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論文題目：

擬真動畫人物的網路廣告說服效果：

外表吸引力的影響

Attractiveness of Sexy Avatars:

Gender Differences in Persuasion Effect

報名編號： D0055

摘要

本研究透過共 1187 個受訪樣本的三個實證研究，探討線上遊戲廣告中使用性感虛擬人物所帶來的廣告效果及閱聽人性別的影響。研究一和二檢驗使用性感及普通虛擬人物在不同類型線上遊戲的廣告效果。研究三，利用不同裸露程度的虛擬人物，來了解受訪者對性感呈現的態度。本研究發現性感虛擬人物會增加廣告吸引力，但過度裸露的虛擬人物會降低可信賴度及專業性，而男性閱聽人較會受性感虛擬人物所吸引，女性則視廣告標的的線上遊戲類型而定。

關鍵字：線上遊戲、動畫人物、廣告效果、外表吸引力

1 INTRODUCTION

To reach the advertising effect, the advertisers adopt a variety of tactics to engage audience attention. Female models with physical appearance are frequently considered as communicators or endorsers in advertising for the purpose of drawing attention (Reichert and Ramirez, 2000; Soley and Reid, 1988; Patzer, 1980). This advertising manner mainly uses the sexy or good looking females to build the product image or brand image, and enables the advertised product or message into consumers' memory.

Although the adage "sex sells" advocates the use of sexual appeal in advertisings, the effect of sexual appeal in advertising is controversial. Previous studies revealed inconsistent results to persuasion effect of sexual appeal (Putrevu, 2008). LaTour and Henthorne (1994) questioned the effect of overt sexual appeal. Some previous studies revealed the gender difference of receivers in the effectiveness of sexual appeal (Sengupta and Dahl, 2008; Davies et al., 2007; Patzer, 1980; Sciglimpaglia et al., 1978). Sciglimpaglia et al. (1978) revealed that both males and females tended to evaluate sexual portrayals of the same sex in a negatively manner. Since female models are usually used as sexual appeals, male audiences hold the positive while female ones hold negative evaluation to the advertisings. Patzer (1980) found that perceived female sexiness was determinant factor of advertisement effectiveness for male receivers only. Sengupta and Dahl (2008) argued that males on average exhibited a more positive attitude to gratuitously sexual appeal than females. Davies et al. (2007) explained this negative evaluation by the moderating role of sexual self-schema.

There is a long history for sexual appeals in advertising (Putrevu, 2008; Lin, 1998; Reichert and Carpenter, 2004). Recently, a new variety of sexual appeals, the use of sexy avatars, appears in advertising. Due to the advances of multimedia and 3D graphic technology, advertisers now can use avatars or virtual models in advertising on Internet as well as traditional media such as print and commercial firms. The trend is obvious for the increasing use of avatars in advertising for online games. The extensive use of

sexual avatars in advertising can be quickly confirmed by browsing the online game websites.

There are abundant sexual content and sexy avatars in online game advertisement. The use of sexually oriental avatar in advertising can refer to the usage of sexual appeal of physical models. Nevertheless, few academic studies still now focus on the persuasive power of sexy avatars in advertisings. The effect of sexy avatars is just based on the rules of thumb.

People acknowledge the difference between real models and avatars which are artificial portrayals built by computer graphic software. The emerged research question is the effectiveness of advertisement with sexy avatar. Advertisers may hope to know if these avatars could substitute for sexy models to appear in advertisings as sexual appeals. Another emerged research question is that would female audiences still hold negative evaluation to advertisings with sexual appeals once they realize the unreal nature of sexy avatars. These two questions are essential for advertise practice as well as academics.

The current paper focuses on the persuasion effect of sexy avatars in online game advertisings. The beauty type of avatars and game categories are considered as factors influencing the effectiveness of advertisings with avatars. Gender difference is considered as moderator to the use of sexy avatars in advertising. Three empirical surveys were conducted to talk about the relationship among the different beauty types of avatars, the various types of online-game, gender, and advertising effectiveness.

2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Physical Attractiveness, Match-up Hypothesis and Advertising effectiveness

In advertising, physical attractiveness of model determines advertising effectiveness (Baker & Churchill, 1977; Peterson & Kerin, 1977; Kahle & Homer, 1985; Petrosius & Crocker, 1989; Bloch and Richins, 1992; Bower, 2001; Bower & Landreth, 2001; Tsai & Chang, 2007). In attractiveness-related product advertising, highly attractive models induce effect of advertising (Peterson & Kerin, 1977). Baker and Churchill (1977) revealed that attractive models generated higher advertising ratings than unattractive models on affective dimension. Highly attractive models reveal their advantage in persuasion effect in the dimensions of advertising attitude, product attitude, and purchase intentions (Petrosius & Crocker, 1989; Baker & Churchill, 1977). Tsai and Chang (2007) showed that for the adolescents, both male and female adolescents, in the product attitudes and purchase intentions, the high-attractive models had better effective than ordinary attractive models.

