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The HEXACO model of personality and video game preferences ☆

Virgil Zeigler-Hill *, Sean Monica

Oakland University, United States

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ABSTRACT

Personality dimensions are associated with preferences for various recreational activities. The present study examined whether personality dimensions differed in their associations with preferences for particular aspects of gaming experiences. We examined the unique associations that personality dimensions had with gaming preferences reported by 359 community members who were active gamers. The basic personality dimensions captured by the HEXACO model of personality were found to be associated with gaming preferences. For example, extraversion was found to have a moderate association with the socializer gaming preference (i.e., enjoyed interacting with others while playing) and a weak association with the daredevil gaming preference (i.e., enjoyed the thrill of taking risks in games). Discussion focuses on the implications of these results for understanding the connection between personality and preferences for gaming experiences.

1. Introduction

Playing video games (or "gaming") is an extremely popular recreational activity in many parts of the world [20,38]. Nearly 50% of households in the United States have at least one video game console [18]. The earliest video games (e.g., *Pong*) often focused on a single principle of play and catered to a specific style of play which was due, at least in part, to the technological and creative limitations of the past. The sophistication of video games has increased dramatically during recent decades with improved graphics, innovations in interactivity, greater flexibility, and more compelling storylines that allow players to more easily immerse themselves in the games. In today's marketplace, there are various types of video games that are intended to appeal to consumers with different kinds of preferences including first-person shooter games, strategy-based games, massive multiplayer online games, sports games, driving games, and adventure games. Each of these types of video games may contain elements that may be attractive to certain types of gamers. The goal of the present study was to examine whether basic personality dimensions were associated with gaming preferences.

Personality dimensions play a vital role in shaping how individuals respond to various experiences including video games (e.g., [9,44,49,50]). For example, gamers tend to report higher levels of extraversion, openness, and conscientiousness than non-gamers [48]. In addition to personality differences between gamers and non-gamers, it is important to note that personality dimensions are associated with the extent and nature of play among gamers. Individuals who report problematic video game playing patterns tend to possess higher levels of neuroticism and lower levels of agreeableness, conscientiousness, and extraversion [13,26,42]. Bean and Groth-Marnat [9] found that personality dimensions were associated with the style of play that gamers preferred in a massive multiplayer online role-playing game (i.e., World of Warcraft). More specifically, gamers who preferred the Player vs. Player style reported higher levels of extraversion and emotional stability but lower levels of openness than gamers who preferred Player vs. Environment or Role-Playing styles. Chory and Goodboy [12] found that individuals with higher levels of openness and lower levels of agreeableness played violent video games more frequently than other individuals. Taken together, these findings suggest that personality dimensions may be associated with preferences for particular types of gaming experiences.

Individuals with a wide range of personality traits play video games but it is believed that they may do so for somewhat different reasons (e.g., [36]). Previous studies have attempted to link personality dimensions with gaming preferences and satisfaction with gaming experiences but the results of those studies have been inconsistent (e.g., [8,49]). A possible explanation for this inconsistency is that reports of personality dimensions in a gaming context may differ from those obtained in other contexts [49]. As a result, it has been argued that studies concerning the links between personality and gaming preferences should focus on models that capture

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* Corresponding author at: Department of Psychology, Oakland University, 212A Pryale Hall, Rochester, MI 48309, United States.
E-mail address: zeiglerh@oakland.edu (V. Zeigler-Hill).

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playing styles rather than trying to adapt psychological instruments for use in gaming contexts (e.g., [39]). There have been a number of attempts to develop a taxonomy of gaming preferences that capture motivations for playing, expectations for games, and the kinds of gaming dynamics and results that are enjoyable (e.g., [6,7,36,50]). A recent set of gaming preferences developed by Nacke et al. [36] identifies seven types of preferences. *Seekers* report that they enjoy exploring things and discovering their surroundings. *Survivors* enjoy frightening scenes and the excitement that is associated with escaping from scary situations. *Daredevils* enjoy the thrill of taking risks in games. *Masterminds* enjoy solving puzzles, making decisions, and developing strategies. *Conquerors* enjoy struggling to overcome difficult challenges. *Socializers* enjoy interacting with others. *Achievers* enjoy completing tasks and achieving goals. Although it is unclear whether these are actual "types" in the classic sense (see [23], for an extended discussion of this basic issue), we believe that the gaming preferences identified by Nacke et al. [36] have the potential to contribute to our understanding of the motivations that lead individuals to play video games despite the fact that research concerning these gaming preferences is still in its earliest stages.

