
The Influence of the privacy concern and social advertising type on the attitude and behavior

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Abstract

Nowadays social media can collect consumers' online behavior. The enterprises make the customized advertisement to achieve targeting marketing and close consumers' needs. With the right of privacy, the consumers pay attention to this kind of advertisement. In this study, we made the online questionnaire. Asking the privacy concern, and analyzing the advertising attitude and behavior in a different advertising situation. The result we found that customized advertising made consumers increase positive attitude, but made negative attitude on advertising behavior like click, share, etc. In addition, both male and female have different responses to customized advertisements and intimate products advertisements. The result can serve a reference for manufacturers to make advertising strategies in the future.

Keywords: Social Media Advertising; Consumer attitude; Privacy Concern; Consumer embarrassment;

1. Introduction

Social media has changed the mode of people's communication. According to the Best Practice Guide published by Facebook: Marketing on Facebook Guidance. It explicitly points out that the enterprise can through establishing the fan page, and attract consumers to interact with the fan page to build brand image effectively. Nowadays, more and more companies set up a fan page to keep in touch with consumers. Therefore, Facebook provides users' data for enterprises to achieve marketing targeting and formulate online behavioral advertising. However, getting consumers' data also violates the privacy of consumers and makes consumers dislike this kind of advertisement. The purpose of this study is to investigate whether consumers' attitudes and behaviors may change due to different advertising situations, and to explore whether privacy and embarrassment may influence advertising attitudes and behaviors.

2. Literature Review

2.1. Online behavioral advertising

Enterprise in order to achieve consumer expectations, through to track consumer behavior on the Internet and develop customized advertising for them. This kind of series process is called online behavioral advertising [8]. B. ur et al think online behavioral advertising is to create a user profile when using site survey [2]. When users visit the web and leave a record, next time when they get on the internet again, that will look through the relevant ads that are provided by enterprise or web browsers.

[8] found that a personalized AD would attract more attention when the name of the consumer appeared in it. Therefore, consumers' attention will lead to a higher willingness to purchase. B. ur et al [2] showed the results that consumers consider online behavioral advertising can give the consumer benefits, such as the ads can provide to consumers interested in and closely related to them. Even some consumers think that such ads can provide a special price. But some consumers can't totally agree with online advertising because of privacy concerns.

[3] L.F. Bright, S.B. Kleiser, and S.L. Grau Studied the difference from male and female for Internet advertising attitude and behavior. The result showed that the male in Internet advertising attitude and behavior of the score is

higher than female. Our research will be the difference between male and female for customized advertising attitude and behavior which can be taken as reference to the future to develop customized advertising.

2.2. Privacy Concern

In the past, privacy concerns were considered whether Internet users would mind their personal privacy information being let out to companies. Now we define the privacy concern on the Internet, whether users would worry about their information would be threatened when they transmit information on the Internet [1].

Enterprises in order to understand consumer needs and preferences, they can collect the background of the customer. With the development of science and technology, enterprises more easily store and use of customer's privacy information. Therefore, privacy issues are highly concerned [18]. The development of the internet makes data collection easier, and also consumers in the use of online shopping are easily aware of privacy issues [17].

In the past, relevant studies have shown that if advertisers adopt the pricing strategy of advertising through the information of customers, the auction price will be higher and more benefits will be obtained [16]. Users with a higher awareness of privacy are more likely to feel social media fatigue [3], which will also lead to users being more relevant to social media. Consumers' doubts about privacy will directly affect their willingness to consume [5].

K.B. Sheehan showed that in the anonymous Internet environment, women are more concerned about their privacy than men [11]. But men are more aggressive face the privacy issues, while women are more passive in dealing with privacy issues. However, according to M.G. Hoy and G. Milne, in the web2.0 environment, compared with ten years ago, women are more aggressive in self-protection of privacy than men [7].

2.3. Embarrassment

Embarrassment is an emotion damaged in daily interaction, which can reflect the appropriateness of an individual's behavior and the sense of self-esteem when it is deprived [10]. Embarrassment is an emotion that occurs when people are unexpected, unwilling to face difficulties and violate social norms. It is a short-term negative emotion. [12].