Nevertheless, high attractive models would not necessarily bring advertising

effectiveness (Brower and Landreth, 2001). The advertising effectiveness of highly attractive models depends on the product types and not all advertisement should use highly attractive models (Bloch and Richins, 1992). High attractive models make consumers less confident when audiences compare themselves to the advertising models. In the target of female market, the advertisement with highly attractive female models would arouse negative affect to female consumers that would impact negatively to advertising effectiveness (Bower, 2001). For both female and male adolescents, normally attractive models were significantly more effective than highly attractive models in the study of Tsai and Chang (2007). Highly attractive models of the opposite sex are with better advertising effectiveness than the same sex (Sciglimpaglia et al., 1979). Baker and Churchill (1977) also revealed that females had a higher willingness to purchase the product when the model was male in the advertisement.

Gender difference in attention to physical attractiveness is a popular phenomenon rather than limit to the field of advertising. Previous research revealed that males paid more attention to physical attractiveness than females (Buss and Barnes, 1986; Goodwin, 1990; Buunk et al., 2002). Men spend more time to see the beautiful images, and both men and women preferred beautiful images much than average images (Levy et al., 2008).

When there was a corresponding relationship between the endorser and the endorsed product, endorsers became effective (Kamins, 1990; Kim & Na, 2007). Kim and Na (2007) suggested match-up hypothesis could explain messages communicated by the endorser picture and the endorsed product should be congruent for persuasive effectiveness. The effectiveness of endorsements might change owing to other factors like the fit between the endorser and the advertised product (Till & Shimp, 1998). Peterson and Kerin (1977) discovered that males considered the body oil (a personal feminine product) advertising which used the seductive model was the most attractive, and females thought the ratchet wrench set (an impersonal masculine product) advertising which used the nude model was the least attractive. Therefore, the over-nude advertisements not really had better advertising effect. In terms of match-up hypothesis and the foregoing argument, this paper suggests to determine the specific beauty types of avatars are more or less suitable (i.e., better match-ups) for certain game types when paired in advertising.

The use of avatars with sexy physical appearance is popular in online game advertising. The assumption behind is that the advertising effectiveness of sexy avatars is similar to that of sexual appeal of real models. Thus, the main focus of this paper is the advertising effectiveness of sexy avatar. Besides, the negative evaluation of female audiences on sexual appeal in advertising may come from self comparison with the models in the advertisings. People may curious on the existence of gender difference in advertising

effectiveness of sexy avatars when females realize the unreal nature of sexy avatars. Based on the above discussion, the following hypotheses are proposed.

H1: Sexy of avatar would induce positive impact on advertising effectiveness. The positive impact of sexy avatar is moderate by gender and product match-up.

H1a: For male, sexy of avatar is positive relative to advertising effectiveness.

H1b: For female, advertising effectiveness of sexy avatar is moderated by the match-up between type of online game and sexy avatar.

2.2 Attractiveness, Trustworthiness and Persuasive effect

Enterprises and the mass media prefer to use the spokesperson or endorser for propaganda, the main cause is the spokesperson could attract the attention of consumers in a short time. Akin & Block (1983) indicated that consumers have better advertising attitude and product evaluation attitude when used endorsers than those did not use the endorsers. Frieden (1984) found that consumer attitudes would affect by the endorser type and have no significant relationship with endorser gender. Celebrity, expert, CEO and typical consumer were four of the representative endorser types from Frieden research in 1984. Using various types of advertising spokesperson was expected to influence consumers purchasing decisions by their persuasiveness. Therefore, the product advertising effects distinct increased by the spokesperson advertised the product when the spokesperson characteristic matched up the product identity.

Hovland, Janis and Kelley (1953) research suggested that the key to convince the effect of advertising communication from two factors; one was the message persuasiveness, and the other was the message source persuasiveness. Endorsers would be said the kind of clues which consumers used to determine whether the product was worth believing (Hovland, Janis & Kelley, 1953; Ohanian, 1990). According to Baker and Churchill study in 1977, the source credibility and attractiveness made a great impact on the source persuasion.

Source credibility is a term generally used to insinuate the receiver's acceptance of a message is affected by the communicator's positive characteristics, including various dimensions, such as trustworthiness (Hovland et al., 1953; Kelman, 1961; Bowers & Phillips, 1967; Whitehead, 1968; Applbaum & Anatol, 1972; Dholakia & Stemthal, 1977; Friedman et al., 1978; Friedman & Friedman, 1979; Debevec & Kernan, 1984; DeSarbo & Harshman, 1985; Ohanian, 1990; Stafford et al., 2002; Pornpitakpan, 2003; Kim & Na, 2007), expertise (Hovland et al., 1953; Kelman, 1961; Applbaum & Anatol, 1972; Mills & Harvey, 1972; Friedman & Friedman, 1979; Maddux & Ronald, 1980; DeSarbo & Harshman, 1985; Ohanian, 1990; Goldsmith et al., 2000; Bower, 2001; Stafford et al., 2002; Pornpitakpan, 2003; Kim & Na, 2007), attractiveness (Kelman, 1961; Mills & Aronson, 1965; Mills & Harvey, 1972; Dholakia & Stemthal, 1977; Baker & Churchill, 1977; Friedman et al., 1978; Friedman & Friedman, 1979; Maddux