1.1. Overview and predictions

The goal of the present study was to examine the associations between basic personality dimensions and gaming preferences in order to develop a clearer understanding of what gamers enjoy about video games in general. We used the HEXACO model of personality [3] to capture the basic dimensions of personality. The HEXACO is a six-factor model that includes variants of the Big Five dimensions of personality (e.g., [14,17,22]) as well as an honesty–humility dimension that captures the degree to which individuals exhibit fairness, sincerity, and modesty. In this model, emotionality captures the extent to which individuals are susceptible to negative emotional states (e.g., worry, anxiety). Extraversion reflects characteristics such as sociability, dominance, and talkativeness. Agreeableness includes traits such as friendliness, warmth, and cooperativeness. Conscientiousness is characterized by attributes such as carefulness, self-discipline, and reliability. Openness captures qualities such as curiosity, imaginativeness, and originality. Three of the HEXACO dimensions (i.e., extraversion, conscientiousness, and openness) closely resemble their Big Five counterparts, whereas emotionality (which is equivalent to "neuroticism" in the Big Five model) and agreeableness reflect slightly rotated versions of their Big Five counterparts [4,30].

It is important to examine the connections between basic personality dimensions and the gaming preferences described by Nacke et al. [36] because those preferences were developed using the Myers-Briggs typology (e.g., [35]) as a basis. The fundamental claim of the Myers-Briggs typology is that people can be divided into 16 personality types that are determined using four basic dimensions each of which consists of two opposing preferences (i.e., Extraversion vs. Introversion, Sensing vs. Intuition, Thinking vs. Feeling, Judgment vs. Perception). Although the Myers-Briggs typology is still quite popular in some areas (e.g., career counseling), there is a broad consensus among scholars that the Myers-Briggs Type Indicator fails to meet many of the standards expected of psychological tests including issues as basic as being a reliable and valid test (e.g., [16,24,33,43,46,47]). These serious concerns about the Myers-Briggs typology do not necessarily undermine the utility of the gaming preferences developed by Nacke et al. [36] but these concerns suggest that it would be beneficial to examine whether there are connections between these gaming preferences and a model of personality – such as the HEXACO – that has a substantive research foundation. Thus, the present study may provide a bridge that links the immense literature concerning basic personality dimensions with the recently developed BrainHex gaming preferences which has only received very limited empirical attention so far.

We expected emotionality to be negatively associated with the daredevil preference. The rationale for this prediction was that individuals with high levels of emotionality may be uncomfortable with the sensation-seeking aspects of the daredevil preference (e.g., [21]). We believed that extraversion would be positively associated with the daredevil and socializer preferences because extraversion is closely linked with sensation-seeking and sociability (e.g., [11,21]). We expected conscientiousness to be positively associated with the achiever preference because conscientiousness is often the most important predictor above and beyond cognitive variables in explaining individual differences in academic and occupational performance (e.g., [29,40]). We thought openness to experience would be positively associated with the seeker preference because openness has been shown to be closely associated with curiosity and a desire to explore (e.g., [27]). We did not have specific predictions for honesty–humility or agreeableness but we included these personality dimensions for exploratory purposes and reportorial completeness.

2. Method

2.1. Participants and procedure

Participants were 359 community members from the United States who were recruited using online gaming forums (e.g., Origin, Steam, IGN). Participants (268 men, 84 women, 7 undisclosed) were asked to complete measures concerning basic personality dimensions and gaming preferences via a secure website. The mean age of the participants was 25.11 years (SD = 8.27) and their racial/ethnic composition was 79% White, 8% Asian, 4% Hispanic, 2% Black, and 7% other. All of the participants were active gamers with 79% of the sample reporting that they played video games at least 9 h per week. Further, the sample included a sizable number of participants who were extremely active in their gaming activities with 26% of the sample reporting playing video games more than 25 h per week.

2.2. Measures

2.2.1. Personality dimensions

The HEXACO-60 [3] was used to assess basic personality dimensions. The HEXACO-60 is a 60-item measure designed to assess six basic dimensions of personality: *honesty–humility* (10 items; e.g., "I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed" [α = .73]), *emotionality* (10 items; e.g., "I sometimes can't help worrying about little things" [α = .83]), *extraversion* (10 items; e.g., "In social situations, I'm usually the one who makes the first move" [α = .84]), *agreeableness* (10 items; e.g., "I rarely hold a grudge, even against people who have badly wronged me" [α = .82]), *conscientiousness* (10 items; e.g. "I often push myself very hard when trying to achieve a goal" [α = .77]), and *openness to experience* (10 items; e.g., "I would enjoy creating a work of art, such as a novel, a song, or a painting" [α = .77]). Participants were asked to rate their level of agreement for each item using scales that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The HEXACO-60 has been found to possess adequate psychometric properties in previous studies (e.g., [3]).

2.2.2. Gaming preferences

The BrainHex survey [36] was used to assess gaming preferences. The BrainHex survey is a 21-item measure designed to