In the past, there are many scholars attempting to distinguish between embarrassment and shame, and D.W. Dahl, R.V. Manchanda, and J.J. Argo proposed the feeling of shame is personal, and embarrassment is involved in the relationship of exposure-this means embarrassment will only occur in real or imagined someone else besides [9]. They feel ashamed because of their personal behavior.

Embarrassed consumers intend to study, though awkward moods will not significantly affect the consumers for Internet privacy concerns, but can be a significant image directly to the purchase intention [4]. It lacks gender in the study of different weather embarrassment, so we will distinguish between gender differences.

3. Method

This questionnaire is divided into seven parts. First, basic information such as birth year, education background and gender will be asked. Then, the questions will be described in words and respondents will be asked to answer the following questions:

The study employed a repeated measurement design with four situations. The four situations were advertisement for general product, personalized advertisement for general product, personalized advertisement for embarrassing male product, and personalized advertisement for embarrassing female product. In each scenario, subjects were asked to imagine they read advertisements when surfing on Facebook. Subjects were asked to provide their attitude to advertising and intention to click advertisement for all these four scenarios.

We provide the questionnaire on the Sex, Q_ary and PttEarnMoney of ptt form 2018 December 19 to 2019 January 27. We will give 50 ptt money to the person who provides the effective survey. After collecting enough questionnaires, we will give 3 people NT \$ 100 randomly.

3.1. Facebook advertising attitude

We measured users' attitude to online advertising using the five items scale, as mentioned in the appendix. We developed the scale based on the 14 item scale which was originally developed by N. Souiden [6]. To shorten the questionnaire, we only adopted five rather than 14 items. The statement of measurement items was modified to fit the

online advertising scenario that this study focused on. The scale was measured using a 5-point Likert scale, in which a score of 1 indicated strongly disagree and 5 indicated strongly agree.

3.2. Privacy Concern

Privacy concerns toward online advertising were measured using four items adapted from the scale developed by C. Ranganathan [15]. The items of privacy concern were measured using a 5-point Likert scale, in which a score of 1 indicated strongly disagree and 5 indicated strongly agree. It evaluates the degree of privacy concern of the respondents after reading the privacy statement of the users of Facebook.

3.3. Advertising Behavior

According to the button Settings of Facebook posts, this study developed four advertising behaviors, including click, like, message and share which were measured by the five-point Likert scale. We developed the scale based on the 4 scale which was originally developed by the button. setting of Facebook posts.

3.4. Embarrassing Attitude

This study questions developed by W.G. Parrott and S.F. Smith [14] in the embarrassment of the questionnaire. The questionnaire has five dimensions to measure total respondents embarrassing, and dimensions were dramatic, social anxiety, the situation of self-esteem, personal standards, shame. The dimensions of shame conform to the situation of this research and this study used the two questions form shame. For increasing abundance, this study increased two additional items. This study developed five points Likert scale, from 1 to 5 respectively representing strongly disagree, disagree, ordinary, agree, strongly agree to measure the degree of embarrassment in different situations.

Table. 1. Interval Measure

Variable investigated	Measure items
Advertising attitude	1. I like Facebook advertisement. 2. I consider Facebook advertisement is a good thing. 3. Facebook advertisement is fun to see. 4. I think Facebook advertisement is favorable. 5. I do my best to avoid Facebook advertisement.
Advertising behavior	I will click my favorite post. I will click the like button on my favorite post. I will comment on my favorite post. I will share my favorite post.
Embarrassing attitude	In this situation, I feel embarrassed. In this situation, I feel nervous. In this situation, I feel shame. In this situation, I feel dishonorable.

4. Results and Discussion

4.1. Sample

We collected 442 samples. If respondents chose for a long time didn't use Facebook, and never use Facebook, and the test completed under ordinary scores, will be considered as an invalid questionnaire. After deleting the invalid 42 questionnaires, there're 400 valid questionnaires. There's 212 men, accounted for 53% and women for 188 people, accounted for 47%. The average age is 27. The highest school with a master's degree is 99 people, the university degree is 277 people, a high school degree 21 people and the junior high school degree is 3 people.