& Ronald, 1980; Joseph , 1982; Atkin & Block, 1983; Debevec & Kernan, 1984; Kahle & Homer, 1985; McGuire, 1985; Ohanian, 1990; Shavitt et al., 1994; Goldsmith et al., 2000; Bower, 2001; Stafford et al., 2002; Pornpitakpan, 2003; Kim & Na, 2007), likableness (Friedman et al., 1978; Friedman & Friedman, 1979; Kahle & Homer, 1985), similarity (Friedman et al., 1978; McGuire, 1985), familiarity (McGuire, 1985), dynamism (Whitehead, 1968; Applbaum & Anatol, 1972), objectivity (Whitehead, 1968; Applbaum & Anatol, 1972), awareness (Friedman et al., 1978, Friedman & Friedman, 1979), talent (Friedman et al., 1978), credibility (Debevec & Kernan, 1984), honesty (Goldsmith et al., 2000), sociability (Debevec & Kernan, 1984), competence (Bowers & Phillips, 1967; Whitehead, 1968), evaluative (DeSarbo & Harshman, 1985), potency (DeSarbo & Harshman, 1985), and activity (DeSarbo & Harshman, 1985).

Ohanian (1990) divided endorser researches into two topics which were the source-credibility model and the source-attractive model. Source credibility was commonly said that the communicator's characteristics related to the subject of communication, and the communicator could provide an objective view of the source to affect the acceptability of the recipient about the message (Ohanian, 1990). The source-credibility model originated from a milestone study by Hovland, Janis and Kelley (1953). They conducted the factor analysis resulting in the perceived credibility of the communicator, and resulted the two factors of source credibility-namely, trustworthiness and expertise (Hovland et al., 1953). The source-attractive model resulted from a social psychological research by McGuire (1985). It was an essential element of the "source valence" model. McGuire (1985) indicated the effective message to the receiver relied on "familiarity", "likability", "similarity", and "attractiveness" of the source. In addition, source attractiveness referred to the attractive communicator was able to make changes in positive attitude of consumers (Kahle & Homer, 1985).

The endorser study of Ohanian in 1990, in recent years, was the most representative research about endorsement field. Ohanian defined the three factors of advertised endorser credibility-respectively, attractiveness, trustworthiness and expertise. This study focused on these three dimensions to discuss the influence on advertisement.

The appealing body and the attractive appearance was an important suggestion judging a person (Joseph, 1982). The previous research used likability (Friedman et al., 1978; Friedman & Friedman, 1979; Kahle & Homer, 1985), familiarity (McGuire, 1985) and similarity (Friedman et al., 1978; McGuire, 1985) to measure attractiveness. Friedman, Santeramo, and Traina (1978) found similarity and attractiveness was highly correlation. McGuire (1985) constructed the attractiveness composed of likability, familiarity and similarity as a notable dimension to measure advertising effectiveness. Mills and Aronson (1965) found that when a physical attractive female communicator declared

her persuasive intention had more effective persuasion for male than when she did not declare her intention. Besides, when a physical unattractive female communicator declared her persuasive intention had no effectiveness of persuasion. Mills and Harvey (1972) concluded that the attractive communicator was given the information after as great agreement as before. In Debevec and Kernan (1984) research, they found males were in favor of attractive female model than average look female model, while females had more favorable reaction to the attractive male model than average look male model. The attractive communicator had strengthened changes in positive attitude that the receiver easier made positive impression about he endorsed (Joseph, 1982; Kahle & Homer, 1985). The reason was that attractive models were more favorable than average-looking models (Debevec & Kernan, 1984).

Hovland, Janis, and Kelley (1953) defined trustworthiness was the degree of the confidence in the intention of the communicator to convey the statements which he thought about it validly. Trustworthiness included dynamism (Whitehead, 1968; Applbaum & Anatol, 1972; Friedman & Friedman, 1979; Wynn, 1987), believability (Wynn, 1987), honesty (Goldsmith et al., 2000), and objectivity (Whitehead, 1968; Applbaum & Anatol, 1972). These dimension described the more upright and honest endorser more effective convince the consumers. Dholakia and Stemthal (1977) resulted that the more trustworthy endorser had more credibility. Friedman, Santeramo, and Traina (1978) indicated that trust was strongly related to likeableness and similarity. Friedman and Friedman (1979) found that the favorable endorser had more trustworthiness than others. In addition, Debevec and Kernan (1984) concluded that when the model was normal, the female model was more trustworthy and sociable than the male model, especially for female participants. Furthermore, they also reacted more favorable. In view of this, this current study all utilized the female avatar to conduct the experiment. Pornpitakpan (2003) determined that the trustworthiness was positively related to purchase intention.

Hovland, Janis, and Kelley (1953) defined expertise was the extent to which a communicator is perceived to have expert knowledge, discipline and experience about the product. Goldsmith (2000) considered expertise originated in the knowledge of specifics. Competence was similar to expertise (Bowers & Phillips, 1967; Whitehead, 1968). Maddux and Rogers (1980) research resulted the source expertise positively changed the receiver's attitude, and the expert source significantly created greater agreement than the nonexpert source. In general, the expertise definition is spokesmen have demonstrated expertise in product. The current study predicted that the avatar expertise was unrelated to the nudity of avatars.

The previous discussions reveal the use of avatars with sexy physical appearance is usual in online game advertising. The avatar's attractiveness, trustworthiness and

expertise may affect the consumer attitude toward the advertisement. Thus, the main focus of this paper is the persuasive effectiveness of sexy avatar. Besides, the above inference also refer to the negative evaluation of female audiences on sexual appeal in advertising may come from self comparison with the models in the advertisings. People may curious on the existence of gender difference in persuasive effectiveness of sexy avatars when females realize the unreal nature of sexy avatars. Based on the above discussion, the following hypotheses are proposed.

