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The impact of online game character's outward attractiveness and social status on interpersonal attraction

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Abstract

Online games resemble miniature societies, in which social interactions occur within a virtual world. Previous studies have realized that the main motivation in playing games is to fulfill interpersonal needs. Players expect to own great interpersonal attraction to help them develop ideal interpersonal relationships. In the real world, individual outward appearance and social status are two important factors having influence on interpersonal attraction. In online games, the outward appearance of characters can be manipulated by changing the clothes and accessories used by those characters. This study proposes that difference in outward appearance, as in real society, affects player interpersonal attraction assessments. Additionally, when game experience and performance of players are accumulated, their grade in game would be raised. This study also proposes that the variation of role grade would influence its social status and the attitude of others. This study conducts experiments, and the results verify that a game character with high outward attractiveness and social status acquires higher online interpersonal attraction than one with low outward attractiveness and social status, and vice versa.
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1. Introduction

Online games have been developing rapidly in recent years. Online games maturely exploit the visual and audio abilities of computers to entertain players. Online games also

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connect worldwide players to a virtual community via two Internet characteristics: real-time interaction and borderless environment. Citizens of online gaming worlds can play and interact with other players, and even engage in mutual transactions of virtual assets. Previous studies have realized that satisfying interpersonal needs is the most important motivation for online game players (Lo, Wang, & Fang, 2005a, 2005b). Players desire to have strong interpersonal attraction for facilitating the building of ideal interpersonal relationship.

Researchers interested in interpersonal relationship within real-world societies understand that outward appearance influences individual interpersonal attraction. That is, persons with good looks and outward attractiveness would be more likely to foster higher interaction willingness among others and gain more friendship (Berscheid & Walster, 1974; Johnson, 1988; Korabik, 1981; Townsend & Levy, 1990a). In online games, each player executes game tasks via a character that represents itself. Although service providers give game characters an unmodifiable face, players can change the clothes and accessories acquired by their character during the game, and then the character would exhibit different outward feature. Some roles wear plain clothes and hold simple tools or accessories, while others have elaborate clothing, powerful weapons and valuable treasures. This study argues that these differences in outward appearances are the same as those in real societies, and influence the attitudes of other game members towards individual players. Additionally, the life experiences and research results from real society have considered that people prefer to familiarize with others who possess high social status or the ability to influence others. Actually, the ''grading system'' in the online game is an objective institution to reveal players' gaming performance. Characters can increase their grading level by accumulating game experience and achieving good performance. Players with higher grading level would receive prominence and be respected by other gamers, and the gaming behavior and strategy of high-grade players would influence the gaming skill of low-grade players. Accordingly, this study believes that improving online grading of players will improve their status in the gaming world, and consequently other gamers would modify their assessments of their interpersonal attraction to the character.

This study performed an experimental design to manipulate the clothes, accessories and grade level of the online game character to verify whether players with high outward attractiveness and high-grade would have higher interpersonal attraction than low outward attractiveness and low-grade players. The results of this study not only successfully implemented real world interpersonal relationship theories into virtual societies, but also helped players realize that they can change their clothes and equipment and promote their grade level to increase interpersonal attraction and build great interpersonal relationships. Additionally, this study suggests that online game service providers can aim to improve clothes, equipment, and grading systems to satisfy the main motivations of gamers.

2. Conceptual development

2.1. Online games

Based on the number of computers involved, computer games can be categorized as PC (played on one personal computer only, although they can involve multiple players) or Net (short for ''network,'' played on multiple computers) games (Lo, Wang, & Fang, 2005b).

Net games can be further divided into web games, network games, and online games. Web games use a website as an interface; players must register in order to play. Network games allow multiple players to use their own PCs to interact via Local Area Networks (LANs) or the Internet; many of these closely resemble PC games. Network games players must buy and install game software, but do not pay any other fees beyond those for Internet connections. Online games require players—from a handful to tens of thousands—to log in to a server. After selecting a role, players interact with other virtual roles, accumulate valuable experience, and collect virtual assets. Online games continue even when individual players log out and fail to log in again for days or weeks; when they return, their experience and assets are waiting for them. Online game participants must install a client program that is usually free or very inexpensive; additional fees are paid to an Internet Service Provider (ISP) for Internet connection and online game providers to attend the online game. The online game provider normally charges according to the time spent for playing the game. These fees are paid in advance.

