

Relating Five Factor Personality Traits to Video Game Preference

Christina deGraft-Johnson
CDJ1109@gmail.com

Yu-Chi Wang
yuchiwang021@gmail.com

Michael Bradlee Sutherland
michaelbradlee@gmail.com

Kent L. Norman

Department of Psychology and the Human-Computer Interaction Laboratory, University of Maryland,
College Park, MD
klnorman@umd.edu

ABSTRACT

This study examined the relationships between a person's scores on the Five Factor Personality Inventory with (a) how much they liked and (b) how difficult they found it to play four different genres of video games (fighting, racing, dancing, first-person shooter). It was hypothesized that there would be a correlation between personality factors and which genres of games people preferred to play. Participants played one of two games from each genre and filled out the Five Factor Personality Inventory and ratings of their liking and perceived ease for each game. Conscientiousness was negatively correlated with perceived ease of first-person shooter games. Extraversion was positively correlated with both liking and perceived ease of dancing games. Agreeableness was positively correlated with liking of dancing games.

INTRODUCTION

Since the advent of video games over forty years ago, there has been a greater variety of video games as well as an increasing number of

different types of people playing them. This increase has led to an interest in finding out what might influence people to play certain games. The researchers observed that certain people tended to play specific genres and that they would play more similar games to those with similar personalities. Thus, we wanted to see what personality factors influence gameplay.

Previous research studies have proposed a link between a person's personality and his or her motivation for playing online games (Jeng & Teng, 2008), a connection between personality and online gaming addiction (Mehroof & Griffiths, 2010), and an association between personality and frequency of violent video game play (Chory & Goodboy, 2011). Scholars have claimed various reasons as to what would cause a person to start playing games. These reasons include, but are not limited to, situational factors, maintaining self-esteem, need for achievement, and escapist tendencies (Hartmann & Klimmt, 2006).

In looking at the literature surrounding video game research, we found only one study involving personality and genre. One of the variables studied by Ventura, Shute, and Kim (2011) was game genre preference in relation to the personality factors of openness and conscientiousness; they found a number of significant correlations. In our present study, we wanted to consider a more comprehensive look at all five factors of personality in relation to not only game genre preference but also perceived ease. Identifying which personality traits correlate to specific genres “may explain why individuals react very differently to the same media content” (Chory & Goodboy, 2011). This research may better help individuals pick games that they could be more interested in playing and help video game producers better target specific audiences.

We believe that a person’s personality factors will be correlated to their video game preference. In order to determine video game preference we will look at genre selection. We will measure genre selection through liking and ease ratings for specific games.

H1: There will be significant correlations between the scores of the Five Factor Personality Inventory with a person's liking of a specific genre

H2: There will be significant correlations between the scores of the Five Factor Personality Inventory with a person's perceived ease of a specific genre

METHOD AND MATERIALS

Participants

Participants were undergraduate students receiving research credit for psychology classes at the University of Maryland. In addition, participants were recruited from two psychology classes, which had a mixture of graduate and

undergraduate students, and a few from personal contacts, who were also undergraduate students.

To evaluate the feasibility of running four different genres in two hours, we pilot tested the study with three participants. These participants indicated that they had ample time to play four games and fill out the surveys. In total, we ran 67 participants but excluded the three pilot testers from the data analysis. In addition, in order to control for the amount of times each game was played (31 times) we randomly omitted two participants that had the same experimental conditions. Our analysis of the data was on the remaining 62 participants (26 females and 36 males; 37 Caucasian, 14 Asian, 9 African American, and 2 Mixed; mean age = 21.02 years [$SD = 2.31$]).

Measures

The Five Factor Personality Inventory.

The Five Factor Personality Inventory measures personality using five opposite dimensions of personality. These dimensions are Openness to Experience versus Closedness to Experience, Conscientiousness versus Lack of Conscientiousness, Extraversion versus Introversion, Agreeableness versus Hostility, and Neuroticism versus Emotional Stability (Bakker, Van Der Zee & Lewig, 2006).