H2: Sexy of avatar would induce negative impact on trustworthiness of avatar. The negative impact of sexy avatar is moderated by gender.

H2a: For male, sexy of avatar is irrelative to trustworthiness.

H2b: For female, sexy of avatar is negative relative to trustworthiness.

3 EMPIRICAL STUDIES

3.1 Overview of studies

This paper conducted three studies to investigate the effectiveness of sexy avatar in advertising as well as the moderating of gender. Study 1 examined the use of sexy and normal beauty in the advertisement of online puzzle game targeting to both male and female players. Study 2 also examined the difference in the use of sexy and normal beauty avatar. Nevertheless, the advertised online game was changed to an online game with romantic story targeting majorly to female players. In study 3, three avatars with same looking but different degree of nudity were used to realize respondents' attitude to sexual appeal.

The study 1 can help to realize the persuasion effect of sexy avatar in online game advertisement. Study 2 can help to figure out the advertising effectiveness if the advertised "product" is for female consumers. Study 3 can help to explore the existence of negative effect of overt sexual appeal, especially for female audiences.

3.2 Study 1

3.2.1 Research Design

The study 1 selected online games as advertising target since avatars appear frequently in advertisements of online games. This study developed two experimental advertisements for a simulative online game: one was with sexy physical appearance avatar wearing bikini and the other one with classic beauty physical appearance wearing a normal dress. This study consulted ten subjects to make sure that the created avatar with bikini is sexier than the one with normal dress. Both two avatars were female. The simulative online game advertisements are for an online puzzle game targeting to both female and male players (as Figure 1 see). This study conducted online questionnaire survey to collect data. First, participants were asked to fill out their demographic data.

Then, participants were presented randomly an online game advertisement, which endorsed by sexy avatar or normal avatar. This advertisement was to introduce a new online game. After viewing the advertisement, participants completed the questionnaire to present their attitude to the advertisement as well as the online game and their intention to play the game.



Figure 1 Simulative online puzzle game advertisement

3.2.2 Measure

The questionnaire used in this study was divided into four parts. The first part of the questionnaire surveyed the demographic variable data and the subjects' network behavior. In the second part, this study measured the subjects' attitude towards the advertisement. Attitude towards the advertisement is the subjects' view, impression and feeling of the overall design of this advertisement. This current study used the advertising attitude scale developed by Baker and Churchill (1977) which consisted of eleven semantic differential items. In the third part, this study measured the subjects' attitude towards the targeted online game in the advertisement by the scale proposed by Gresham, Bush, and Davis (1984), which included four items. The fourth part of the questionnaire assessed the intention to play the online game, adopted the scale proposed by Park and Lee (2008), which included two items. All the measurement adopted 7-point Likert scale.

3.2.3 Participants

Study 1 recruited voluntary subjects from two online game communities. The call for voluntary subjects messages were posted on discussion forums of several discussion groups about online game for two weeks. Twenty convenience store gift coupons, each with about US\$ 10 dollars worth, were provided in a lottery for respondents who completed the questionnaires. Study 1 totally recruited 269 completed questionnaires were accepted for data analysis. The subjects consisted of 159 (59.11%) male and 110 (40.89%) female. The age of subjects were ranged from 16 to 45 years ($M = 26.09$, $SD = 5.78$). In addition, 65.06% of the subjects for age were between twenty to thirty years. In the education level, 197 (73.23%) subjects were with university degree, while 10.41% of the subjects were with master degree. 45.35% of the subjects were employed and 42.75% were students. Moreover, the subjects averagely with 3.05 years experiences in playing online games and spent averagely 9.80 hours per week on it.

3.2.4 Reliabilities and Validities

In the current study, Cronbach's α was usually used to estimate the reliabilities of constructs. The commonly acceptable range of reliability is greater than .70 (Nunnally, 1978). The Cronbach's α were .96, .97 and .95, for advertising attitude, product attitude, and playing intention, respectively. All Cronbach's α values in this study were in the acceptable range. This study utilized average variance extracted (AVE) and composite reliability (CR) to evaluate convergent validity. The AVE should exceed 0.50 (Fornell and Larcker, 1981) and CR should over 0.70 (Fornell and Larcker, 1981). In the current study, AVE values were .71 and .88, and CR values were .96 and .97, for advertising attitude and product attitude. All AVE and CR coefficients were within acceptable range. Since only two items were used to measure playing intention, AVE and CR could not be calculated for that construct.

