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Personality and Player types in Fallout New Vegas

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ABSTRACT
The aim of this study was to explore the relationship between personality and videogame player types. Study participants completed an online survey that gathered information regarding the individual’s personality, via the Big Five Inventory, and player types. The study was focused on understanding this relationship in the context of the action role-playing videogame, Fallout New Vegas (FNV). A relationship between personality and player type was found, specifically with respect to the personality traits of openness to experience and conscientiousness.

Author Keywords
Videogames, Personality, Player types, DGD1, Five-Factor Model.

ACM Classification Keywords

General Terms
Human Factors; Theory; Measurement.

INTRODUCTION
This paper examines the relationship between personality and player type, with the aim of better understanding why different people are attracted to different types of games and approach gameplay in different ways. An individual’s personality impacts on their attitudes and how they behave in the real-world [6]. Therefore, it stands to reason that there may be a link between people’s choices, actions and behaviours as they play games, and their personality. Understanding this link will enable us to better design games to suit a wide range of personalities.

The current research aims to establish a relationship between personality and the first demographic game design model (DGD1). The DGD1 was originally linked to personality using the Myers-Briggs Type Indicator (MBTI) [2]. The MBTI is a personality inventory based on Jung’s type theory [5]. We present a study that investigates the relationship between the DGD1’s player types and personality trait theory using the Five-Factor Model (FFM) of personality [4].

Player Types
Three key models of videogame players have been established in the literature. Bartle’s [1] player types model identifies four primary categories of players (achievers, explorers, socialisers and killers) and describes their motivations and resulting play styles. However, the underlying assumptions of the model have not been empirically tested and the player types have not been shown to be independent and valid. Weber and Shaw [7] created six player types – Hedonists, Competitors, Rebels, Team Players, Organisers and Socialisers – based on a number of behavioural elements including incentives, self-regulation and temperament. The DGD1 model, as an alternative, identifies four clusters of play styles (across games) and is linked to particular personality types drawn from the MBTI [2]. Our research builds on the DGD1, as the player categories provide a solid foundation for examining personality in relation to player styles. It should, however, be noted that the study conducted to develop the DGD1 model was exploratory and the author’s acknowledge the need for further research around these player types [2].

The DGD1 model identifies four categories of players’ in game preferences and behaviours [2]. These player types are the Conqueror, Manager, Wanderer and Participant types. Each player type is associated with particular personality traits using the MBTI [2]. Conqueror types players play to win and are highly goal orientated [2]. Conquerors are not overly concerned with story or characters, and prefer advancing rapidly through a game. Once they begin a game, Conqueror type players are compelled to finish it. This player type is associated with MBTI preferences thinking and judging. Manager type players play for strategic, logic or tactical challenge [2]. These players are process-oriented and are focussed on mastery. While Managers enjoy honing their gaming skills, they will give up if a game becomes too difficult. Manager types are associated with MBTI preferences of feeling and perceiving. Wanderer type players play for fun, unique experiences [2]. These players enjoy trying new things, but will not play a game if they’re not having fun. Wanderers tend to become emotionally invested in the characters in a games story. This player type is associated with the MBTI preferences of feeling and perceiving. Participant type players are story-oriented [2]. They desire to participate in and control the game’s story with their actions, and wish to create an emotional connection with the characters. Like Conqueror types, Participants are willing to persevere with
a game rather than give up. They enjoy playing games as a part of a social experience. Participant types are associated with the MBTI preferences of feeling and judging.

**Five-Factor Model of Personality**
The current study explores how the FFM can be mapped to the DGD1 player types and, in turn, whether these connections can be supported empirically. The five-factor model of personality was chosen over the MBTI on the basis that the FFM has been shown to perform more reliably [5]. The five-factor model is comprised of extraversion, agreeableness, openness to experience, neuroticism, and conscientiousness [4]. Each domain is made up of a number of different facets or personality traits.

Extroversion refers to an individual’s regard for their social and material environment. Those with high extroversion will often take the lead and are outgoing in social situations [4]. Within the big five inventory (BFI), a self report measure of design to measure the FFM, extroversion’s facets include assertiveness and activity [5]. Agreeableness is associated with individual’s general regard for others [4]. Those who report high agreeableness often think the best of others [4]. Agreeableness’ BFI facets include altruism and compliance. Conscientiousness is related to an individual’s goal or task-based orientation [4]. Those with high conscientiousness scores tend to follow rules, and will often plan, organize and prioritize tasks [4]. Conscientiousness’s BFI facets include self-discipline and order [5]. Neuroticism is an individual’s tendency for negative emotionality [4]. Individuals with high neuroticism scores often feel anxious, nervous and sad [4]. The BFI’s neuroticism facets include anxiety and depression. Finally, openness to experience refers to an individual’s originality, and the complexity of their experiences and thoughts [4]. Those who report high levels of openness to experience often look for new experiences that break routine and have inventive ideas [4]. The BFI’s openness to experience facets include aesthetics and ideas.