Openness to experience – The openness factor includes being curious, intelligent, and imaginative. “High scorers tend to be artistic and sophisticated in taste and appreciate diverse views, ideas, and experiences” (Golbeck, Robles, & Turner, 2010). In addition, “those with a high openness scores prefer varied stimuli and are open to ideas, various aesthetic and intellectual experiences, and are willing to try a variety of activities” (Krcmar & Kean, 2005).

Conscientiousness – Those high in conscientiousness factor includes people who are responsible, organized, and persevering. “Conscientious individuals are generally

extremely reliable and tend to be high achievers, hard workers, and planners” (Golbeck et al., 2010).

Extraversion – According to Bakker et al. (2006) “extraversion is characterized by a tendency to be self-confident, dominant, active, and excitement seeking. Extraverts show positive emotions, higher frequency and intensity of personal interactions, and a higher need for stimulation.”

Agreeableness – “Altruism, nurturance, and caring as opposed to hostility, indifference to others, self-centeredness and noncompliance characterize agreeableness” (Bakker et al. 2006). People who are agreeable are cooperative, helpful and nurturing. These people are peacekeepers with an optimistic outlook and a strong sense of trust in others (Golbeck et al., 2010).

Neuroticism – “Neuroticism is characterized by individuals’ susceptibility to worry, anxiety, anger, and general emotional instability” (Markey and Markey, 2010). In addition, neurotic people are typically nervous, self-conscious, impulsive, and vulnerable (Krcmar & Kean, 2005).

Video Game Genres

Although there are many video game genres, we focused on four specific and discrete genres for our study; dancing, racing, fighting, and first-person shooter. In addition, time constraints were a factor in choosing the games/genres. We wanted to make sure that participants had enough time to immerse themselves in the games. The four genres were chosen based on whether they could leave an impression on the gamer after only playing for 20-30 minutes. Below are the definitions of the four genres:

Dancing - A dancing game is a video game that involves the player engaging in a dance as the main objective accompanied by music and a set of dance moves or steps for the player to follow. Dancing games may incorporate only movement of the feet or the movement of the

entire body. With technological advances, dancing games have been brought from the arcade into people’s homes. Dancing games of the past, for example *Dance Dance Revolution* and *In The Groove*, are played using dance mats. But now, with the Kinect for the Xbox 360 and the Wii Motion sensor for the Wii, the gamer’s body is the only thing needed to play these games.

Racing - A racing game’s main objective is the manipulation of a vehicle, usually a car, that recreates the driving experience. Gameplay is typically experienced through a predetermined race course. The game can be experienced in a first person or third person perspective. Gameplay can be placed in real world league or fantasy settings.

Fighting - Fighting games typically emulate one-on-one combat. Generally, fighting games require the player to use different combinations of buttons to engage in combat, typically either hand-to-hand or by using weapons. There is a lot of choice with which character to use, as different characters have different specialties or styles of fighting and which stage to play on, but generally the players do not interact with the background. Originally this was done in 2D, so there would be one player on each side of the screen and they could move around and they could battle until one of the players ran out of the health. This genre has expanded to many 3D games still with 2 players as well as up to 4 person combat.

First-person shooter (FPS) - Gameplay involves using a weapon to shoot targets whether they are people, aliens, or objects. Many first person shooter games mimic real life combat, though some have fantasy elements. Typically, the player experiences the game through the eyes of a character in the game. The gameplay’s main design element is combat with multiple weapons. Often times, FPS games take place in a free roaming 3D environment that can

sustain damage. In addition to utilizing a weapon, melee combat tactics can be used.

Apparatus and Materials:

In the study, we utilized two gaming consoles - the Xbox 360 with the use of its Kinect accessory and the PlayStation 3. In order to extend the generalizability of our conclusions of people liking certain genres and their ease of playing, we selected two games per genre. The games administered for the Xbox 360 were *Just Dance 3*, *Dance Central 2*, *Halo 3*, and *Call of Duty: Modern Warfare 2*. For the PlayStation 3, the games were *Tekken Hybrid*, *Soul Calibur IV*, *Grid*, and *Burnout Paradise*.