Online games have several features that attract large numbers of players. Users can build their own virtual organizations and create individual factions, guilds, and teams based on shared beliefs, goals, preferences, or other factors (Klang, 2004; Lo et al., 2005a, 2005b). Group members cooperate to complete game tasks, exchange virtual assets, develop strong relationships, and strengthen social ties (Granitz & Ward, 1996; Okleshen & Grossbart, 1998). All of this can be done anonymously, without fear of being appraised and/or approved by others.

2.2. Interpersonal attraction

In interpersonal interactions, individuals that make us feel comfortable or inspire us to wish to contact and build interpersonal relationships with them are said to possess interpersonal attraction. Even though interpersonal attraction describes the attraction of A to B, attraction derives from the positive/negative or like/dislike evaluation of A by B, and hence interpersonal attraction is a kind of attitude (Huston & Levinger, 1978). Interpersonal attraction is consistent with other attitudes that are affected by various extraneous factors. Previous studies have discussed variables that influence individual liking and evaluation of others. For example, some studies have demonstrated that proximity influences individuals' willingness to interact with others. That is, when two individuals are close in physical distance, they will be attracted to one another and develop an interpersonal relationship (Berscheid & Walster, 1978). Familiarity also affects individual feelings of liking. People like those they meet frequently (Moreland & Beach, 1992). Good-looking individuals possess strong interpersonal attraction and easily acquire better interpersonal relationship (Berscheid & Walster, 1974; Johnson, 1988; Korabik, 1981). Furthermore, people prefer to socialize with others who share similar attitudes, interests, values, and personality (Brehm, 1992; Klohnen & Luo, 2003). Finally, humorous individuals also enjoy high popularity (Murstein & Brust, 1985).

2.3. Outward attractiveness and interpersonal attraction

Studies have verified that individual outward appearance affects interpersonal attraction. Good-looking people are likely to have better interpersonal attraction and then get greater interpersonal relationships, while ugly people frequently fail in interpersonal interaction

(Berscheid & Walster, 1974; Johnson, 1988; Korabik, 1981; Townsend & Levy, 1990a). Regardless of age, people like to make friends with others who are outwardly attractive (Adams & Huston, 1975; Dion, 1974; Huston, 1973). Studies have also found that good-looking people not only have many friends but also have high frequency of dating than unattractive people (Berscheid, Dion, & Walster, 1971; Feingold, 1992).

Huston and Levinger (1978) proposed three reasons why outward attractiveness affects individual interpersonal attraction. First, Huston and Levinger (1978) hypothesized that since all people appreciate beauty, gorgeous-looking people may be appreciated for simple aesthetic reasons, as is good art. Second, people believe that there is more to physical beauty than ''meets the eye'', with physical appearance providing the basis for inferring ''internal'' qualities of persons. For example, outwardly attractive individuals are more likely to attain high occupational status, to be more competent as husbands and wives, and to have happier marriages than less attractive individuals. Third, and related to the second point, persons may desire to be associated with good-looking individuals to enhance their own social standing. Furthermore, outwardly attractive persons have been found to exhibit greater social confidence than physically unattractive persons (Jackson & Huston, 1975); social confidence, in turn, is related to behavior designed to elicit favorable views from others (Huston & Levinger, 1978; Jones & Panitch, 1971). Actually, the criteria of outward attractiveness not only includes the beauty of individual's face but also their overall image, including physique (or body type), height, costumes and accessories (Huston & Levinger, 1978; McElroy & DeCarlo, 1999). The study of Townsend showed that individual clothes and grooming influenced individual assessments of the attractiveness of others (Townsend, 1987, 1989). Moreover, Gibbins and Gwynn (1975) and Townsend and Levy (1990a) also found that individuals with good taste in clothes would acquire higher willingness of interaction from others.

