RELATIONSHIP BETWEEN PERSONALITY TRAITS AND SUBJECTIVE WELL-BEING: EVIDENCE FROM THE ONLINE GAME PLAYERS

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ABSTRACT

According to the survey report of DFC Intelligence, there have been over 110 million online game players in 2006 worldwide. The quantity of online game grows six-fold. DFC Intelligence also predicts that worldwide online game revenues will reach $9.8 billion by 2009. Therefore, online game becomes the mainstream of recreation. On the other hand, it is important to understand the personality traits of the consumers in that industry. This study researches the relationship between the personality traits and subject well-being. The object of study is the “online game” adolescent players. The scope of study is Taipei, the metropolis of Taiwan, and questionnaire has been adopted in the cyber cafe shops. A systematic sampling produced 134 usable questionnaires to be used for the final data analysis. Multiple regression analysis has been adopted to study the causal relationship between personality traits and life satisfaction of the online game players. The result shows that neuroticism and agreeableness have significant negative influence on life satisfaction. Openness has significant positive influence on life satisfaction. Though extraversion and conscientiousness do not have significant correlation with life satisfaction, their influence still accords with the assumption in this study. Finally, implications for leisure practice and further research are discussed.

Keywords: Personality Traits, Subjective Well-being, Online Game

Acknowledgments:
The support of Ministry of Education is acknowledged.
Background

According to the forecast from DFC Intelligence, the global output value of online game in 2006 grows to 5,200 million US dollars, and will reach 9,800 million US dollars in 2009. According to the statistics from Institute for Information Industry, the population of online game in Taiwan accounts for 40% of all internet users and exceeds 3 million people. According to the figure from online game dealers, there are over 450,000 users connect to the internet playing online game in Taiwan during peak hour. Therefore, online game becomes the mainstream of recreation. The growth of online game market is closely related to the popularization of broadband network. According to the “Survey on internet usage in Taiwan 2004” from Yam.com, the utilization of broadband in Taiwan has been over 90%. It is clear that each family can connect to internet rapidly and connect life with the virtual world. With the globalization of broadband in the coming future, when there are online game players everywhere in the world, our real life will certainty be affected.

In the past, online game is only the product of cyber cafe and the virtual space for the teenagers spending time. However, as the utilization of broadband is increasing globally, the large population of online game players and the change of life may hide the influence of universality. The large population of online game players has different variation of personality traits and different life satisfaction. If the online game dealers can understand the impression of the customers, how can they ignore their performance in the world or virtual reality? Therefore, we should understand the things shown in the virtual world could satisfy their life. Most of the study focuses on the business of the online game manufacturers and the addiction of the consumers. However, there is little study on personality traits or life satisfaction. In order to compensate the gap, this study has attempted to research on whether the online game teenager players with different personality traits satisfy the life satisfaction.

Literature Review

Personality traits

The sustaining and consistent characteristic reaction of the individual under different situations is called personality traits (Costa and McCrae, 1989). The individual behavior usually reflects the unique personality traits, such as shy, amenable, loyal, and timid. If these characteristics appear sustaining in different situations, it is regarded as “personality traits”. Therefore, personality traits are stable and extremely important compositions in people’s life (Costa & McCrae, 1992).

Regarding the study on aspects of personality traits, since the directions of research and the theme to concern from the scholars are different, the classification of aspects of different personality traits has no unanimous view (Goldberg, 1993). Recently, the five factors of classification of personality traits have widely been admitted and accepted. They have been widely been applied on psychology, sociology, pedagogy and management (Digman, 1990; Clayson and Sheffet, 2006; Mount, et al., 2006; Pirog and Roberts, 2007)

The Big Five Factor is the five extensive factors, which compose the structure of extensive human traits (Goldberg, 1993). Costa and McCrae (1992) have composed a research team for which the questionnaire scale has been introduced into this research domain. Through the adjective based self-evaluated scale and third party measurement,
the stability of the five factors in the course of human development is measured. The NEO personality inventory (NEO-PI-R) developed by Costa and McCra (1992) has reflected the intension of these five major factors. These five major factors include: Extraversion, Neuroticism, Openness, Agreeableness and Conscientiousness.