Procedure:

After participants entered the lab, they were instructed to fill out the consent form presented before them on a computer. Upon completion of the consent form, they then completed the Five Factor Personality Inventory (See Appendix A). Next, they were told that they would be playing a series of video games for a minimum of 20 minutes each. Participants were assigned beforehand to their specific conditions using a random number generator. These conditions determined which of the two games per genre the participant would play and in what order they would play the four different games. Immediately after playing each game, the participants completed a brief survey rating how much they enjoyed the game and their perceived difficulty of the game (See Appendix B). For this survey, we included multiple questions regarding both ease and liking to ensure validity of these measures. These responses were averaged to find an overall score for ease and liking for each game. Upon completing the final survey after the fourth game, the participants filled out a demographic information page. Finally, they were presented with our debriefing form and were asked if they had any questions (See Appendix C).

RESULTS

The primary intent of this study was to test whether there would be significant correlations between a person’s score on each of the different Five Factors and how much he or she preferred to play different genres of video games. Preference was measured by both a self-reported score for enjoyment and a self-reported score for ease for each of the games. To analyze the data, we first paired each participant’s score on each of the Five Factors with their rating of ease and liking of each of the four video game genres. Then, we found the correlation for each of these. We performed both a Pearson correlation test and a Spearman correlation test between each of the Five Factors and liking and ease of each genre. Table 1 lists the four correlations that were significant for both Pearson’s and Spearman’s.

There was a statistically significant moderate negative relationship between conscientiousness and ease of playing an FPS $r(61) = -0.415$, $r_s(61) = -.381$, $p < .01$. This indicates that people who scored lower on conscientiousness reported higher ease when playing FPS (See Figure 1).

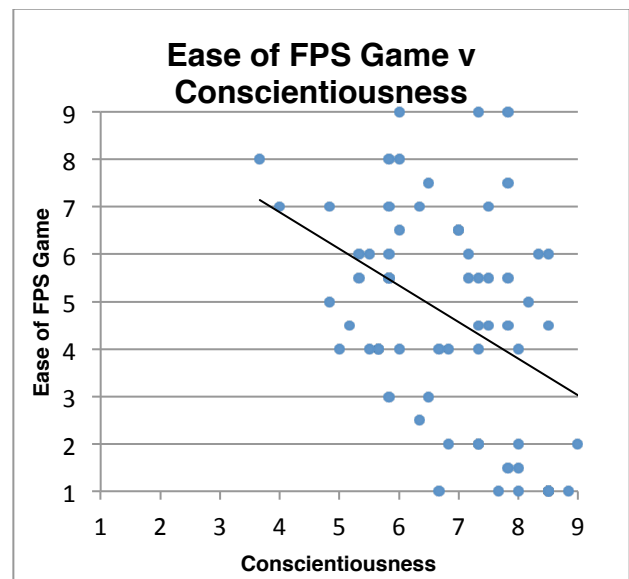


Figure 1.

There was a statistically significant positive Pearson correlation between extraversion and ease of dancing games, $r(61) = 0.298, p < .05$, as well as a statistically significant positive Spearman correlation, $r_s(61) = 0.292, p < .05$, indicating that those who scored higher on extraversion also reported higher ease on dancing games (See Figure 2).

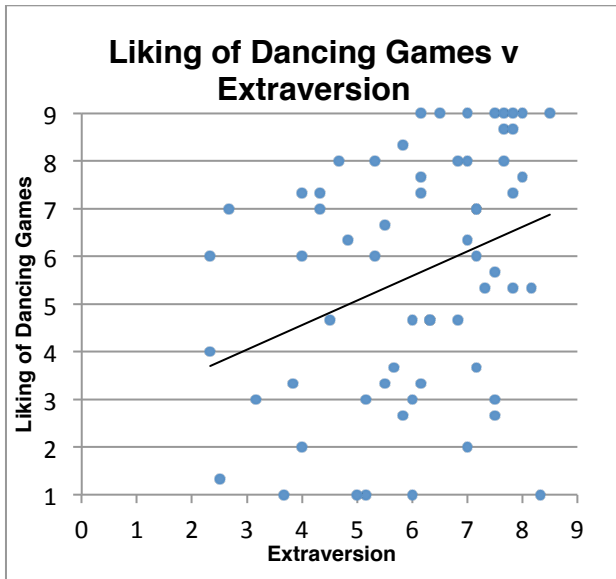


Figure 2.