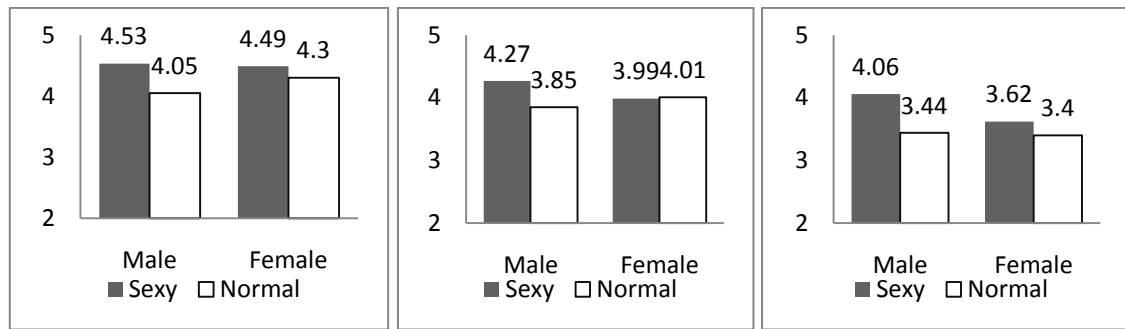
3.2.5 Data analysis

Table 1 showed the t-test results of impact of beauty type on advertising effectiveness. Significant differences were not found for female for all advertising attitude, product attitude, and play intention. However, for males, significant differences were found in advertising attitude and ($t=2.24$; $p<.05$) and play intention ($t=2.35$; $p<.05$). For males, the average score of advertising attitude was 4.53 (SD = 1.30) to the advertising with sexy avatar and was 4.05 (SD = 1.38) to the one with normal beauty avatar. The average of playing intention was 4.06 (SD = 1.63) for the advertising with sexy avatar and 3.44 (SD = 1.69) for the advertising with normal beauty avatar.

Table 1 and figure 2 showed that gender difference was found in the advertising effectiveness of sexy avatar which enhanced males' attitude to advertising and intention to playing the advertised online games. However, female subjects were not persuaded by sexy avatar. Sexy avatar did not revealed effectiveness to female audiences in study 1.

Table 1 Advertising effect of sexy avatar - online puzzle game

		Sexy			Normal			p
		n	Mean	Std.	N	Mean	Std.	
Male	Advertising attitude	70	4.53	1.30	89	4.05	1.38	$t=2.24^*$; $p<.05$
	Product attitude		4.27	1.50		3.85	1.55	$t=1.71$; $p=.09$
	Playing intention		4.06	1.63		3.44	1.69	$t=2.35^*$; $p<.05$
Female	Advertising attitude	52	4.49	1.29	58	4.30	1.25	$t=0.80$; $p=.42$
	Product attitude		3.99	1.55		4.01	1.29	$t=-0.09$; $p=.93$
	Playing intention		3.62	1.71		3.40	1.64	$t=0.69$; $p=.49$



(a) attitude to advertising (b) attitude to online game (c) intention to play

Figure 2 Advertising effect of sexy avatar - online puzzle game

3.3 STUDY2

3.3.1 Research Design

Persuasion effect of sexy avatar for female subjects in study 1 was not significant statistically. To explore again the gender difference in persuasion effect of sexy avatar in advertising, study 2 developed another simulative online game with romantic story. This romantic story online game targeted majorly to female players. Study 2 also developed two experimental advertisements: one was with sexy physical appearance avatar wearing bikini and the other one with classic beauty physical appearance wearing a normal dress. This study consulted ten subjects to make sure that the created avatar with bikini is sexier than the one with normal dress. Both two avatars were female. Study 2 followed the similar measure scales and data collection procedure as that of study 1 (as Figure 3 see).



Figure 3 Simulative online puzzle game advertisement

3.3.2 Reliabilities and Validities

In study 2, The Cronbach's α were .96, .96 and .95, for advertising attitude, product attitude, and playing intention, respectively. All Cronbach's α values were in the acceptable range. AVE values were .73 and .86, and CR values were .96 and .96, for advertising attitude and product attitude. All AVE and CR coefficients were within acceptable range.

3.3.3 Data analysis

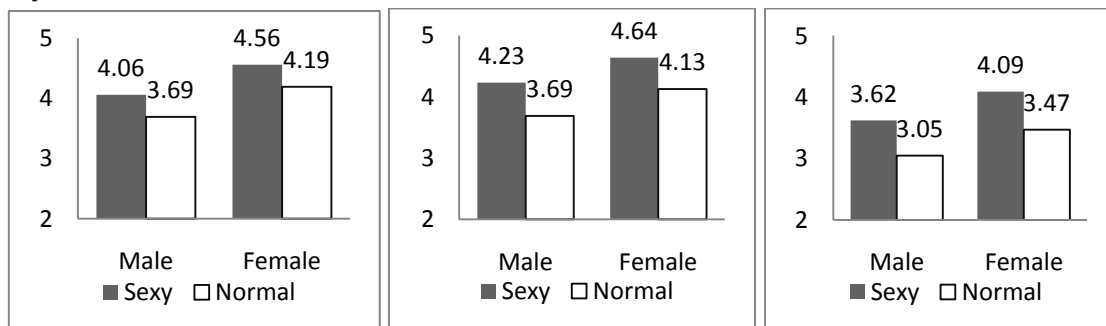
Table 2 showed the t-test results of beauty type on advertising effectiveness. Significant differences were found for male subjects in product attitude ($t=2.52$; $p<.05$) and play intention ($t=2.26$; $p<.05$). For male, the average of product attitude was 4.23 (SD = 1.45) for the advertising with sexy avatar and 3.69 (SD = 1.47) for the advertising with normal beauty avatar. The average of playing intention was 3.62 (SD = 1.75) for the advertising with sexy avatar and 3.05 (SD = 1.63) for the advertising with normal beauty avatar. Playing intention between sexy and normal beauty avatar groups were significantly different for female subjects ($t=2.05$; $p<.05$). The average score number of playing intention for sexy beauty type was 4.09 (SD = 1.80) and for normal beauty type 3.47 (SD = 1.82) for female subjects. Although the differences also existed in female subjects' advertising attitude and product attitude, the differences were not statistically significant.