In online games, each player is represented by a character. Eventhough players are free to choose what role to play, the faces and other outward attraction characteristics (e.g. physique) of these roles are pre-designed by the game service provider and are unmodifiable. However, players can obtain better clothes and accessories through killing monsters in the game or using virtual money to purchase them. All equipments and clothes that can be obtained in the game possess specific functions and features, as well as visual differences. Some clothes and accessories are elaborate, while others are plain. Upon entering a game, all characters begin with the plainest clothes and accessories set by the game service provider. As the game proceeds, the characters can exchange their unattractive clothes and simple tools for attractive garments and special weapon. If other outward attraction criteria are equal, then the characters with elaborate clothes and accessories would exhibit higher outward attractiveness than the plain ones. As discussed above, outward attractiveness of individuals would affect their interpersonal attraction assessments by others.

H 1. In online games, characters with high outward attractiveness receive higher interpersonal attraction evaluations than those with low outward attractiveness.

2.4. Game performance, social status and interpersonal attraction

Basically, humans are social creatures and form groups voluntarily through various motivations and purposes (Adler, 1930). Researchers have proposed that all social

groups have hierarchies (Bernstein, 1981; Eibl-Eibesfeldt, 1989; Mazur, 1985; Owens & Sutton, 1999). People always aspire to move their steps to the higher tier for improving their social status (Adler, 1930). Researchers considered this intention as one of the most important motives stimulating human behavior (Barkow, 1975; Hogan & Hogan, 1991).

There is no uniform definition of social status existing in previous studies. The arguments of researchers can be reduced to three broad views (Anderson, John, Keltner, & Kring, 2001): (1) social status involves asymmetrical amounts of attention, such that those higher in the hierarchy receive more attention than those lower in the hierarchy (Fiske, 1993); (2) status involves differential amounts of aspects and esteems, members of higher status are more respected and held in higher regard (Barkow, 1975; Eibl-Eibesfeldt, 1989); (3) social status involves differential amounts of influence within the group, members of higher status are allowed yo have more control over group decisions and processes (Berger, Cohen, & Zelditch, 1972). Accordingly, Anderson et al. (2001) utilized the integrated concept to describe individual social status as a condition in which the individual is prominent, respected, and has influence over a group.

Social status cannot be recognized in isolation, but only when it is generated from the assessments of others (Kemper, 1991). Additionally, status level (high/low) is a relative concept based on comparison with other members (Owens & Sutton, 1999). Consequently, since social status is a subjective judgment made by others, thus, its level is not constant. The social status of individuals would be changed according to the shift of some valuable features they possess (Owens & Sutton, 1999). For instance, working skill, math ability or any specific competence in a group will influence status (Hass & Gregory, 2005). With the same argument, Stewart (2005) stated that individuals' performance is positively related to social status. Previous researchers even found that social status of students in a classroom was affected by their academic achievement (Schmuck, 1963; Yamamoto, 1984). People will evaluate those with high performance as a person of higher status, and refer the low performance person to have lower social status.

Social status results from social interaction, and must influence interpersonal relationships. One basic human motivation is the hope of obtaining the respect of others and acquiring a certain level of status within a group. As mentioned above, people like to make friends with physically attractive persons, because physical attractiveness is expected to be a predictor of improved status and influence. Thus, the reason people like to cultivate interpersonal relationships with good-looking individuals is to reinforce their own social standing via association with others. Accordingly, individuals believe that they can elevate their own social status through directly pursuing relationships with high-status individuals. Therefore, persons of high social status have the high interpersonal attraction for group members. Previous studies have proposed a similar concept; for example, the experimental results presented by Juni and Brannon (1981) and Townsend and Levy (1990b) revealed that social status affects the interpersonal touching behavior, as well as the willingness to develop interpersonal relationships. The research findings of Levi also directly indicated that social status determins group member evaluations of individual attractiveness (Levi, 2005).

In online games, grading system is an objective criterion for evaluating players' performance in the game. Service providers design systems in which entry-level players are assigned the lowest grade, which can be improved as players accumulate experience. Every game character possesses a grade, and those with higher grades have greater

experience, ability, skill and performance in this virtual world, earning them increased prominence and greater respect from other players. Also, the strategies adopted by high-grade players in a game frequently influence the gaming behavior of low-grade players. According to the above description, high-grade players are perceived to possess high social status, and consequently receive higher assessments of interpersonal attraction from members.

H 2. In online games, characters with high social status brought from high performance receive higher interpersonal attraction evaluations than low social status characters.