There was also a statistically significant moderate positive relationship between extraversion and liking of dancing games $r(61) = 0.328, p < .01$ found in the Pearson correlation test and the Spearman correlation test $r_s(61) = 0.363, p < .01$, indicating that those who scored higher on extraversion reported a higher liking of dancing games (See Figure 3). Agreeableness and liking of dancing were also positively statistically related $r(61) = .273, r_s(61) = .288, p < .05$. (See Figure 4).

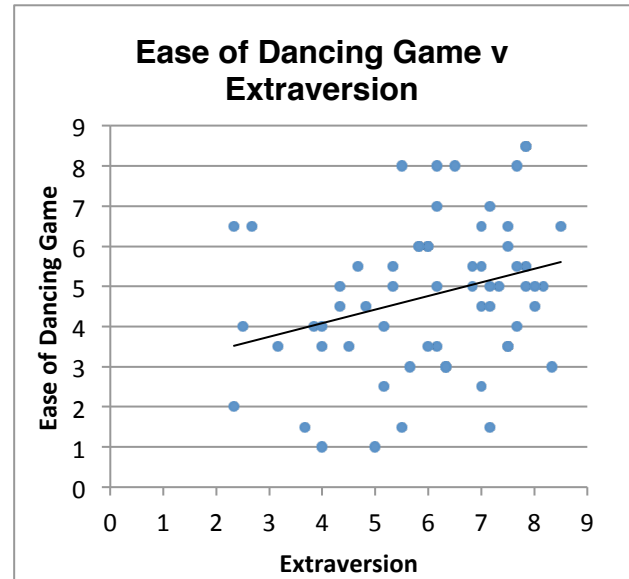


Figure 3.

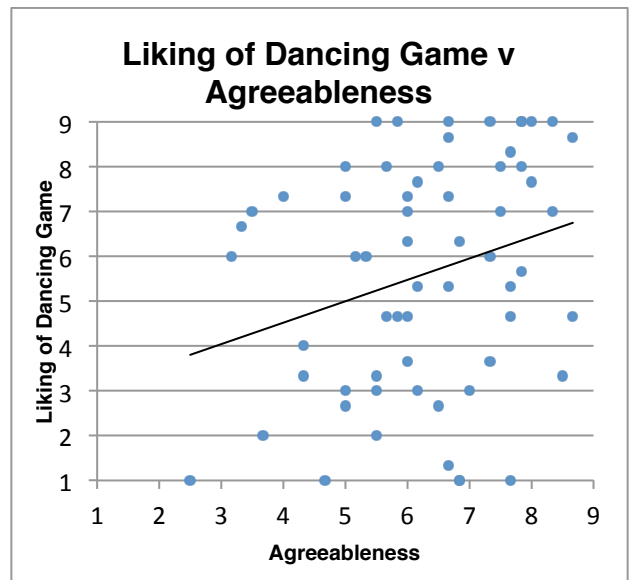


Figure 4.

All other correlations were not found to be statistically significant (See Table 2 for complete table of correlations and significance levels).

Additionally, we considered the correlations between liking and ease of playing within each genre. In all four cases, there was significance as shown in Table 2, but the magnitudes of the

relationships were statistically different. Racing and fighting genres showed weaker relationships between liking and ease of play while first-person shooter and dance games showed very strong relationships between liking and ease of play.

Finally, we looked at the marginal means between the categories for both ease and liking. Figure 5 shows the relationship between the average means for ease and liking respectively. The difference between means for liking was not significant $F(168)=1.583, p > 0.1$. The difference between the means for ease was significant $F(176)=18.325, p < .01$.

DISCUSSION

We hypothesized that there would be a relationship between the personality of a gamer and what genres of video games they would prefer playing. We found four correlations that support our hypothesis.

