

The Stereotyping of Chinese Female Ph.D.s in Social Media

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### Abstract

The stereotyping against Chinese female Ph.D.s initially emerged with the prosperity of the Internet in China in the late 1990s and has become particularly prevalent in the social media in recent years. Chinese female Ph.D.s are negatively portrayed as “the third sex” in Chinese society in various forms such as jokes, anecdotes and caricatures, while the convenience and interactivity of social media play a crucial role in accelerating the spreading of these typical negative opinions toward Chinese female Ph.D.s. Under such context, by conducting a content analysis and survey experiment, this study intends to examine the content patterns in the social media for the stereotyping against this minority group, and explore the impact of the stereotyping in the social media on its users’ stereotypic attitudes and behaviors in the light of priming and uses-and-gratifications theory.

*Keywords:* stereotype, Chinese female Ph.D., priming, uses-and-gratifications

### Stereotypes of Chinese Female Ph.D.s in Social Media

“Hello, everyone! My name is Shixian Lee. I’m here to break the negative images of female Ph.D.s.” The brief self-introduction, announced by a Chinese female Ph.D. in a famous Chinese dating TV show--“You Are the One”, might have touched the bottoms of most Chinese female Ph.D.s’ hearts. As a popular saying prevalent in China goes, “there are three types of sex in our society: male, female and female Ph.D.”. In this article, we intend to explore the phenomenon of stereotyping against Chinese female Ph.D.s in social media behind this saying.

Traditionally, deeply influenced by Confucian philosophy, Chinese society has been male dominated, with women being relegated to “objects” or property (Birge 1992; Croll 1984; Doder 1989; Lee 1984). However, the development and modernization of Chinese society along with the contemporary Women’s Movement have brought increased opportunities for women’s education and employment (Li, 2008). As a result, the number of female Ph.D.s has been springing up from the percentage of 22% by 1998 to 36% by 2006 in Chinese society (Quality Analysis Seminar on Chinese Ph.D., 2010).

However, women scholars noted that there is still a long way to go for women to achieve real equality in all aspects of their lives (e.g. Luo & Hao, 2007). Chinese female Ph.D.s, labeled as wild rebels against traditional female roles, become the victims of the continuously increasing conflicts between traditional cultural values and the rising of feminism. While they are more and more negatively portrayed in Chinese mass media in various forms such as jokes, anecdotes and caricatures, few studies related to this minority group have been conducted in mass media. Therefore, to explore how Chinese female Ph.

D.s are stereotyped in mass media might help fill this gap in the research field of gender stereotypes.

In addition, the stereotypes, if any, against Chinese female Ph.D.s in mass media might contribute to a series of outcomes by restraining the educational and academic aspirations and motivations of Chinese women, which may further hinder the improvement of the whole nation's education level (Cao, 2007), and by marginalizing this minority group, which may impede the progress of the whole Chinese society. Therefore, conducting this research to study the formulation and potential effects of this specific stereotyping is of great importance and necessity.

Notably, the stereotype against Chinese female Ph.D.s initially emerged with the prosperity of the Internet in China in the late 1990s and became particularly prevalent in social media in recent years (Li, 2011). According to Kaplan & Haenlein (2010), social media "is a group of Internet-based applications that ... allow the creation and exchange of User Generated Content". It has established its own foothold and gained more and more momentum in China with the appearance of a variety of media platforms such as Youku Video, Renren SNS, and Xinlang Microblog. Additionally, the convenience and interactivity of social media play a crucial role in expanding the influence of these typical negative opinions toward female Ph.D.s (Han, 2010). Thus we concentrate our research on stereotyping against Chinese female Ph.D.s in the context of social media and examine this new medium's influence on people's attitudes and behaviors towards Chinese female Ph.D.s.