As discussed above, an online game character with higher social status would acquire higher interpersonal attraction. However, besides status, other players also receive outward cues of this actor while evaluating his interpersonal attraction. Therefore, if the high status individual possesses low outward attractiveness, according to the descriptions made in Section 2.3, he would acquire lower interpersonal attraction evaluation than other high status gamers, and vice versa. On the other hand, if a game character possesses low outward attractiveness but high social status, then this character would acquire higher interpersonal attraction evaluation than others. Although the level of effect of outward attractiveness (or social status) on interpersonal attraction would be influenced by social status (or outward attractiveness), the influential reasons and the direction of changes will still be based on the main effects of two independent variables (H1 and H2). Consequently, this study does not assert any interaction effect between outward attractiveness and social status.

3. Research methodology

3.1. Research design and procedure

The research utilized a 2×2 experimental design with two independent variables of outward attractiveness and social status derived from performance that were assigned either high or low levels, totaling four treatments. Each participant was randomly assigned to one of the four treatments and received a packet of materials that consisted of a picture of a game character and grading information about this role, which was manipulated by the independent variables. After viewing the stimulus for 1 min, the participants were then asked to evaluate the interpersonal attraction of the character.

The purpose of this study is to realize instinctive reactions to external stimuli, and is not a survey of consumer experiences or attributes. Any individuals with online game experience were allowed to participate. The experiment recruited 191 volunteers from different online game communities.

3.2. Manipulation and measurement of variables

Outward attractiveness is one of the independent variables in the current study. As mentioned above, the facial and body features of game characters are designed by service providers, and cannot be manipulated or changed by players. However, players can vary the overall image of these roles through changing their clothes and equipments, obtaining replacements for the existing items by either killing some monsters or making purchases

within the game. Those additional costumes and accessories can be either elaborate or plain. Thus, this study designed two new game characters for avoiding participants' previous image of specific role that would influence the result. These two experimental roles are same in face and body type (male characters, look like cartoons), but the one who wore the plain clothes and equipment was labeled the "low outward attractive character", while the other with elaborate costumes and accessories was labeled the "high outward attractive character". As Berscheid and Walster (1974), argued the outward attractiveness is hard to define. They noted that if numerous people designate a person as outwardly attractive, then that person is defined as outwardly attractive. Thus, two experimental characters were pretested on a sample of 52 online game players recruited in a cybercafe, who rated each game role on a single-item, a 9-point scale developed by Morrow (1990). The outward attractiveness mean for the "game character with elaborate costumes and accessories" was 5.75 (SD = 1.13) and for the "character with plain costumes and accessories" was 3.02 (SD = 1.49). Pretest result supported our expectation (t (df = 102) = 10.41, $p < 0.01$).

Another independent variable in the current study is social status obtained from performance. The manner in which the grading system as performance directly influences the social status of individual players in the online game world has already been discussed above. Consequently, this study manipulated the grade of character to bring high and low social statuses. Researchers asked subjects to read a short description of grade presented alongside the picture of the experimental character. For example, the description shows that the proposed game role is 03 degrees, and an additional interpretation demonstrates that the degrees in this game range between 1 and 60, this statement attempt to present the relative low status of this character. Also, a character with 58 degrees in this hierarchy is presented as an example of higher social status. In order to confirm the character's social status affected by its grade, pretest asked those 52 online game players to evaluate the status of each character on a 7-point scale (7 indicated strong agreement and 1 indicated strong disagreement). The wording of the question was "The social status of this game role is high." The result indicated the high-grade character to possess higher social status than the low-grade role (t (df = 102) = 7.73, $p < 0.01$).

The dependent variable in this study is interpersonal attraction. Fifteen measurement items were developed by McCroskey and MoCain (1974) and used to measure this variable via a seven-point scale. We modified the wording of items slightly to make it more appropriate for online game environment.

4. Results

4.1. Descriptive statistics and manipulation checks

This experiment recruited 191 subjects that included 124 are males and 67 females with an average age of 21.29 (SD = 1.87) years and an average online game playing experience of 27.42 (SD = 25.28) months. It is notable that the gender of subjects in this study is self-reported, which may not be the true gender. Griffiths and his colleagues found that 60% online game players have ever swapped or converted their gender in online games (Griffiths, Davies, & Chappell, 2003, 2004), thus we cannot be totally sure of whether the self-reported gender is correct or not.