Openness to Experience. Research has shown that people high in openness would be able to master new skills easily. These people should be able “to solve problems creatively, inspiring trust and assisting their game character development” (Teng, 2008). The four genres we chose did not appear to have much character development as a main objective in the game, which may be the reason we did not find significant data on this factor.

Conscientiousness. We found a negative relationship between conscientiousness and the perceived ease of FPS games. Many FPS games require a mastery of maze-like environments to achieve strategic war objectives (Montag et al., 2011). The direction of this correlation is surprising because previous research has shown that “high-conscientiousness individuals have a strong motivation to learn and learn things

carefully, facilitating their mastery of skills and the upgrading of their capabilities. They can also efficiently do routine work and learn new knowledge systematically with patience” (Teng, 2008). There are several possibilities for this inverse relationship. First, the nature of FPS games is that they are difficult to master. If one is attempting to achieve a mastery of skills and play a perfect game, the FPS genre is not an option. Second, the FPS genre involves combat and destruction, not necessarily something that a conscientious person would want to do. Finally, it must be remembered that we are dealing with a prototypical video game genre that is probably more closely aligned with the negative endpoints of the scales: careless, disorganized, undependable, negligent, weak willed, and lazy.

Extraversion. The extraversion factor was found to be positively correlated with both liking and perceived ease of dancing games. People high on extraversion draw their energy from being in social situations. Because dancing games are based upon real life dancing, which is an inherently social activity, this may explain the tendency for those higher in extraversion to enjoy this genre. This is consistent to what research has shown. “High-extraversion individuals generally engage in interpersonal interaction and enjoy such activity. They have a strong motivation to learn and learn things actively and energetically, facilitating their mastery of new skills and the upgrading of their capabilities. They are also energetic and ambitious, allowing them to accomplish tough tasks” (Teng, 2008). On the other hand, people exhibiting sober, quiet, and reserved traits would likely not prefer putting their dance ability on display.

Agreeableness. Agreeableness and liking of dancing games was also positively statistically related. This relationship seems to be in part due to the predominantly non-violent nature of

dancing games. Individuals low in agreeableness tend to exhibit aggressive or hostile tendencies and prefer violent media, possibly as a suitable outlet for such characteristics (Chory & Goodboy, 2001; Krcmar & Kean, 2005), the lack of violent facets, such as guns and gore, in dancing games may not appeal to them.

Neuroticism. There were no significant relationships between neuroticism and ease or liking of any of the specific game genres. People who are highly neurotic tend to exhibit worrisome behavior, often feeling self-conscious and high strung. It is important to note that video game entertainment achieves its goals through curiosity, suspense, and surprise (Vorderer, Bryant, Pieper & Weber, 2006). Therefore, neurotic people may not enjoy this form of entertainment, because they are insecure and nervous.

Study limitations / Future directions

The current study is limited in a number of ways. Although the sample of 62 was sufficient to detect relatively large correlations, a larger sample size would have provided more statistical power to detect smaller correlations. The sample was not necessarily representative of the general population of those who play video games since 85.48% of our participants were university students between the ages of 18-22. While we had 1.6% of our participants younger than this age group and 12.9% older than this age group, there was not a strong representation of the gaming population as a whole.

The study included four genres of video games and consequently may have missed genres that would have shown to be related to personality factors. Moreover, only two games were selected to represent each of the genres. In reality, there is considerable variability among games within genres than between them. There

are many sub-genres within a genre that could affect the tone of a particular game very differently such as a racing game with an ‘open world’ and a racing game without that aspect.

In the future, researchers should look into doing a more in depth analysis with a wider selection of genres. Though we picked a diverse group of games, there are many other genres that could show significant results. In addition, researchers should look at the variety of games within a specific genre and test for ease and liking correlations to personality factors. This would give researchers the opportunity to test the generalizability of our conclusions with different games within the genre.