Media priming refers to "effects of the content of the media on people's later behavior or judgments related to the content that was processed" (Roskos-Ewoldsen,

Roskos-Ewoldsen, & Carpentier, 2008). Plenty of research has been done on the potential for the media to prime various gender stereotypes, including both gender and racial stereotypes (Roskos-Ewoldsen et al., 2008). Nevertheless, most research of this kind mainly focuses on the priming effects of traditional media such as television and advertisements and little attention has been paid to the priming effects of social media. Here we intend to examine the role played by social media in priming effects on stereotyping. Moreover, according to uses-and-gratifications theory, audiences play an active role in the process of communication by selecting and using media to satisfy felt needs or desires (Katz, Gurevitch, & Haas, 1973). Therefore, we are interested in whether people with stereotypic attitudes towards female Ph. D.s would be more likely to seek and disseminate stereotypic contents in social media.

To summarize, by focusing on Chinese female Ph.D.s, this paper intends to explore the content patterns in the social media for stereotyping against this group, and the impact of the stereotyping in the social media on its users' stereotypic attitudes and behaviors in the light of priming and uses-and-gratifications theory.

## **Literature Review**

### **Gender Stereotyping against Females**

Stereotypes are a crucial part of social science. Quasthoff (1978) defined a stereotype as “the verbal expression of a belief which is directed towards social groups or single persons as members of these groups” (p. 6). Gender stereotypes, as one specific category of stereotypes, are “categorical beliefs regarding the traits and behavioral characteristics ascribed to individuals on the basis of their gender” (Duehr & Bono, 2006, p. 816). As a

common social phenomenon that has existed for a long time, great efforts and numerous studies have been contributed to this area. Yet researchers' interests in this issue have never faded.

According to social role theory (Eagly, 1987), differential role occupancy in the family and occupations cultivates gender stereotypes by which each sex is expected to own characteristics that equip it to function adequately in its typical roles (Diekmann & Eagly, 2000). Gender stereotypes are results of "role-bound activities", and the characteristics favored by these roles become stereotypic of each sex and assist its typical activities (Diekmann & Eagly, 2000, p. 1172). Duehr & Bono (2006) argued that women are typically stereotyped as more communal which primarily refers to "the welfare of other people, including attributes such as compassionate, kind, sentimental, helpful, and generous" (Duehr & Bono, 2006, p. 816).

However, Diekmann and Eagly (2000) stated that changes have appeared in gender stereotypes against women. They noted that the roles of women and men have become more similar, mainly because of women's increased participation in the paid labor force and their entry into traditionally male-dominated occupations (Diekmann & Eagly, 2000). Therefore, people should believe that women's attributes have shifted to incorporate the characteristics identified with employees which should be more agentic (e.g., competitive, individualistic) and less communal (e.g., kind, nurturing) than those identified with the domestic roles (Eagly & Steffen, 1984). Moreover, Duehr & Bono (2006) stated that social environments with respect to women, such as the legal and employment environments, have been changing,

which also leads to changes in gender stereotypes towards females. Stereotypes of women have shifted to become more masculine or more agentic (Duehr & Bono, 2006).

On the other hand, Diekmann & Eagly (2000) found that the respondents in their experiments believed that even when social change happens steadily, women will still be to some degree overrepresented in roles traditionally held by women. Additionally, in the study of gender stereotypes based mainly on self-reported personality and direct comparisons of men and women, Lueptow, Garovich-Szabo, and Lueptow (2001) argued that gender stereotypes have remained stable over time with a possible increase in the perceived femininity of females. We can see that the question of whether gender stereotypes are changing or not still remains unsettled.

### **The Traditional Origins behind the Stereotyping of Chinese Female Ph.D.s**

Not until the late 1970s and the early 1980s did feminist studies boom in China as an impact of the rise of Feminism in the worldwide trends and the economic reforms of the People's Republic of China in the late 1970s. Journal articles and books on the changing gender roles in China sprang up during this period. After reviewing the extant literature on the content patterns of sex-role stereotypes prevalent in Chinese society for thousands of years, the historic origins of the stereotyping towards Chinese female Ph.D.s become clear to us.