Analysis results of Table 2 showed that sexy avatar enhanced both female and male subjects' intention to play the advertised online games. The results for male audiences were similar to that of study 1. Nevertheless, the results for female audiences were different from study 1. Sexy avatar did not reveal persuasion effect for female audience in study 1 as it showed in study 2.

Table 2 Advertising effect of sexy avatar - online game of romantic story

		Sexy			Normal			P
		N	Mean	Std.	N	Mean	Std.	
Male	Advertising attitude	93	4.06	1.38	89	3.69	1.30	$t=1.84$; $p=.07$
	Product attitude		4.23	1.45		3.69	1.47	$t=2.52^*$; $p<.05$
	Playing intention		3.62	1.75		3.05	1.63	$t=2.26^*$; $p<.05$
Female	Advertising attitude	70	4.56	1.42	73	4.19	1.54	$t=1.47$; $p=.14$
	Product attitude		4.64	1.55		4.13	1.66	$t=1.87$; $p=.06$
	Playing intention		4.09	1.80		3.47	1.82	$t=2.05^*$; $p<.05$

* $p<.05$



(a) attitude to advertising (b) attitude to online game (c) intention to play

Figure 4 Advertising effectiveness - online game of romantic story

3.4 STUDY 3

3.4.1 Research Design

As mentioned above, previous studies questioned the effect of overt sexual appeal (LaTour and Henthorne, 1994) and argued that female sexiness was determinant factor of advertisement effectiveness for male receivers only, while female audiences held negative evaluation to female sexual appeal in the advertisings (Sengupta and Dahl, 2008; Davies et al., 2007; Patzer, 1980; Sciglimpaglia et al., 1978).

Study 1 and study 2 did not get consistent results for female subjects on the advertising effectiveness of sexy avatar. LaTour and Henthorne (1994) questioned the effect of overt sexual appeal. Dahl (2008) argued that female audience on average exhibited less positive attitude to gratuitously sexual appeal than male ones. In study 3, avatars of different nudity levels were used to explore the negative effect of overt sexual appeal, especially for female audiences.

3.4.2 Measure

The questionnaire used in study 3 was divided into two parts. The first part of the questionnaire surveyed the demographic variable data and the subjects' network behavior. In the second part, one of the three avatars was presented randomly to respondents. Then, this study used the scale developed by Ohanian (1990) to measure avatar's expertise, trustworthiness, and attractiveness. Fifteen items, five items each for attractiveness, trustworthiness, and expertise, were used to measure respondents' attitude to avatars. The measurement adopted 7-point Likert scale.

3.4.3 Procedure

Study 3 developed three female avatars with overt sexual, seductive, and demure dresses. All the three avatars were with the same face, hair, looking, body, pose and physical appearances. The only differences were the clothes they wear. Study 3 manipulated the degree of nudity by the clothes of avatars. Overt sexual avatar was with almost naked bikini. Figure 5 showed the three avatars.

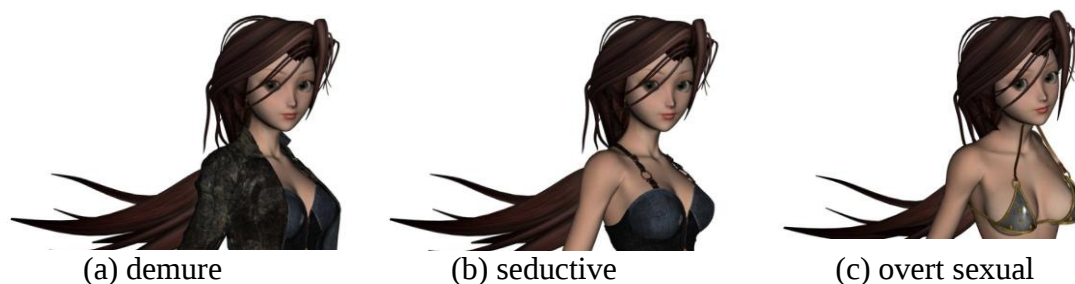


Figure 5 Avatars with different nudity levels

3.4.4 Participants

Study 3 recruited voluntary subjects from an online community in which most users were students or young people. The subjects were not the same as those in study 1 and study 2. The call for voluntary subjects messages were posted on discussion forums of several discussion groups about online game for two weeks. Points that can be use in the online community were provided as incentive for all respondents. Besides, twenty convenience store gift coupons, each with about US\$ 10 dollars worth, were provided in a lottery for respondents who completed the questionnaires.

Study 3 totally recruited 593 completed questionnaires were accepted for data analysis. The subjects consisted of 354 (59.70%) male and 239 (40.30%) female. The age of subjects were ranged from 10 to 39 years ($M = 24.61$, $SD = 3.54$). In addition, 90.64% of the subjects for age were between twenty to thirty years. In the education level, 421 (70.99%) subjects were with university degree, while 20.57% of the subjects were with master degree. 69.14% of the subjects were students and 23.57% were employed. Moreover, the subjects averagely with 3.50 years experiences in playing online games and spent averagely 10.05 hours per week on it.