For the post-game survey, we asked questions regarding ease and liking of the games. We wanted to see whether certain personality traits affected not only how much a person liked a game but also if this would affect how easy they perceived the game to be. With this we also had to consider the possibility that liking of a game and ease were linked more closely together and were actually influencing one another rather than the personality traits, e.g. we did not want someone to like a game just because it was easy or vice versa, since this would have no relationship to personality. Thus, we looked at the correlation between the participants’ rating of how much they liked a game and how easy they found the game for each of the genres. For each of the genres, there was a significant positive relationship between ease and liking. This poses a potential limitation in our interpretation of the results, especially because the highest correlations of ease and liking were between dancing games (ease and liking were correlated at .59) and first person shooter games (ease and liking correlated at .703), which were both games that we found were correlated with certain personality traits. There is no way that we can say for sure that it was either. However,

if it were just the ease that affected the liking (or vice versa), we would have expected to see a similar relationship for each of the genres, which we did not.

In addition to asking our participants to express their preferences about their liking and ease of each game, we asked them if they had ever played their randomly assigned games before. From our data we had found that:

- 29 participants had played one or the other first person shooter games (*Modern Warfare 2* – 15; *Halo 3* – 14).
- 14 participants had played one or the other dancing games (*Dance Central 2* - 6; *Just Dance 3* - 8).
- 4 participants had played one of the racing games (*Burnout Paradise* - 4).
- 16 participants had played one or the other fighting games. (*Tekken Hybrid* - 7; *Soul Calibur IV* - 9).

As many of our participants reported previous experience with one or more of these games, previous game play presents as a possible moderating variable. Just having played a particular game before as well as the degree to which they may have played a game(s) could have influenced their ratings of ease and/or liking. For future research, it is important that all participants have similar gaming experience to obtain more accurate data.

Lastly, two thirds of our participants listed cellphones as one of their sources of game play. While in the past, cell phone games mimicked what was available on PC and arcade games (*Tetris*, *Pac-Man*) they currently have taken leaps forward and have branched off into their own category of game play. Because these games are constantly being created with the advent of the app stores, future research should look into the affects cell phone games play on video game preference.

REFERENCES

- Apperley, T. H. (2006). Genre and game studies: Toward a critical approach to video game genres. *Simulation & Gaming*, 37(1), 6-23.
- Bakker, A., Van Der Zee, K., & Lewig, K. (2006). The relationship between the big five personality factors and burnout: A study among volunteer counselors. *The Journal of Social Psychology*, 146(1), 31-50.
- Chory, R., & Goodboy, A. (2011). Is basic personality related to violent and non-violent video game play and preferences?. *Cyberpsychology, Behavior, and Social Networking*, 14(4), 191-198.
- Golbeck, J., Robles, C., Turner, K. (2010) *Predicting personality with social media*. Manuscript submitted for review. <http://hcil.cs.umd.edu/trs/2010-30/2010-30.pdf>
- Hartmann T, Klimmt C. (2006) The influence of personality factors on computer game choice. In Vorderer P, Bryant J, eds. *Playing video games: Motives, responses, and consequences*. (132–52). Mahwah, NJ: Lawrence Erlbaum.
- Jeng, S., & Teng, C. (2008). Personality and motivations for playing online games. *Social Behavior and Personality*, 36(8), 1053-1060.
- Krcmar, M., & Kean, L. (2005). Uses and gratifications of media violence: Personality correlates of viewing and liking violent genres. *Media Psychology*, 7, 399-420.

- Markey, P., & Markey, C. (2010). Vulnerability to violent video games: A review and integration of personality research. *Review of General Psychology, 14*(2), 82-91.
- Mehroof, M., & Griffiths, M. (2010). Online gaming addiction: The role of sensation seeking, self-control, neuroticism, aggression, state anxiety, and trait anxiety. *Cyberpsychology, Behavior, and Social Networking, 13*(3), 313-316.
- Montag, C., Flierl, M., Markett, S., Walter, N., Jurkiewicz, M., & Reuter, M. (2011). Internet addiction and personality in first-person-shooter video gamers. *Journal of Media Psychology, 23*(4), 163-173.
- Norman, K. (2010). Development of instruments to measure immerseability of individuals and immersiveness of video games. Tech. Rep. http://lap.umd.edu/LAP/Papers/Tech_Report_s/LAPDP2010TR03/LAPDP2010TR03.pdf
- Teng, C. (2008). Personality differences between online game players and nonplayers in a student sample. *CyberPsychology & Behavior, 11*(2), 232-234.
- Vorderer, P., Bryant, J., Pieper, K., & Weber, R. (2006). Playing video games as entertainment. In P. Vorderer & J. Bryant (Eds.), *Playing video games – Motives, responses, and consequences* (pp. 1-7). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Appendix A: Five Factor Personality Test