**Subjective Well-Being**

Shichman and Cooper (1984) points out that people usually thinks that life satisfaction is an easy obtainable feeling such well-being, happiness or quality of life. Meadow (1988) believes that the overall degree of satisfaction with life is inevitably influenced by that of different areas in life, such as personal health, career, family and leisure. Yet, such satisfaction in different areas of life is also the combination stemming from inside and outside of the human self. Edginton, et al (1995) think that satisfaction with life is a subjective and complex notion, implying that objective investigations are only able to provide an overview of how much one is satisfied economically, physically as well as emotionally, and they need to be further reinforced. Kelly (1987) points out that human beings are able to obtain the sensation of climax through exciting leisure activities, and hence satisfaction. To sum up, satisfaction with life is a mental feeling of wellbeing and fulfillment; it is also a subjective evaluation towards the self. It is a subjective, overall and comprehensive evaluation, as well as the subjective acknowledgment and feeling of the self with life status quo.

“The Satisfaction with Life Scale” (SWLS) proposed by Diener, et al in 1985 evaluates the individual’s recognition of overall satisfaction with life. This scale uses one’s overall evaluation with life to measure the notion of “satisfaction with life”, as opposed to the conventional approach of using individual events in life as indicators of evaluation, possessing the advantage of be simplicity and applicability to different age groups (Diener, et al, 1985).

Previous studies in the context of personality traits and life satisfaction have already been conducted in the last two decades. Relevant research also has been done to explore the moderating factors (Schimmack, 2002; Heller, 2002) directly impacting the two conceptions, as well as the direct correlation between them. Research on the direct relationship between the two includes: experience of neurotic people negatively related to life events (Magnus et al., 1993); extroverts who find social interactions more rewarding, who are predisposed to experience positive emotions (Costa & McCrae, 1992); conscientiousness which is related to life satisfaction (McCrae and Costa;1991). DeNeve and Cooper (1998) have conducted a meta-analysis to support the relationship between the above three Big Five factors and life satisfaction: neuroticism (negative); extraversion (positive); and conscientiousness (positive). There are, in existence, many studies done in the context of how respective character traits relate to satisfaction with life, but the integrated study of the completed five Big Five factors is lacking, particularly in the area of leisure activities. To fill such a gap, this study attempts to study the relationship between the completed five Big Five factors and satisfaction with life amongst players of online games.

**Research Hypothesis**

**Extraversion**
This trait implies the propensity of being highly sociable. However, this is only one facet among many factors to be measured. Individuals who are extrovert are more interested in being amongst people and taking the initiative to approach them. They are also more self-confident, self-initiated and talkative, as well as more inclined to exciting activities and be more active (Costa & McCrae, 1992).

Extroverts hold a more optimistic perspective towards matters of life, are more involved in social activities, and do not hold back when offering their abilities and passion as they immerse themselves in the past-paced, busy and fulfilling lifestyle in their respective expertise pursuing fun for themselves, while they do not let themselves ruled by negative emotions. For the very reason of pursuing fun and happiness in life, these people always show smile and vitality on their faces.

According to Costa McCrae's viewpoints, extroverts are more inclined to be amongst people, and are more confident, self-initiated, talkative and passionate. It is our belief that extrovert teenager players of online games can enhance their satisfaction with life by maintaining such positive emotions. Thus, this study proposes the following hypothesis:
H1: the extrovert character trait is significantly and positively related to satisfaction with life.

Neuroticism
People with neuroticism are primarily influenced by negative experience of their past, such as fear, grief, embarrassment, anger, sense of guilt, et al. These individuals generally find it difficult to control their impulses and emotions, and are less capable of dealing with pressure. According to Costa and McCrae (1992), they often demonstrate character traits such as anxiety, hostility, depression, self-consciousness, impulsiveness and vulnerability.

Highly neurotic individuals are very much incapable of facing frustrations. When under pressure, they choose to remain in situations that generate negative effects (Emmons et al., 1985). For the reason that they show preferential attention to negative stimuli (Rusting & Larsen, 1998), this study proposes the following hypotheses:
H2: neurotic character trait demonstrates a significantly negative correlation with satisfaction with life.

Openness to Experience
Individuals who are open to a variety of experience generally are full of imagination, more focused on feelings of the heart, inclined to fine arts or equipped with the ability of appreciation, fond of more diversity, hungry for more knowledge, strongly curious, very independent in their thinking and judgments, unbiased (Barrick & Mount, 1991; Thomas et al., 1996; Neuman et al., 1999), full of fantasy, inclined to aesthetics, feelings, actions, their own ideas and values (Costa & McCrae, 1992).

These people are not bound by conventional wisdom, have distinctive and sensitive thinking, are full of emotions and imagination, and they are highly creative. They are able to tolerate strange things and furthermore explore them, take the initiative to pursue different experience to make their life more colorful.