Table. 2. Description of Sample of this study

Variable	Item	Frequency	Percentage
Gender	Male	212	53%
	Female	188	47%
School	Master	99	24.75%
	University	277	69.25%
	Senior High School	21	5.25%
	Junior High School	3	0.75%

4.2. Sample Analysis

Then we conducted paired samples t-test to compare whether there is a difference between general advertising and customized advertising in attitude and behavior. Table 3 shows the attitude comparison of the two kinds of advertisements with a P value greater than 0.05, while table 4 shows the behavior comparison of the two kinds of advertisements with a P value greater than 0.05. We can find that there is a significant difference between the two kinds of advertisements for the subjects.

Table. 3. Two situation of advertising attitude

Effect		Value	F	Sig.
ad type	Pillai's Trace	0.282	156.487 ^b	0
	Wilks' Lambda	0.718	156.487 ^b	0
	Hotelling's Trace	0.393	156.487 ^b	0
	Roy's Largest Root	0.393	156.487 ^b	0
ad type × gender	Pillai's Trace	0.002	0.979 ^b	0.323
	Wilks' Lambda	0.998	0.979 ^b	0.323
	Hotelling's Trace	0.002	0.979 ^b	0.323
	Roy's Largest Root	0.002	0.979 ^b	0.323

Table. 4. Two situation of advertising behavior

Effect		Value	F	Sig.
ad type	Pillai's Trace	0.081	34.970 ^b	0
	Wilks' Lambda	0.919	34.970 ^b	0
	Hotelling's Trace	0.088	34.970 ^b	0
	Roy's Largest Root	0.088	34.970 ^b	0
ad type × gender	Pillai's Trace	0.004	1.536 ^b	0.216
	Wilks' Lambda	0.996	1.536 ^b	0.216
	Hotelling's Trace	0.004	1.536 ^b	0.216
	Roy's Largest Root	0.004	1.536 ^b	0.216

We compare the four conditions of the questionnaire, which is generally advertising, customized advertising, intimacy of male product advertising, intimacy of female product advertising. Moreover, we compare the sex attitude and behavior of different situations. For the following curve drawing, we can find customized advertising attitude is

relatively general, scores improved, but in the aspect of behavior is falling. When it goes on to the male intimacy product advertising and female product advertising, both scores of attitude or behavior are falling. Women lower scores than men.

Table. 5. Different situation of advertising attitude

gender	adtype2	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
male	general	2.253	0.049	2.157	2.349
	customized	2.668	0.057	2.555	2.781
	Intimacy male	2.161	0.054	2.055	2.268
	Intimacy female	2.118	0.057	2.006	2.230
female	product				
	general	2.395	0.052	2.293	2.497
	customized	2.749	0.061	2.629	2.869
	Intimacy	1.876	0.058	1.762	1.989
	male product				
	Intimacy female	1.954	0.061	1.835	2.074
	product				