In traditional Chinese society, feminine inequality was prevalent from the ideology to all structures of society such as family, economy, education, culture, and the political system. The ideology that includes oppression, degradation and abasement towards women had a long history in feudal China, which was developed by Confucian scholars in the Han

dynasty and reached its culmination during the period from the late Ming dynasty to the early Qing dynasty (Pearson, 1995). Certain feudal ethics known as “the three obediences” (to father before marriage, to husband after marriage, and to sons if she was widowed) and “the four virtues” (which refer to good morality, rhetoric, bearing, and needlework) (Su, 2003, p. 46) bear heavily on every traditional Chinese woman. Women ought to devote their whole life to supplying their male heirs in supportive and instrumental roles, such as giving birth, raising children, and managing household affairs (Cheung, 1996). Therefore, as Luo & Hao (2007) noted, “to be a filial daughter, a loyal wife, and a dutiful mother” has become an important value and moral standard for every Chinese woman (p. 283).

Although there was a revolution for the emancipation of woman in the early twentieth century in China, not until the founding of the People’s Republic of China by the Chinese Communist Party in 1949 did the situation of feudal oppression and enslavement of women greatly change (Edwards, 2002). “Holding up half the sky” was propagandized as a slogan for women’s brand-new status under the policies of the new government. This egalitarianism has been prescribed on gender relations by the national constitution in 1950 (Luo & Hao, 2007).

In contemporary Chinese society, although the overall status of women has improved under the Communist system, the revolution for improving women’s status has been stranded at the propaganda level without any implemental program (Li, 2008). Generally speaking, due to the “survival of patrilineal kinship system”, the “ancestral cult in China”, and the “inadequacy of the socialist revolution”, there still exists discrimination towards women in China both at work and within the home (Hong, 1976; Cheung, 1996). Women still have to



struggle between the balance of work and family. Despite the increased opportunities for women in education and employment, equality for women and men in all aspects of social life has still not been achieved (Luo & Hao, 2007).

Women's new social role conflicts and stresses, particularly those existing between the esteem, values, and aspirations of Chinese women and their traditional family values, play an important role in the limitation of their achievements (Cheung, 1996). Studies focusing on gender differences in achievement aspirations affirmed that the development of self-worth and achievement motivation of males and females are, to a great extent, under the influence of the sex-role stereotypes prevalent in the society (e.g., Li, 2008). The role conflicts and stresses further cause an approach-avoidance conflict for females regarding to success: although they desire success because of its associated rewards, they are more afraid of social and sexual rejection since success is defined to be a male goal and "unfemininity" for women (Cao, 2007).

This conflict reveals the dilemma that female Ph.D.s in China are facing. Having gained high achievements in education and academia, Chinese female Ph.D.s, who should be recognized and praised for their contribution to the progress of both Chinese women and society, however, are marginalized and further stereotyped by the majority of Chinese society as "the third sex" (Han, 2010). They are characterized as hard-hearted, unfeeling, dull, boring, and unfeminine. The main reason is that they go across the boundaries defined by traditional Chinese culture of what a Chinese woman should be and challenge the traditional cultural rules on gender roles in the masculine-dominated society (Li, 2008).

**The Power of Social Media in the stereotyping of Chinese Female Ph.D.s**

The mainstream traditional mass media are under the tight control of the Communist Party and are assigned the task of promoting the gender ideology of egalitarianism as well as propagandizing the new achievements of Chinese women in the new China (Luo & Hao, 2007). However, new media like the Internet and social media, as a newly rising power in representing the public opinion of Chinese people, seem to be on a different path.

In modern Chinese society, continuously affected by the market economy and consumerism, as well as the traditional gender culture rooted in “the mass”, the image of Chinese women presented on the Internet remains stereotyped. The traditional supportive role continues to be reinforced through the Internet’s conflicting messages about women’s roles (Han, 2010). The stereotyping of Chinese female Ph.D.s that rises on the Internet, then, becomes the product of the influence of the consumerism and traditional culture.

On one hand, the stereotypic tone in the media portrayal of Chinese female Ph.D.s is determined by the masculine culture of Chinese society; on the other hand, the driving force of commercial profits propels the exaggeration and distortion in the contents so as to catch eyes and attract audiences (Li, 2011). Moreover, the new characteristic of social media, which blurs the boundary between the communicator and receiver, and engages the mass into the active communication of information, has played a crucial role in accelerating the production and spreading of stereotypic content about Chinese female Ph.D.s (Li, 2011, p. 228).