Meanwhile, since they are highly mobile, they will engage themselves in the pursuit of relevant knowledge once they are interested in certain things, and participate in
different activities – they are the ones who like the freshness of the unknown that motivate them to enhance their satisfaction with life. Online gaming is the kind of leisure activity precisely possessing the quality of freshness and diversity, so this study proposes the following hypothesis:

H3: openness to experience is significantly and positively related to satisfaction with life.

Agreeableness
This character implicates the ease to get along, communicate and work with others. Individuals possessing such a trait are trustworthy, straightforward, altruistic, compliant, modest and tender-minded (Costa & McCrae, 1992). It is also easier for them to establish friendship with others (Digman & Inouye, 1986) because they believe that human beings are innately kind, and they like helping others.

These people are basically altruistic, will actively show compassion one others and wholeheartedly help them, believing that others would do likewise. They constantly put themselves in other people's shoes and do not ask for anything in return, making people feel warm.

Based on the above, agreeableness is the trait meaning the ease to get along, communicate and work with others. Although this trait is basically altruistic, the compassion to help others and the belief that others would not exist in the virtual competition environment. As such, this study proposes the following hypothesis:

H4: agreeableness is significantly and negatively related to satisfaction with life.

Conscientiousness
Individuals who are conscientious are usually very determinant, disciplined, with strong will and trustworthy. They are very much achievement oriented, self-disciplined and deliberate in their thinking (Costa & McCrae, 1992).

Highly conscientious people demand a lot from themselves, have a strong sense of responsibility and planning capability, and are highly success-oriented. Because the efficiency and hard work associated with this trait that foster task accomplishment, these individuals often plan ahead, are more organized and self-controlled. And since they are strong-willed and determined to pursue their own goals (Schneider & Delancy, 1972), this study proposes the following hypothesis:

H5: Conscientiousness is significantly and positively related to satisfaction with life.

Method
Sample collection
Adolescents living in Taipei, Taiwan are defined as the target population in this research. The questionnaire sets were distributed to the participants and collected in the entrance of internet cafe. All participants were requested to read the instructions stated on the questionnaire carefully before endorsing their responses and was emphasized that all the responses were completely anonymous and there were no right or wrong answers to any of the questions. A total of 124 useful samples are for the final data analysis.

Instruments Adopted
The Satisfaction with Life Scale (SWLS) designed by Diener et al. (1985) is adopted to assess subjective well-being, and is comprised of five items. Pavot, et al (1991) has
demonstrated that this scale is a trustworthy and effective instrument of measurement. McIntosh (2001) points out that SWLS is the most popular tool for self-evaluation in the context of measuring satisfaction with life.

The “Five-factor Model” (FFM) introduced by McCrae & John (1992) is adopted in this study to assess the personalities of online game players because of its validity and wide range of application (Furnham, et al, 2003). Many scholars believe that these five factors present the forming facets of character traits of human beings (Goldberg, 1992; Saucier, 1994). Mowen and Spears (1999) have demonstrated the trustworthiness and effectiveness using the structural equation model. The measurement scales are comprised 8 items for each dimension, respectively. A 7-point Likert-type scale was used with “strongly disagree” (=1) to “strongly agree” (= 7).

**Result**

The reliability of the scale measured by Cronbach α coefficient was examined. The Cronbach’s α of all personality facets is greater than 0.6. There are 5 items in the measurement table for satisfaction with life, and the Cronbach’s α of the table is 0.818 (see Table 1). Therefore, the internal consistency and homogeneity of the scales are both very good.

*Table 1: The reliability of the measurement*

<table>
<thead>
<tr>
<th>Research constructs</th>
<th>Measurement Items</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>8</td>
<td>0.698</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>8</td>
<td>0.715</td>
</tr>
<tr>
<td>Openness to Experience</td>
<td>8</td>
<td>0.731</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>8</td>
<td>0.640</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>8</td>
<td>0.749</td>
</tr>
<tr>
<td>Subjective Well-Being</td>
<td>5</td>
<td>0.818</td>
</tr>
</tbody>
</table>

In terms of validity, since the theoretical bases of the questionnaires are the Big Five and SWLS that have been demonstrated by scholars as being valid, therefore the questionnaires are valid as far as content and professionalism are concerned. In addition, the reliability of a scale measured by coefficient alpha reflects the degree of cohesiveness among the items therein, and is therefore an indirect indicator of convergent validity (Parasuraman et al., 1991; Reimer and Kuehn, 2005). Since the alpha values and the item total correlations are very high in the study, they can be regarded as a reference for high convergent validity.