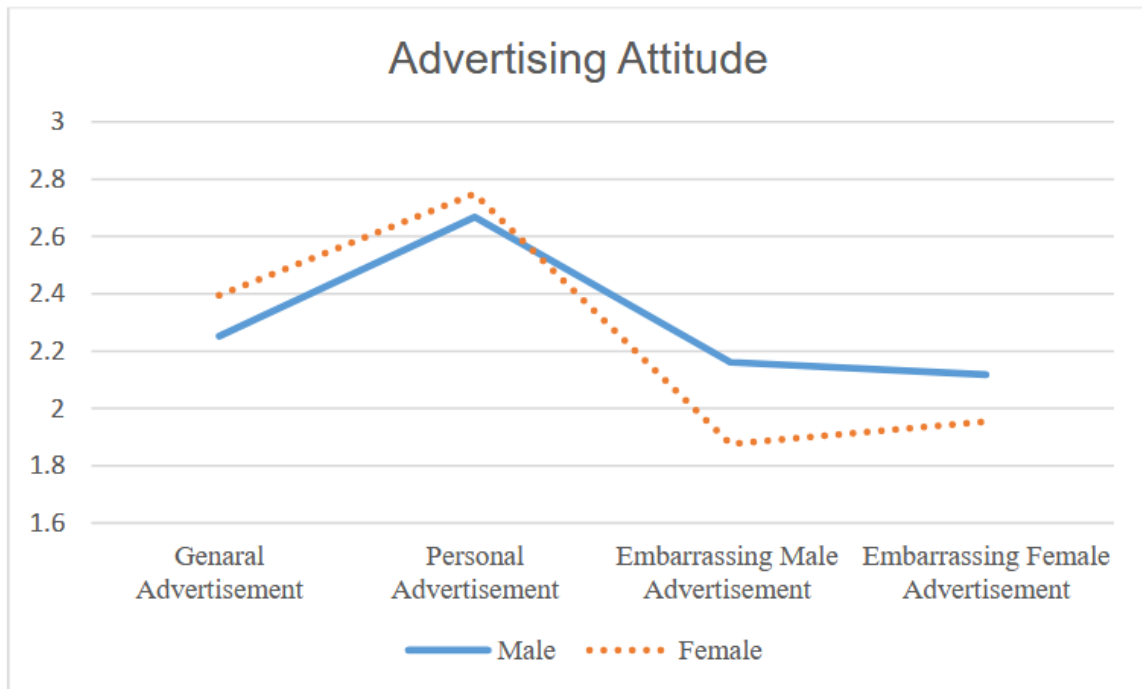
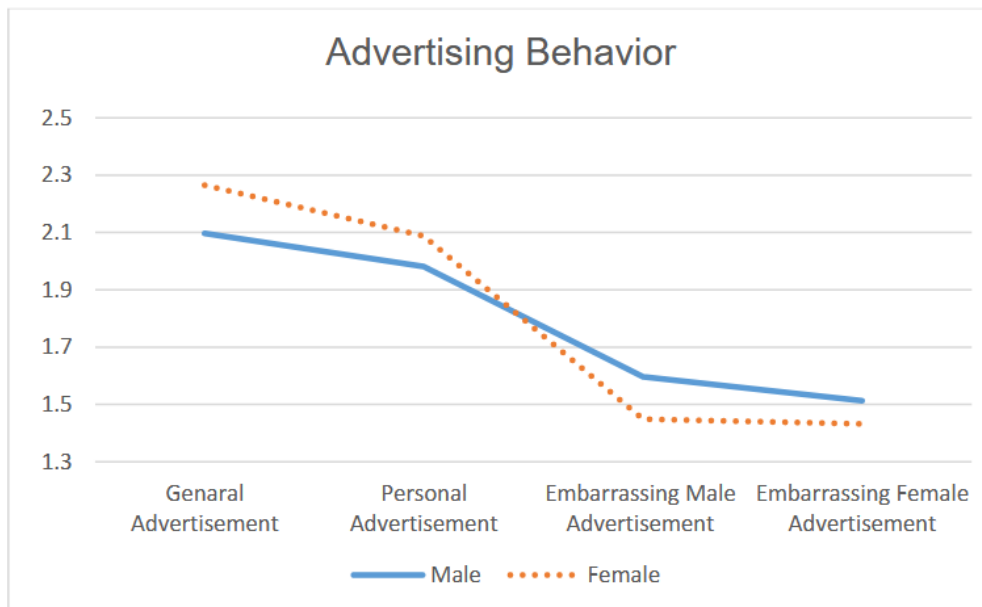


Figure. 3. Different situation of advertising behavior

Table 6. Different situation of advertising behavior

gender	adtype2	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
male	general	2.097	0.055	1.989	2.204
	customized	1.981	0.053	1.877	2.085
	Intimacy male	1.596	0.045	1.508	1.684
	Intimacy female product	1.513	0.043	1.429	1.597
female	general	2.265	0.058	2.151	2.379
	customized	2.088	0.056	1.977	2.198
	Intimacy	1.449	0.048	1.356	1.543
	male product				
	Intimacy female product	1.432	0.045	1.343	1.522

**Figure 4.** Different situation of advertising behavior

5. Discussion

From this study can found that different gender has different privacy concerns, and privacy concerns will also affect advertising attitude and behavior. Bright, S.B. Kleiser, and S.L. Grau Found that when consumers realize that vendors provide customized advertising, their click-through rates drop dramatically [3]. For the advertising attitude, A. De Corniere and R. De Nijssaid that consumers' trust in the vendor is extremely [5]. Even customized ads can best consumer recognition, and the results are the same with our result that when manufacturers release personalized ads have a positive influence on advertising attitude. However, it will make consumers more reluctant to click on advertisements and other behaviors. Personalized advertisements can indeed effectively improve manufacturers' impression on consumers, but how to make consumers willing to have further interaction can be sustainable in subsequent studies.