It is these individual personality traits that enable us to predict how the domains of the FFM may be related to the DGD1’s player types. Our research takes an explorative approach to discovering the relationships between player types and personality. Rather than creating formal hypotheses we identified a number of possible relationships based on the conceptual mapping of the DGD1 player types to BFI personality facets (as shown in Table 1). To formulate these connections we used basic DGD1 player type descriptions. For example, the Conqueror plays a game “right to the finish” and enjoys “sticking with” game challenges. These attributes map to the goal-oriented and self-discipline attributes of conscientiousness. The striving for mastery through “strategic and tactical” gameplay of Managers similarly maps to the rule following, planning and organization activities of people with high conscientiousness.

<table>
<thead>
<tr>
<th>Player Type Description</th>
<th>BFI Domain and Facets</th>
</tr>
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<tbody>
<tr>
<td><strong>Type 1. Conqueror:</strong> I enjoy a challenge and the feeling of triumphing over adversity. I can be very patient with frustrating situations, as I know if I stick with it, I will be victorious. When I start a game I will play it right to the finish.</td>
<td>Positive Conscientiousness</td>
</tr>
<tr>
<td><strong>Type 2. Manager:</strong> I am generally looking for a strategic or tactical challenge. I am interested in the mastery of the game – that is, the process-oriented challenge of learning how to play well. Winning is to some extent meaningless to me if I have not earned it.</td>
<td>Positive Conscientiousness</td>
</tr>
<tr>
<td><strong>Type 3. Wanderer:</strong> I am in search of a fun experience. Whereas other players may be looking for a challenge, I am looking for fun, or an experience. I won’t play a game I’m not enjoying, and will in fact stop playing the moment it ceases to be fun.</td>
<td>Positive Extraversion (Activity)</td>
</tr>
<tr>
<td><strong>Type 4. Participant:</strong> I am very story-oriented and enjoy playing games as a social experience. I wish to participate either in the story the game is offering, or participate with other players in some emotional context.</td>
<td>Positive Extraversion</td>
</tr>
</tbody>
</table>

Table 1: Conceptual Connections between the DGD1 player types and the domains of the BFI

**METHOD**
As an initial exploration of the relationship between the five factor model of personality and the DGD1, we decided to focus our study on one particular videogame. The Bethesda game, FNV, was chosen for the study as it can be played in a variety of ways and has the potential to appeal to players of each of the DGD1 types.

**Study Participants**
Study participants were recruited through online forums and social networking pages dedicated to FNV. Overall, 113 participants began the online survey, while 67

1 To avoid confusion, participants refer to people in the study and we use Participants when referring to player type.
participants completed the player type and personality sections. Of those who completed the relevant sections, 84 per cent were male. The average age of respondents was 23.25 years of age, their ages ranged between 14 and 53 years.

Procedure
An online survey was devised to capture player information regarding participants’ personality and play behaviours in FNV. The survey was distributed on six online forums and two social networking pages. The survey contained the big five inventory [3,4] and a section that required participants to select from one of four brief player type descriptions (as shown in Table 1) based on the four DGD1 player types.

Personality Measure
The Big Five Inventory (BFI) was used to measure the FFM domains [3,4]. The BFI measures respondents’ scores in each domain (extroversion, agreeableness, openness to experience, neuroticism and conscientiousness) by quantifying their responses regarding a number of individual facets. The measure is comprised of 44 self-reported items; each item requires the respondent to indicate on a 5-point scale the extent to which a characteristic accurately describes them, for example, “is talkative”, “gets nervous easily” [3,4].

The reliability of each domain scale was assessed. Each domain’s individual Cronbach’s Alpha scores are as follows, extroversion = .82, agreeableness = .72, neuroticism = .83, conscientiousness = .83, and openness to experience = .66.