In this study, 98 subjects were asked to grade the interpersonal attraction level of a high outward attractive character. Among the 98 subjects, 53 were asked to grade the attraction

of the "high social status" character, and 45 were asked to grade the attraction of the "low social status" character. 93 subjects were asked to grade the interpersonal attraction level of a low outward attractive character. Among the 93 subjects, 45 were asked to grade the attraction of the "high social status" character, and 48 were asked to grade the attraction of the "low social status" character.

The independent-samples *t*-test was done to test subject perceptions of outward attractiveness. Analytical results confirm that the subjects perceived the game role with elaborate clothes and accessories as possessing higher outward attractiveness ($M = 5.33$, SD $= 1.20$) than that with plain clothes and accessories ($M = 3.60$, SD $= 1.43$) (t (df $= 189$) $= -9.044$, $p < 0.001$). The mean interpersonal attraction assessment (coefficient alpha $= 0.92$) of high outward attractive character is 4.49 (SD $= 0.85$), compared to 3.92 (SD $= 0.82$) for low outward attractive character.

In this experiment, 98 subjects were asked to evaluate the interpersonal attraction of a high social status role and 93 were asked to grade the low social status character. The results of perceived social status testing also confirm that the high-grade character acquires higher social status judgment from players ($M = 5.28$, SD $= 1.31$) than the low-grade role ($M = 4.06$, SD $= 1.39$) (t (df $= 189$) $= -6.19$, $p < 0.001$). The mean interpersonal attraction evaluation of the high social status character was 4.47 (SD $= 0.81$), compared to 3.95 (SD $= 0.88$) for the low social status role (Table 1).

4.2. Hypotheses testing

H1 and H2 test whether the outward attractiveness and social status of game characters positively influence role interpersonal attraction. The testing results, conducted using two-way ANOVA, show that role outward attractiveness (All: $F = 21.65$, $p < 0.01$; Male: $F = 12.24$, $p < 0.01$; Female: $F = 7.46$, $p < 0.05$) and social status (All: $F = 17.40$, $p < 0.01$; Male: $F = 10.70$, $p < 0.01$; Female: $F = 4.24$, $p < 0.05$) significantly and positively affect online interpersonal attraction. The results are the same for both self-reported genders. That is, the high outward attractive character (elaborate clothes and accessories) attracts higher interpersonal attraction than the low outward attractive role (plain clothes and accessories). Therefore, H1 is supported. Table 2 shows that the high social status (high-performance/grade) character has higher interpersonal attraction than the low status (low-performance/grade) role. Therefore, H2 is supported.

Table 2 also reveals no interaction effect between outward attractiveness and social status (All: $F = 0.45$, $p > 0.05$) and both self-reported genders are the same (Male: $F = 0.18$, $p > 0.05$; Female: $F = 0.57$, $p > 0.05$). As discussed in Section 2.4, the effect of social status

Table 1
Interpersonal attraction mean and SD

Outward attractiveness	Social status	All		Male		Female	
		Mean (SD)	N	Mean (SD)	N	Mean (SD)	N
Low	Low	3.72(0.85)	48	3.69(0.90)	38	3.82(0.58)	10
	High	4.13(0.74)	45	4.14(0.80)	36	4.07(0.55)	9
	Total		93		74		19
High	Low	4.19(0.86)	45	4.18(1.05)	20	4.20(0.69)	25
	High	4.76(0.76)	53	4.77(0.70)	30	4.75(0.84)	23
	Total		98		50		48

Table 2
ANOVA result

	All ($n = 191$)		Male ($n = 124$)		Female ($n = 67$)	
	F	p	F	p	F	p
Outward attractiveness	21.65	0.001*	12.24	0.001*	7.46	0.01*
Social status	17.40	0.001*	10.70	0.001*	4.24	0.04*
Outward attractiveness × social status	0.45	0.503	0.18	0.67	0.57	0.45

on interpersonal attraction can indeed be influenced by outward attractiveness, but the direction of change is still based on the main effects of the two independent variables. Thus, there is no interaction effect between outward attractiveness and social status. As shown in Fig. 1, regardless of whether the outward attractiveness is high or low, the character's social status is certain to attract a higher online interpersonal attraction; also, regardless of whether the social status is high or low, the considerable outward attractiveness of character would attract a higher interpersonal attraction in the online game world, and vice versa.