On privacy concerns, men and women in customized advertising show that both for customized ads have a positive attitude, but in the advertising behavior is negative, L.D. Wolin and P. Korgaonkarstudied whether men and women are different on Internet advertising attitude and behavior [13]. The result showed that the male in Internet advertising

attitude and behavior's score is higher than women. when making customized advertising should care that women are more sensitive to privacy issues. For the product to be targeted women are required to avoid violating consumers' privacy. This study found that comparing four different advertising situations, customized ads relatively general ads have higher scores in attitude and behavior. However, once the customization advertising products is intimacy, it has a negative attitude and behavior. It influences both men and women to give a lower score. If a vendor wants intimacy products used by online advertising behavior may cause a negative impression. Follow-up study can discuss how intimacy advertisements make a balance between customization and privacy.

References

- [1] J.-Y. Son and S.S. Kim, Internet users' information privacy-protective responses: A taxonomy and a nomological model. *MIS quarterly*, 503-529, 2008.
- [2] B. Ur, et al. Smart, useful, scary, creepy: perceptions of online behavioral advertising. in proceedings of the eighth symposium on usable privacy and security. 2012. ACM.
- [3] L.F. Bright, S.B. Kleiser, and S.L. Grau, Too much Facebook? An exploratory examination of social media fatigue. *Computers in Human Behavior*, 44, 148-155, 2015.
- [4] A. De Corniere and R. De Nijs, Online advertising and privacy. *The RAND Journal of Economics*, 47 (1), 48-72, 2016.
- [5] N. Souiden, S. Chtourou, and B. Korai, Consumer attitudes toward online advertising: The moderating role of personality. *Journal of Promotion Management*, 23 (2), 207-227, 2017.
- [6] M.G. Hoy and G. Milne, Gender differences in privacy-related measures for young adult Facebook users. *Journal of Interactive Advertising*, 10 (2), 28-45, 2010.
- [7] R.A. Layton, Marketing systems — A core macromarketing concept. *Journal of Macromarketing*, 27 (3), 227-242, 2007.
- [8] D.W. Dahl, R.V. Manchanda, and J.J. Argo, Embarrassment in consumer purchase: The roles of social presence and purchase familiarity. *Journal of consumer research*, 28 (3), 473-481, 2001.
- [9] E. Goffman, Embarrassment and social organization. *American Journal of sociology*, 62 (3), 264-271, 1956.
- [10] K.B. Sheehan, An investigation of gender differences in on-line privacy concerns and resultant behaviors. *Journal of Interactive Marketing*, 13 (4), 24-38, 1999.
- [11] M. Higuchi and H. Fukada, A comparison of four causal factors of embarrassment in public and private situations. *The Journal of Psychology*, 136 (4), 399-406, 2002.
- [12] L.D. Wolin and P. Korgaonkar, Web advertising: gender differences in beliefs, attitudes and behavior. *Internet Research*, 13 (5), 375-385, 2003.
- [13] W.G. Parrott and S.F. Smith, Embarrassment: Actual vs. typical cases, classical vs. prototypical representations. *Cognition & Emotion*, 5 (5-6), 467-488, 1991.
- [14] C. Ranganathan and S. Ganapathy, Key dimensions of business-to-consumer web sites. *Information & Management*, 39 (6), 457-465, 2002.
- [15] A. De Corniere and R.J.T.R.J.o.E. De Nijs, Online advertising and privacy. 47 (1), 48-72, 2016.
- [16] T. Dinev, et al., Privacy calculus model in e-commerce – a study of Italy and the United States. 15 (4), 389-402, 2006.