However, so far, only a handful of studies have collected data on the stereotyping of Chinese female Ph.D.s on the Internet, not to mention in social media. By conducting a content analysis on 142 news reports in Xinlang (one of the largest and most popular news

websites in China), Han (2010) found that the content patterns of stereotyping towards Chinese female Ph.D.s focus on the intensity, topic, and tone of the reporting. The Chinese female Ph.D. minority group is stereotyped in Internet news reports through highly repetitive and intensive follow-ups on the same events, the focus of news topics on romantic relationships and marriage, suffering in crimes and misfortunes, personal life, and in a sarcastic and negative reporting tone (Han, 2010, p. 59). Li (2011) also analyzed the stereotypic contents about Chinese female Ph.D.s in the news reports accessed by Google search engine from the perspectives of period, topic, and tone. Li found that the stereotyping of Chinese female Ph.D.s was rising along with the prosperity of the Internet in the late 1990s, which focuses on their miserable situations in romantic relationships and marriage, employment, and suicide, as well as their defects in physical appearance and personal character, with an exaggerated and sensational reporting tone.

Yet, extant studies (e.g. Han, 2010; Li, 2011) have furnished us with limited systematic information about the stereotypic content patterns toward Chinese female Ph.D.s, while the lack of scientific methods and statistical supporting data can be found in their results. Moreover, while focusing on the general webspace, there are barely any studies paying attention to social media, which has become the main platform where this stereotyping is prevalent in Chinese society (Fan, 2010). Therefore, given the paucity of relevant research on the stereotyping of Chinese female Ph.D.s in social media, in the present study, we formulate the following research question:

**RQ1:** What are the content patterns for the stereotyping of Chinese female Ph.D.s in social media?

### **Priming Theory and Stereotypes**

From the former discussion, we can see that stereotypes against females and specific female groups like Chinese female Ph.D.s exist both in the society and the mass media. After answering the research question, we would like to explore the role played by social media in stereotyping against Chinese female Ph.D.s. In this paper, we are concerned about how social media influence the formation of stereotypes.

In the 1960s, scholars noticed certain cues contained in media violence might have certain psychological influences on audiences (Berkowitz & Geen, 1967; Berkowitz & Lepage, 1967; Jo & Berkowitz, 1994). From these influences, scholars developed the theory of priming and stated that “priming occurs when a certain category or schema is activated and applied to other, even unrelated, objects or events” (Brewer & Nakamura, 1984). With the development of research, the research on effects of priming has been extended to a broader scope, and the relationship between priming and stereotypes has become the newest field of research (Roskos-Ewoldsen, Roskos-Ewoldsen, & Carpentier, 2009). Gender stereotypes, along with racial stereotypes, have become the concentration of the research studying priming and stereotypes (Roskos-Ewoldsen, Roskos-Ewoldsen, & Carpentier, 2009).

There are two main research approaches in priming and gender stereotypes. The first approach concentrates on testing the priming effects of different prime types in media contents. Semantic structures and contents are the basic type of primes which media can use to affect people’s attitudes towards genders. Researchers examined the semantic priming procedure to support the conclusion that gender information imparted by words, for example a name which is more likely to be a female’s, can influence people’s judgments and attitudes

(Banaji & Hardin, 1996). By extending the scope into media images of females, Grabe, Ward and Hyde (2008) argue that exposure to media images which depict the thin-ideal body impact people's attitudes towards ideal women's body images in reality. Hasen & Hansen (1988) tested whether media could prime gender stereotypes by using rock music videos as primes. The results showed that after exposure to a stereotypical music video, people tend to perceive "the woman as less dominant" in the interaction between males and females (Hasen & Hansen, 1988). Another experiment concentrated on the "short-term cognitive effects of playing a popular video game". It argued that female roles in video games were usually portrayed sexily and "playing a video game with the theme of female 'objectification' " may prime stereotypical thoughts towards females and increase "tendencies to behave inappropriately towards women" in reality (Yao, Mahood, & Linz, 2010).