5. Discussion

Previous studies have demonstrated that various factors affect individual willingness to interact with others. For instance, outward attractiveness has an important influence on willingness to interact, since people like to interact with gorgeous-looking people or those with a good taste. For this reason beautiful ladies are never short of suitors. In contrast, those without good looks face obstacles in the development of interpersonal relationships, owing to low willingness of others to interact with them. Online games, and their associated virtual communities, resemble small societies that contain numerous real world phenomena. The current experiment manipulated game role external attractiveness, and the analytical results revealed that game characters wearing the elaborate clothes and accessories displayed higher interpersonal attraction than those wearing more basic items.
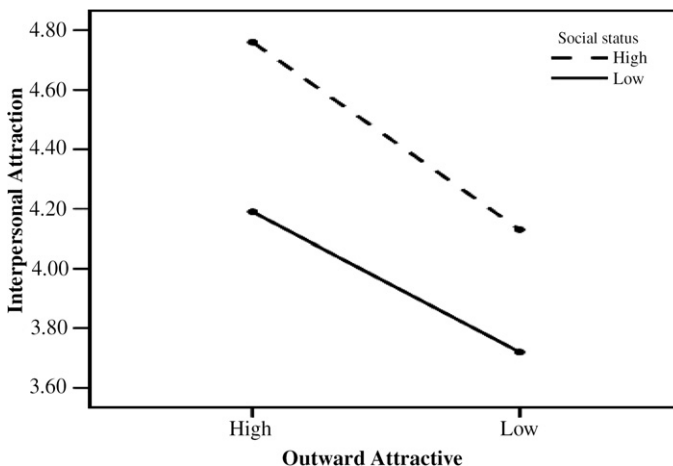

Fig. 1. Outward attractiveness × social status.

Additionally, people in the real world are inclined to build great interpersonal relationship with persons who possess high performance and high social status. The grading system provides an objective criterion to evaluate gamers' performance and ability. The exhibition of each character's grade indeed affects its social status perceived by others. The experiment in this study adopted grades to manipulate the social status of game role, and the analytical results demonstrate that characters assigned with high grades (with high social status) obtained higher interpersonal attraction evaluation from other players than those with low grades (with low social status). In this study, we only discuss and measure the social status brought from high grades. However, there are some factors that may affect status which are not being considered in this experiment, such as the personality of players and different functions and occupations associated with different characters in online games. One limitation of this study is that the findings are to explain the effect of social status brought from high performance on interpersonal attraction, but may not be able to directly apply to all relationships between the status and interpersonal attraction. Researchers can further study on other factors.

One of the theoretical implications in this study is that traditional interpersonal relationship theories can be successfully applied to online communities, with the interactive behaviors of players in online game resembling real world interpersonal relationships. These experimental results demonstrate that virtual communities cannot be neglected. Online games are more than simply games, and involve concrete social groups. Previous studies have proposed these virtual communities have workable associated economies, with frequent transactions of virtual assets and even exchange rates between virtual and physical currency. Moreover, languages and culture from online communities have transferred to physical society. Therefore, online games cannot simply be considered as a form of entertainment for children, but rather must be considered as a real part of society.

In the competitive online game market, the reconsidering of satisfying user's need by the service providers is a very important topic. Previous studies proposed that satisfying interpersonal needs is the most important motivation for online game players. The designing of some mechanism by the service providers for facilitating gamers to build an ideal interpersonal relationship must acquire users' satisfaction. The results of this study demonstrate that outward attractiveness and social status of characters influence player interpersonal attraction. Service providers can thus consider how to provide multiform appearance elements for players to change their outward feature, and can also consider designing some mechanism to "glorify" players' social status and those with higher grades. External appearance and status are manipulated to increase interpersonal attraction and develop ideal interpersonal networks. When expected interpersonal relations are established, their needs for playing online game will be fulfilled, and thus consumers will tend to continue to support the online game.

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