RESULTS
A between-subjects multivariate analysis of variance was performed on 5 dependent variables (scores on extraversion, agreeableness, conscientiousness, neuroticism and openness to experience via the BFI). The independent variable was player type (Conqueror, Manager, Wanderer or Participant types). There were no univariate or multivariate within-cell outliers at p<.05. Results of evaluation of assumptions of normality, homogeneity of variance-covariance matrices and multicollinearity were satisfactory [6]. With the use of Wilks’ criterion, the combined DVs were found to be significantly related to player type, F(15, 157.75) = 2.058, p <.05. This indicates that there is a significant difference in personality scores across the four player types. To assess which of the individual personality scores were related to player type, tests of between-subjects effects were conducted. Both conscientiousness (F(3,61)=6.335, p<.01) and openness to experience (F(3,61)=3.025, p<.05) were found to vary across player types. To identify which player types were significantly different from one another in conscientiousness and openness to experience, post-hoc Scheffe tests were used to compare the mean personality scores for each player type group. As shown in Figure 1, Conquerors (x=3.69) reported significantly higher levels of conscientiousness than Participants (x=2.73, p<.001); and Managers (x=3.48) reported significantly higher levels of conscientiousness than Participants (x=2.73, p<.05). Also, Participants (x=3.97) reported significantly higher levels of openness to experience than Managers (x=3.5, p<.001) (Figure 2).

DISCUSSION
The results suggest there is a relationship between BFI-conscientiousness and players who identify with the Conqueror, Manager and Participant type of play. According to the results, players who relate to either the Conqueror or Manager types are likely to report significantly higher levels of conscientiousness than those who identify with the Participant type of play. This finding supports the conceptual mapping made in Table 1 in terms of confirming high levels of conscientiousness among Conquerors and Managers.

Conqueror type players are goal-oriented with an interest in beating the game and achieving their gaming goals [2]. Our results suggest that the Conqueror style of play relates to the conscientiousness personality trait, which most likely reflects this trait’s facets of self-discipline and goal-orientation. While Conquerors are goal-oriented, Managers are process-oriented players and play to master the game [2]. This process-oriented play may relate to conscientiousness from a planning, organizational and task-oriented perspective, as this player type strives to be successful at gameplay experiences. Unlike Conqueror and Manager types, Participant type players are not interested in actions such as achieving goals or mastering the game; they play for the story and the characters. Our results suggest that these players show lower levels of conscientiousness. In summary, those with high levels conscientiousness are significantly more likely to prefer strategic, task-oriented and/or goal-oriented play, which relates to the Manager and Conqueror styles of play. Players with lower levels of
conscientiousness are likely to derive enjoyment from the story and characters in a game.

Our results also suggest that players who identify themselves as Participant type players are likely to report higher levels of openness to experience than players who identify themselves as Managers. Participant type players are story-oriented players who show interest in a game’s characters and wish to control the story through their actions [2]. These preferences may show a regard for complexity of experiences, which is behaviour associated with high scores in openness to experience. The research conducted by Bateman and Boon [2] suggested that Manager type players are likely to quit playing games if they get too difficult; in other words Managers will no longer enjoy the game if it goes beyond their comfort zone. In relation to personality, individuals with low openness to experience may become uncomfortable with new or out-of-the-ordinary experiences. In sum, our results suggest that those players with high openness to experience are likely to prefer games where they can control the story, vary the outcome of the narrative and other Participant related play preferences. While those with low openness to experiences are likely to prefer games with set challenges and difficulty and other Manager related play preferences.

Our results only partially support the theorised relationships between personality and player types shown in Table 1. This may reflect errors in terms of our theorized connections, limitations with our study (see below), or the need for further changes to the DGD1 model. It is not possible to tell from this initial exploratory research which explanation is the most likely to be correct. Further research (as described below) will shed further light on these questions.

**Study Limitations**

As the survey was promoted on online gaming forums there is a possibility of sampling bias, as those who frequent these online forums may represent the most enthusiastic and dedicated members of a gaming community. In order to gather a wide range of data about gamers of a single community and to adhere to time constraints, this study focused on players of FNV. Doing so limited the sample size and reduced the relevance of the findings beyond FNV. In order to assess the reliability of the data across the wider gaming community, a study examining a greater number of games and gaming genres is required.

As there is no validated measure of the DGD1 player types, Participants were asked to select their player type based on simple descriptions. This method was based on the assumption that individuals can select their own player type; however, it must be acknowledged that this may not always be the case. It is also important to recognise that the DGD1 has not been validated and that the authors have called for further validation of the model [1].

**CONCLUSION**

This study successfully establishes a relationship between personality and player types. By identifying a relationship between conscientiousness and Conquerors, Managers and Participants, as well as openness to experience and Participants and Managers, we are able to develop assumptions about how personality influences the play styles that people bring to a game like FNV. Such findings have implications for game researchers and developers alike, as we strive to better understand the players experience and the factors that influence engagement and enjoyment. While this study has shown a significant relationship between player types and personality within FNV, it is important that results of the study are tested using different games with a wide variety of genres. Moreover, a more valid connection between player types and personality may be possible in future research by exploring and analysing participants’ actual in game behaviours and choices. Additionally demographic characteristics (such as hours of play, etc) should be explored as possible variants.

**REFERENCES**