The second approach focuses on the process of priming. It examines how the gender stereotype is activated and whether it can be controlled or moderated in the process of people's exposure to media content. The first process is stereotype activation (categorization), which means that related attitudes in people's minds that deal with the target group are activated. This process is an automatic process as long as a situational cue is present and people will be influenced (Brewer, 1988; Fiske & Neuberg, 1990). The second process is stereotype application, which means that people "use these activated stereotypic information in judgment" (Blair & Banaji, 1996). Many studies have shown that this process can be controlled and the influences of stereotype application can be reduced under certain appropriate conditions (Devine, 1989; Kruglanski & Freund, 1983; Monteith, 1993). Generally speaking, gender stereotypes originate from the process of exposure to

media, no matter if audiences are conscious or unconscious about the stereotypical content within the media. However, “the strength of such effects may be moderated by judgment task and prime type” (Banaji & Hardin, 1996). From this perspective, in the automatic process of stereotype activation, priming theory can shed some light on how mass media shape stereotypes against females.

To summarize, there are two main limitations in previous research. Though considerable research has confirmed that effects of media priming on formation of gender stereotypes do exist, research seldom focuses on how social media--a new platform of media--prime stereotypes. Though a great number of studies have examined how females are portrayed with bias in media, most research regards females as a whole group. Therefore, our study intends to fill the void of previous research by studying Chinese female Ph. D.s as a subcategory of the whole female group.

However, previous studies increase our confidence in exploring how media priming influences people’s attitudes and judgments on female Ph.D.s in China. Based on the existing arguments of priming theory and gender stereotypes, we presume that:

**H1:** Exposure to stereotypical contents portraying Chinese female Ph.D.s in social media will activate audiences’ stereotypical attitudes towards them.

### **A Uses-and-Gratifications Perspective on Stereotype**

Other than the influences of stereotypical contents on audiences’ attitudinal changes, scholars noticed and explored the effects on behavioral changes as well. As supported by previous experiments on priming and stereotypes, lots of research indicated tendencies of

increasing aggressive or inappropriate behaviors after exposure to biased contents (e.g., Yao, Mahood, & Linz, 2010; Berkowitz & Lepage, 1967; Berkowitz & Geen, 1967).

In this research, as mentioned before, we argue that media platforms can influence the formation of stereotypes. According to Kaplan and Haenlein (2010), social media “allow the creation and exchange of User Generated Content”. This interactive feature of social media provides more opportunities for audiences to respond and react to the contents they are exposed to.

Resulting from the great feature of social media, we expect--not like previous research which expected aggressive or inappropriate behavior in real life--responding to media content to be another type of behavioral change incurred when encountering stereotypical content. We would like to further extend this hypothesis from the perspective of uses-and-gratifications theory.

According to the uses-and-gratifications theory, “media audiences are variably active communicators, rather than passive recipients of messages” (Rubin, 2009, p. 165). Contemporarily, five assumptions have built up the constructs of the uses-and-gratifications theory. As concluded by Rubin, the second assumption argues that audiences are variably active in participating in selecting and using communication. The third assumption asserts that “social and psychological factors guide, filter, or mediate behavior.” (Rubin, 2009, p. 167). These social and psychological circumstances include “personality, social categories and relationships, potential for interaction, and channel availability.” (Rubin, 2009)

Based on the second assumption, people will seek media vehicles and contents which cater to their interests and feelings. Furthermore, according to the third assumption,

psychological factors, for example, people's attitudes towards a certain group of people at that time will also influence their media use. Additionally, the platform of social media greatly increases the "potential for interaction and channel availability", which provides users more motivation to use the social media. Thus, we presume:

**H2:** Existing stereotypical attitudes towards Chinese female Ph.D.s will be positively correlated to people's intention to seek and re-disseminate stereotypical contents in social media.