3.4.5 Reliabilities and Validity

In study 3, the Cronbach's α were .92, .97 and .95, for attractiveness, trustworthiness, and expertise, respectively. All Cronbach's α values in study 3 were in the acceptable range. In general, CR value had to more than .70 (Fornell and Larcker, 1981; Hair et al., 1998). In the current study, CR values were .92, .97 and .95 for avatar attractiveness, trustworthiness and expertise. The CR coefficients in this study all exceeded .90 represented that the dimensions in this study had well internal consistency. Average Variance Extracted (AVE) represented discriminate validity. Fornell and Larcker (1981) suggested the AVE should over .50. In the current study, AVE values were between .70, .85 and .78 for avatar attractiveness, trustworthiness and expertise. Three dimensions AVE were all greater .50 and showed clearly the current study had discriminate validity. All CR and AVE coefficients were within acceptable range.

3.4.6 Data analysis

ANOVA analysis results revealed the existence of significant differences among subjects' attitude to avatars of three nudity level ($p < .05$). Table 3 and figure 6 showed the male and female subjects' attitude to avatar with demure, seductive and overt sexual dressing. The ANOVA results showed significant effects for perceived avatar attitude for male ($F = 3.17$, $p < .001$) and for female ($F = 2.46$, $p < .001$). As figure 4 revealed, overt sexual avatar was more attractive than seductive and demure avatar for male audiences. However, the trustworthiness and expertise of overt sexual avatar was not significantly different from that of seductive and demure avatars.

Nevertheless, for female subjects, the overt sexual avatar did not bring much attractiveness. No significant difference was found among attractiveness of the three avatars of overt sexual, seductive and demure dressing. Besides, female subjects felt overt sexual avatar was less trustworthiness and expertise than seductive and demure avatars.

Study 3 showed that male subjects felt that overt sexual avatar was more attractive than seductive and demure avatar. The trustworthiness and expertise of overt sexual avatar were similar to that of seductive and demure avatar. These results mean that overt sexual avatar could be used in advertising to draw attention for male audiences without reduce the feeling of trustworthiness and expertise. Nevertheless, female subjects did not prefer overt sexual avatar. The trustworthiness and expertise of overt sexual avatar were lower than that of seductive and demure avatar. These results mean that overt sexual avatar could not draw attention of female audiences. On the contrary, for female audiences, overt sexual avatar was with less trustworthiness and expertise. Overt sexual physical appearance of avatar did not bring female audiences positive attractiveness but hurt avatar's trustworthiness and expertise.

Table 3 Persuasive effects of avatars

		Demure			Seductive			Overt Sexual		
		N	Mean	Std.	N	Mean	Std.	Mean	Std.	
Male	attractiveness	126	3.88	1.35	124	3.99	1.35	104	4.33	1.18
	trustworthiness		3.87	1.25		3.80	1.17		3.91	1.15
	expertise		3.67	1.36		3.77	1.24		3.63	1.22
Female	attractiveness	74	3.88	1.37	86	3.95	1.33	79	3.93	1.32
	trustworthiness		3.93	1.16		3.71	1.20		3.38	1.25
	expertise		3.74	1.35		3.49	1.39		3.46	1.31

*p< .05

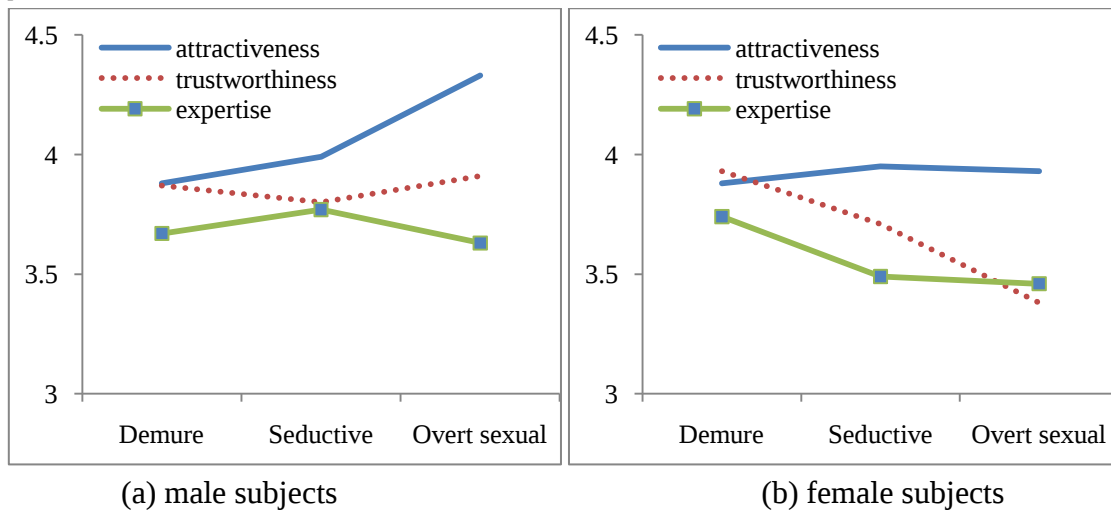


Figure 6 Persuasive effects of avatars

4 DISCUSSION AND CONCLUSION

The “sex sells” ideology induces advertisers to use sexual appeal in advertisings. Due to the advances of multimedia and 3D techniques, advertisers now can use avatars to replace the sexy models in advertisements. It is now a popular phenomenon that sexy avatars are found in online game advertisements.