Extraversion

	1	2	3	4	5	6	7	8	9	
Sober	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fun loving
Reserved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Affectionate
Quiet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Talkative
Retiring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sociable
Unfeeling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Passionable
Loner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Joiner

Openness

	1	2	3	4	5	6	7	8	9	
Conventional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Original
Simple	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Complex
Unadventurous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Daring
Narrow interests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Broad interests
Uncreative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Creative
Down to earth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Imaginative

Agreeableness

	1	2	3	4	5	6	7	8	9	
Ruthless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Soft-hearted
Suspicious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Trusting
Callous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sympathetic
Antagonistic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Acquiescent
Critical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Lenient
Vengeful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Forgiving

Conscientiousness

	1	2	3	4	5	6	7	8	9	
Careless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Careful
Disorganized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Well-organized
Undependable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Reliable
Negligent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Conscientious
Weak willed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Self-disciplined
Lazy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hardworking

Emotional Stability

	1	2	3	4	5	6	7	8	9	
Worrying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Calm
Nervous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	At ease
Insecure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Secure
Self-pitying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Self-satisfied
Self-conscious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comfortable
High-strung	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Relaxed

Appendix B: Post-Game Liking/Ease Likert Questionnaire

Video Game Survey: Game 1

Please get the video game attendant to start the game for you.

Enter the name of the video game :

Select Game

Record Start Time of Game

Record End Time of Game

1. Have you played this game before? No Yes

	Not at all							Very much	
	1	2	3	4	5	6	7	8	9
2. How difficult do you think this game is?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. How well do you think you did on the game?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. How much do you enjoy playing this game?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. How likely would you play this game again?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. How interested would you be in playing other games like this?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Other comments about the game:

Appendix C: Demographics survey

Section 1: Demographic Information

1. In what year were you born: 2. Gender: Female Male

3. Racial Identity (Check all that apply):

 African American/Black Asian/Pacific Islander Caucasian/White Hispanic Native American Other:

4. Dominance:

Which hand do you favor when you write, throw a ball, eat, etc.?

 Left Right

When you put your hands together with your fingers interlaced, which thumb is on top?

 Left Right

5. What are your hobbies and interests?

6. What type of video games do you play? Please check all that apply.

 Action/First-Person Shooter (007, Halo, Call of Duty) Adventure (Zelda, Monkey Island, Super Mario Bros.) Board/Card Games (Uno, Chess, Monopoly) Dancing (Dance Central, Dance Dance Revolution, Just Dance) Exercise (Zumba, WiiFit) Fighting (Tekken, Mortal Kombat, Soul Calibur) MMORPG (Massively Multiplayer Online Role Playing Game) (World of Warcraft, Fable, StarCraft) Music (Guitar Hero, DJ Hero) Puzzle (Professor Layton, Tetris, Bejeweled) Racing (Grand Turismo, Mario Kart, Need for Speed) RPG (Role Playing Game) (Final Fantasy, Kingdom Hearts) Simulation (Sims, SimCity) Sports (Top Spin, Madden, FIFA) Strategy (Age of Empire, Command & Conquer, Civilization) Other: None

7. Through what sources do you play video games? Please check all that apply.

 Play Station (2 or 3) Nintendo Wii Nintendo Gamecube XBox Nintendo DS/i/3 PSP Smartphones (Android/iPhone/Blackberry) PC (Windows or Mac) Online Web browser (e.g. Facebook, other websites) Video Game Arcade Machine Other:



8. Please list up to three games that you really like.

9. On average, about how many hours do you play video games per week?

10. Is there anything else that you would like to share about you as a gamer and your background?

Table 1

Correlations between Different Personality Factors and Ease and Liking of Each Game Genre

Personality Variable	Liking/Ease	Genre	r	P-value
Openness	Ease	Fighting	0.131	0.309
Openness	Liking	Fighting	0.103	0.427
Openness	Ease	Dancing	0.086	0.505
Openness	Liking	Dancing	0.026	0.844
Openness	Ease	First-Person Shooter	-0.126	0.327
Openness	Liking	First-Person Shooter	0.024	0.852
Openness	Ease	Racing	-0.015	0.909
Openness	Liking	Racing	-0.127	0.325
Conscientiousness	Ease	Fighting	0.144	0.265
Conscientiousness	Liking	Fighting	-0.05	0.701
Conscientiousness	Ease	Dancing	0	0.997
Conscientiousness	Liking	Dancing	-0.11	0.395
Conscientiousness	Ease	First-Person Shooter	-.415**	.001
Conscientiousness	Liking	First-Person Shooter	-0.212	0.097
Conscientiousness	Ease	Racing	-0.181	0.159
Conscientiousness	Liking	Racing	-0.116	0.37
Extraversion	Ease	Fighting	0.144	0.265
Extraversion	Liking	Fighting	-0.05	0.701
Extraversion	Ease	Dancing	.298*	0.019
Extraversion	Liking	Dancing	.328**	0.009
Extraversion	Ease	First-Person Shooter	-0.181	0.159
Extraversion	Liking	First-Person Shooter	0.002	0.988
Extraversion	Ease	Racing	-0.005	0.97
Extraversion	Liking	Racing	-0.042	0.748
Agreeableness	Ease	Fighting	0.152	0.24
Agreeableness	Liking	Fighting	-0.038	0.77
Agreeableness	Ease	Dancing	0.047	0.716
Agreeableness	Liking	Dancing	.273*	0.032
Agreeableness	Ease	First-Person Shooter	-0.081	0.534
Agreeableness	Liking	First-Person Shooter	-0.045	0.729
Agreeableness	Ease	Racing	-0.098	0.45
Agreeableness	Liking	Racing	0.018	0.89

Neuroticism	Ease	Fighting	0.089	0.492
Neuroticism	Liking	Fighting	0.01	0.936
Neuroticism	Ease	Dancing	0.048	0.71
Neuroticism	Liking	Dancing	-0.001	0.997
Neuroticism	Ease	First-Person Shooter	-0.013	0.919
Neuroticism	Liking	First-Person Shooter	0.009	0.946
Neuroticism	Ease	Racing	-0.147	0.254
Neuroticism	Liking	Racing	-0.073	0.573

* Correlation is significant at the 0.05 level (two-sided)
 ** Correlation is significant at the 0.01 level (two-sided)

Table 2
 Significant Correlations between Different Personality Factors and Ease and Liking of Each Game Genre

Table 1						
<i>Significant Correlations between Personality Factors and Ease and Liking of Each Game Genre</i>						
Personality Variable	Liking/Ease	Genre	r	P-value	r _s	P-value
Conscientiousness	Ease	FPS	-.415**	0.001	-.381**	0.002
Extraversion	Ease	Dancing	.298*	0.019	.292*	0.021
Extraversion	Liking	Dancing	.328**	0.009	.363**	0.004
Agreeableness	Liking	Dancing	.273*	0.032	.288*	0.023

Notes: * Correlation is significant at the 0.05 level (two-sided)
 ** Correlation is significant at the 0.01 level (two-sided)

Table 3
 Correlations between Participants' Ease and Liking Ratings of Each Game Genre

Game Genre	r	P-value
Fighting	0.275*	.031
Dancing	0.595**	< .001
First-Person Shooter	.703**	< .001
Racing	0.251*	.049

* Correlation is significant at the 0.05 level (two-sided)
 ** Correlation is significant at the 0.01 level (two-sided)