## **Methodology**

### **Content Analysis**

Aiming to answer RQ, we choose to conduct a content analysis on video clips from the most popular video-sharing website platform in China—*Youku* (<http://www.youku.com/>)--to examine the content patterns for the stereotyping against Chinese female Ph.D.s in social media. *Youku*, formally launched in December 2006, whose slogan is "The World is Watching", ranked No.1 in the Chinese Internet video sector according to Internet metrics provider CR-Nielsen in January 2010 (*Youku.com*, 2010). Since other international popular sites, such as Youtube, are blocked in Mainland China, *Youku* has become one of the leading forces in the Chinese social media market, where users can upload, view and share video clips. Recent statistics from longitudinal data monitoring the online behavior of a sample of 200,000 home and office users in China also showed that Youku is the most frequently used video-sharing website in China (iResearch Inc., 2011).



**Data set.** We will begin with an initial sample selected by searching the keywords “female Ph.D.” in Chinese (女博士 Nv bo shi) through the on-site search engines within the two websites. Then we’ll rule out all the video clips in which female Ph.D.s play a relatively irrelevant role. For example, a video showing a female Ph.D. playing guitar from beginning till the end without saying any words, will be filtered as irrelevant to our research topic. After eliminating the irrelevant videos, the rest of the videos will form the data set for our content analysis. Our unit of analysis will be each video clip from the data set, although our observational units will be multidimensional.

**Coding.** Each video clip in the data set will be subject to content analysis as an analysis unit. Based on the findings from previous content analysis on the stereotypical news reports on the Internet (e.g. Han, 2010; Li, 2011), we’ll categorize our raw data into multiple dimensions, for example, the number times of the same clips are posted online, the amount of video clips that focuses on the same topic, the topic of each video (including Chinese female Ph.D.s’ academic achievement, career issues, physical appearances, personal character, romantic relationships and marriages, suffering in crimes and misfortunes and others which we may find according to the results of the content analysis), the reporting tone (0 positive, 1 neutral and 2 negative) towards Chinese female Ph.D.s in each video, and the number of times each video was liked and shared. Two coders are assigned to watch each video clip and account numbers for the observational units into the dimensions as mentioned above respectively.

For example, in terms of video clips describing the challenges for a Chinese female Ph.D. in getting married, the coders would first observe how many times the same clip has

been repeatedly posted in Youku and then determine which categories of topics it might belong to, for example, Chinese female Ph.D.s' relationship and marriage. The coder will also determine the tone towards the challenges, that is, whether it is portrayed as an objective fact or in an obviously sarcastic and debasing tone. How many times each clip has been liked and shared will be noted down, as well as how many similar video clips focus on the same topic.

It is also important to note that one video clip can be coded into one or more topic categories. For example, one single video clip can be recorded as related to the Chinese female Ph.D.s' relationship and marriage topic as well as their physical appearance and personal characters. After completing the coding, the result of each coder will be compared in order to avoid possible bias by the coders themselves. Recoding will be conducted if there is a great disagreement between the two coders.

**Data Analysis.** After all the data have been coded, we will use SPSS for further statistical analysis to find the content patterns for the stereotyping of Chinese female Ph.D.s on Youku. The multidimensional factors, including repeating times, intensity on same events, topic categories, reporting tones and users' response will be fine-tuned in the data analysis. After factor analysis, we will employ descriptive statements to summarize our findings and illustrate the content pattern for the stereotyping of Chinese female Ph.D.s in social media.

## **Experiment**

In order to test the two hypotheses, we will conduct a 2\*3 factorial design experiment. Gender (male/ female) and types of videos (biased/unbiased/irrelevant) will serve as

independent variables.

**Participants.** 300 college students will be randomly recruited as participants of this experiment, since they form a large portion of social media users. Also, as college students, they will be more aware of and care about the issues on stereotyping of female Ph.D.s in China.

**Procedure.** Before the experiment, we will inform participants of our identity as graduate students from University of Florida, and state that our purpose is completing a project for the mass communication theory course, but we will not reveal details about the direct purpose of the experiment, so as to avoid unnecessary impact on the respondents and control biases. The direct purpose of the experiment will be explained in detail after the experiment. The participants will be randomly divided into 3 groups. Each group will be separately exposed to one of three video clips selected from those we have analyzed in the content analysis.