Advertisers usually spend a lot of efforts in search appropriate models for their advertisements. When arrange the sexual appeal in advertisements, the selected models may refuse to wear sexy dresses since their own consideration in their images and career development in entertainment industry. In most cases, the cost is also high when asking models to wear sexual dresses in advertisements. In some situation, even the advertisers know the effectiveness of sexual appeal, the models may refuse to do it or the charge is too high that the advertisers cannot afford.

One advantage for avatars is that people can easily adjust the physical appearance, dressing, and nudity level of the avatars to meet the requirement in advertisements. No extra cost is need when asking avatar to appear in an overt sexual dressing. The physical appearance and body sharp of avatars can also be adjusted as advertisers want. These characters attract advertisers’ sight.

Sexy avatars have already been used in many online game advertisements. Nevertheless, few studies focus on the effect of sexual appeal of avatars in advertisings. Although advertisers can make the avatar as sexual as they want, there is no guarantee that sexual appeal of avatar will bring positive impact to advertising effectiveness.

This study focuses on the gender difference in the persuasion effects of sexual avatar. In study 1 which used puzzle game as advertised target, the results found that advertisement with sexy avatar bring higher advertising attitude and playing intention to male audiences. Nevertheless, the use of sexy avatar did not enhance advertising effectiveness to female audience. In study 2 which used romantic online game as advertised target, the results found that advertisement with sexy avatar bring higher product attitude and playing intention to female audiences. Besides, sexy avatar enhanced female subjects’ playing intention to the romantic online games.

Solomon et al. (1992) proposed that there existed a match-up between product and type of beauty of spokesperson in advertising. Good advertising effectiveness will engage if the models in advertisings match the product characters, (Kahle & Homer, 1985). Baker and Churchill (1977) found that the highly attractive model was persuasive in the romance-related product (such as perfume) advertising, and was not persuasive when advertised product was irrelevant to romance (such as coffee). Therefore, the over-nude advertisements not really had better advertising effect. Bower and Landreth (2001) pointed out that the attractive or beautiful model were suitable for

attractiveness-relevant products.

Product types maybe a moderator for the advertising effectiveness of sexual appeal. The advertised targets of study 1 and study 2 were puzzle game and romantic online game, respectively. The product difference in study 1 and study 2 may be an explanation for the difference in persuasion effect for female subjects. According to the results of study 1 and study 2, for male audiences, sexy avatar produced much better advertising effects than normal ones. When an online game company would like to promote a new online game which targeted majorly to male players, sexy avatar may be a solution for advertisement.

Female players were not persuaded by the sexy avatars in study 1. Nevertheless, for female audiences, sexy avatar was persuasive in study 2, in which the advertised target was romantic online game. This evidence provides a suggestion that sexy avatars can be used in online game advertisement which targets to females players. Previous studies reported that females held less positive attitude to overt sexual appeal. (LaTour and Henthorne, 1994). In study 3 of this paper, overt sexual avatar attract only male subjects' attention. Females were not attracted by overt sexual avatar. In addition, for females, overt sexual avatar was less trustworthiness and less expertise. These results inspire advertisers that male players would be attracted by overt sexual avatars, and males do not feel the avatar less trustworthiness and expertise. Moreover, overt sexual avatars would not attract female audiences. Females feel the overt sexual avatar less trustworthiness and expertise.

Solomon (1992) proposed that there were six primary beauty types for females, included classic beauty, cute, sex-kitten and sensual, and girl-next-door, exotic, feminine, and trendy. The current paper discusses only the sexual appeal of avatars. Future studies should extend the scope into all the six beauty types to discuss the influence of beauty types of avatars on advertising effectiveness.

The study 1 and study 2 found the moderation of game types on the advertisement effects of sexy avatars for female audiences. Future studies may focus on the match-up of online game types and avatar beauty, as well as gender difference on this match-up relationship.

The put of sexual appeals in advertising is with long history (Putrevu, 2008; Lin, 1998; Reichert and Carpenter, 2004). Sexy avatar is now a new format of sexual appeals in advertisings. In addition to advertisings, avatar can also be used as communicators in e-learning and mass communication fields. Formerly, the concept of e-learning was to provide the long distance teaching to the learners who hope not to limit the space and time in learning. The technical change causes the teaching environment no longer to limit to the traditional classroom. In order to let the learning be more effective, several

digital e-learning teaching materials pay more attention to the interactive, the validity and the attractiveness. According to the result of multimedia technologies development, the learners who used digital learning materials catch more information and knowledge than those in traditional classroom. Besides the teaching material contents, the digital materials used the virtual avatar as the teacher likely enhances learner's study interest. In the present society, news dissemination is by the physical news anchor. In order to attract more audiences to watch the news, the television stations use the good looking anchor to broadcast the news. But, this way is still unable to appeal the audience whose viewing time is not fixed. For this reason, many news viewers will now use the Internet to watch the news, so network news production has become increasingly important. Using avatar as the virtual anchor will adjust the attractiveness of virtual anchor not only at any time but also based on the viewer performance. In the light of the above applications, we can speculate the avatar will be used in various fields. In the future, academics and practice may try to use of avatars as communicators in other situation.

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