**The Relationship between Personality and Life Satisfaction**

In order to discuss the possible influences that the Big Five can potentially have on the satisfaction with life, we have also conducted testing using regression analysis. After conducting testing on the Big Five using regression analysis, the results reveal that although “extraversion” and “conscientiousness” presumably have positive influences, yet the p values are greater than 0.05, so it can’t prove that the two are significantly and
positively related to satisfaction with life, and thus both H1 and H5 are rejected. The $p$ values for “neuroticism”, “openness to experience” and “agreeableness” are all below 0.05, and fit the hypotheses of the study in the aspect of influencing satisfaction with life, and thus H2, H3 and H4 are accepted. Please see Table 2.

### Table 2 Regression Analysis on the Relationship between Personality Traits and Subjective Well-being

<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>Std. Error</th>
<th>Beta</th>
<th>$t$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>5.534</td>
<td>1.114</td>
<td></td>
<td>4.968</td>
<td>.000***</td>
</tr>
<tr>
<td>Extraversion</td>
<td>.049</td>
<td>.122</td>
<td>.036</td>
<td>.402</td>
<td>.689</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>-.368</td>
<td>.118</td>
<td>-.285</td>
<td>-3.114</td>
<td>.002**</td>
</tr>
<tr>
<td>Openness to Experience</td>
<td>.289</td>
<td>.129</td>
<td>.205</td>
<td>2.245</td>
<td>.026*</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-.395</td>
<td>.148</td>
<td>-.259</td>
<td>-2.665</td>
<td>.009**</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.001</td>
<td>.132</td>
<td>.001</td>
<td>.010</td>
<td>.992</td>
</tr>
</tbody>
</table>

Model $R^2$=0.142; Adj-$R^2$=0.108

Dependent variable: Subjective Well-being
*p<0.05; **p<0.01; ***p<0.001

**Discussion**

The purpose of this study is exploring the impact that online games have on players with different character traits in the context of satisfaction with life. This section gives a comprehensive discussion on the results of studying the hypotheses. Study results show that except for “neuroticism” that demonstrates a negative influence, “openness to experience” and “agreeableness” influences one’s satisfaction with life in a positive and significant manner. “Extraversion” and “conscientiousness” pose no significant results in relation to satisfaction with life, but their positive influence fit the hypotheses of the study.

According to the findings of the study, online game players with different character traits respond differently to satisfaction with life, but the most important thing is how to let individuals with these traits reach the highest level of satisfaction with life as they engage themselves in the act of playing online games. Therefore, it is suggested that a database be established comprised of people with different character traits for the purpose of promptly meeting the diversified demands of various types of players, satisfying the needs of players with different traits, as well as helping update the games and seek new market directions. Game providers may even customize their online games according to the these traits, so that not only individuals with different traits may reach satisfaction with life, those with like traits may even engage themselves in online games tailored to their interests. For instance, extroverts are aggressive, fond of excitement and very decisive in their thinking, so online fighting games are suitable for them. Neurotic individuals are inclined to games that reduce pressure and soothe their emotions. Openness to experience implies curiosity, so games with amazing effects or good for developing intelligence are good. Those of agreeableness could be geared towards teamwork; so for example, online games that require teamwork are suitable for them. In addition, online game providers may even design games allowing players to experience reality, for example, “living” in the games and playing themselves, a design that makes people of different character traits reach satisfaction with life, meanwhile having great
promotional effects. Since online gaming in Taiwan is entering its peak times, many providers continually release new games, so it seems that our government should incorporate gaming industry into its policy making process.

This study only focuses on the correlation between character traits and satisfaction, yet such satisfaction of online game players may also be influenced by their motives and the degree of satisfaction towards leisure activities, therefore researchers in the future could also include the motives and the degree of satisfaction towards leisure activities as variants in relevant research. Also, this study only focuses on players of online games in greater Taipei region, so researchers may, in the future, engage in similar studies in other regions to further understand different geographical regions and leisure activities therein. In addition, since the scales adopted in this study are compiled and edited by scholars of Western nationalities, it is likely that they are applicable only to Western nationals, and thus it is suggested that researchers could, in the future, design scales and measurement tables more applicable to leisure activities in Eastern, to further enhance the validity thereof.

References


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