**Measures.** Group 1 will be exposed to a biased video which portrays how a Chinese female Ph.D. is disadvantaged in romantic relationship and it's difficult for her to find the significant other. On the contrary, group 2 will watch a video portraying that a Chinese female Ph.D. seeks her love and finally finds her true love. The third group will watch a video that contains no information about Chinese female Ph.D.s, for example, a cute cat is playing with a toy.

In the pretest, each respondent will be asked to do a questionnaire which aims at examining if the respondent already has a stereotypical attitude towards Chinese female Ph.D.s. Considering that participants may hide their real opinions when they are aware of the

purpose of our experiment, we will mix some irrelevant questions into the items about Chinese female Ph.D.s. Among these will be questions of opinion on various types of people, such as female nurses, male lawyers and policewomen.

Then, the three different types of video will be shown separately but simultaneously to three groups. The group which watched the video that contains no relevant information about Chinese female Ph. D.s will be considered as the control group. Each participant will be seated in front of a computer and watch the video on the website. After watching the videos, each respondent will again be asked to do a questionnaire which intends to reexamine the respondents' attitudes towards Chinese female Ph. D.s. In the survey, they will be asked to write down five words they think most accurately describe the image of Chinese female Ph.Ds. In addition, they will be asked to answer whether they watched videos contained similar content to the current video in Youku. The questionnaire will also measure the tendency for the participants to comment on or share the videos on Youku.

**Analysis.** After we collect all the data from the experiment, we will input the data into SPSS for statistical analysis. A crosstab analysis will be conducted to analyze whether there exists a positive correlation between the two variables in H1 and H2. After the data analysis, we will illustrate related descriptive statements to prove whether our hypotheses are supported or not.

### **Discussion**

In the present study, we conduct a content analysis and an experiment to explore the content patterns for the stereotyping against Chinese female Ph.D.s in social media and to examine whether a positive correlation exists between exposure to the stereotyping of

Chinese female Ph.D.s in the social media and consumers' stereotypic attitudes and behaviors towards this minority group. The Priming and uses and gratifications theories are used as theoretical guides for our study.

There are several limitations in this study. First of all, in the content analysis, the units of analysis are from one Chinese video-sharing website. Future analysis could be conducted on the stereotyping of Chinese female Ph.D.s in other forms of leading social media in China, such as Renren (the Chinese version of Facebook), Weibo (the Chinese version of Twitter), and Baidu (the Chinese version of Google).

Second, the participants in the experiment are college students, which means the findings cannot be generalized to the entire public. The varieties of participants need to be concerned in the future.

Moreover, the differences between male and female participants in the experiment have not been taken into consideration in our measurement. However, gender differences might play an important role in stereotypic attitudes and behaviors. Further research can explore whether the stereotypical contents in media exert different impacts on male and female users.

In addition, given the nature of our topic--stereotypes of gender groups--is sensitive, there are several issues in considering the validity of our data. We cannot ensure that what we obtained from the self-reported measures in the survey before and after the experiment accurately reflect each individual's true feeling about Chinese female Ph.D.s. The respondents might be able to figure out the purpose of the experiment. Thus those who have

stereotypical attitudes towards Chinese female Ph. D.s may tend to conceal their true feelings and hide their biases.

Theoretical implications for this research are notable. Former research mostly focuses on the media effects of traditional media such as television, newspaper and magazines. With the robust emergence of social media and its rapid spread among the public, examining the effects of social media in our study is meaningful, which will contribute to the research field of media effects.

While numerous studies about priming theory have found that audiences can be influenced by content on traditional media and perceive the world in the way that traditional media portray, our study fills the void of social media effects by examining whether people can be primed by stereotypical contents in social media. Also, by exploring the existence of users' interactive behaviors to seek and re-disseminate stereotypical information in social media to satisfy their stereotypic needs, our study may lead to further implications in the uses-and-gratification theory in terms of social media.

Therefore, if our H1 and H2 can be supported by the data collected from the experiments, a tentative conclusion can be made that the priming theory and the uses-and-gratification theory can work in the context of social media as well as traditional media. As a result, this study can add more experimental data to the extant research about social media's crucial role in media effects on the users' stereotypical attitudes and behaviors.

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