they will help. They also found that people who play for competition also had correlates in dominance, tolerance, leadership, masculinity, and femininity (Mosley 60). A person who is competitive probably has higher levels of dominance and masculinity and lower levels of tolerance and femininity. This makes sense because these traits are usually grouped together and in terms of power, masculinity and dominance are more closely associated to being competitive than femininity and tolerance.

### *Personality and Faction*

A couple of the studies selected for this meta-analysis discussed personality relating to which faction (Alliance or Horde) a person would choose and which personality traits those players tended to have relative to the players who belonged to the other faction.

One study that looked at this was Orr et al.'s study. They found that people who played Horde characters had more dependent traits and had more problematic usage of World of Warcraft (Orr et al. 742). This relates to Mosley's study, which found that femininity is correlated with players' choice of faction (60). These two studies relate because the appearance of the characters within the Horde faction look more "evil" relative to the appearance of the characters within the Alliance faction. This shows some players may be choosing which character they play based on physical appearance. This also shows how people may relate to their characters. For example, the people who use World of Warcraft problematically may have issues in their personal lives that they feel they can deal with by playing the game. This could also lead to them choosing the faction that is seen as more problematic, which happens to be the Horde, because they can identify with their issues.

## Conclusion

There are many different factors that go into how one plays World of Warcraft. After looking at many studies, personality has been shown to be an important factor time and time again. From the Big Five factors to the smaller facets of personality, such as masculinity and femininity, every aspect plays into how a person creates a character and how that person uses that character.

Like any study, this meta-analysis had limitations. For example, the studies used in this meta-analysis study many different topics within personality such as faction in relation to Big Five characteristics and player motivations in relation to Big Five characteristics and other personality characteristics as well. The selection of studies allows for certain conclusions to be made that may not necessarily apply to the entire population of *World of Warcraft* players.

Further research that could be done after looking at these studies is to look at how personality and age relate to how a person plays World of Warcraft. This could give insight as to how people play depending on the developmental stage they are at. This could also give insight as to how life experiences affect a person's personality and how they will play *World of Warcraft*.

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