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Higher social power increases occupational gender stereotyping in Chinese culture

Xiaobin Zhang[1] · Qiong Li[1] · Bin Zuo[2]

Abstract

Prior studies have used the perspective of the social function of social power (such as how power affects interpersonal interaction between the powerful and the powerless) to explore how powerful people stereotype powerless people. In the present research, we further explored how high and low levels of social power affect occupational gender stereotyping from the perspective of how social power affects cognitive processing, that is, social categorization. We proposed that higher social power-primed participants, compared to low social power-primed participants, would be more inclined to use category-based representation and thus use stereotyping. In two studies, we investigated these effects and found that high social power, compared to low social power, increased occupational gender stereotyping in Chinese culture.

Keywords Social power · Social categorization · Occupational gender stereotyping

Introduction

The question of how power affects stereotyping is receiving increasing research attention (Fiske 1993, 2001; Goodwin et al. 1998, 2000; Overbeck 2010; Chen et al. 2004; Lammers et al. 2009; Overbeck and Park 2001; Torelli and Shavitt 2011). Most prior studies explored the way in which powerful people have stereotyped powerless people from the perspective of the social function of power, such as how power affects interpersonal interactions between the powerful and the powerless (Fiske 1993; Goodwin et al. 2000; Overbeck and Park 2001; Chen et al. 2004). The present

study focuses on how different levels social power (high compared to low) affect stereotyping from the perspective of how social power affects cognitive processing, that is, social categorization.

Effect of social power on stereotyping and cognitive processing

Prior studies have mainly focused on how powerful people stereotype powerless people from the perspective of the social function of power, such as the motivational and emotional influences of power (Fiske 1993; Fiske and Dépret 1996; Goodwin et al. 2000; Overbeck and Park 2001; Lammers et al. 2009). Thus, researchers proposed two types of power: social power and personal power (Lammers et al. 2009). Social power means the ability to influence others or control others' outcomes or exercising control over other people (De Dreu and Van Kleef 2004; Fiske 1993; Van Dijke and Poppe 2006). Personal power means the ability to do and get what you want without being influenced by others (Emerson 1962; Lammers et al. 2009). The prior studies indicated that, compared with personal power, which can increase stereotyping (Fiske and Dépret 1996; Goodwin et al. 2000; Torelli and Shavitt 2011), an individual who has social power tends to decrease stereotyping (Overbeck and Park 2001; Chen et al. 2004; Lammers et al. 2009; Torelli and Shavitt 2011). For example, Overbeck and Park (2001)

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found that participants who have social power tend to focus on individuating information rather than stereotype information, and they remember more individuating information. Chen et al. (2004) also found that social power-primed participants indicated a greater motivation to expend processing efforts and to process additional individual information. Researchers proposed that because social power means having control over others, and people with social power must be responsible for others (Bass 1998), to maintain such power an individual with social power expends processing effort to seek additional individual information rather than using stereotype information during social communication (Lammers et al. 2009; Chen et al. 2004). Therefore, compared to personal power, social power should decrease stereotyping (Lammers et al. 2009).

In addition to the social function of social power on stereotyping, a number of prior studies have shown that social power can affect patterns of human cognitive processing, such that people with high power often engaging in an inward-focused processing style (Brinol et al. 2007; Rucker and Galinsky 2009), processing information more abstractly and flexibly (Förster 2009; Guinote 2007a, b; Smith and Trope 2006), and using less diagnostic and more confirmatory strategies (De Dreu and Van Kleef 2004; Leyens et al. 1998). One of these studies showed that high social power can make people categorize stimuli at a higher level (greater breadth of categorization) and improve their ability to perceive coherence relative to the level that is used by low social power individuals (Smith and Trope 2006). For example, high social power participants showed more inclusive categorization of atypical exemplars than did low social power participants (Smith and Trope 2006). Social targets can be represented more broadly, as members of a group (he is male), or more narrowly, as individuals (his name is James) (McCrea et al. 2012). Here, we propose that people with higher social power will be more inclined than those with lower social power to use categorical representations (such as categorizing individuals based on gender) in their dealings with others, thereby increasing stereotyping (more occupational gender stereotyping), rather than viewing individuals on the basis of their unique constellations of attributes.

Present research and hypotheses

In the present study, we explored how different levels of social power (high compared to low) affect stereotyping from the perspective of how social power affects cognitive processing, that is, social categorization. We proposed that high social power, compared to low social power, will increase stereotyping. There are two reasons supporting the above viewpoint. First, prior studies have shown that high social power makes people categorize stimuli at a higher

level (greater breadth of categorization) and improves people's ability to perceive coherence, such as high social power participants showing more inclusive categorization of atypical exemplars than low social power participants (Smith and Trope 2006). Therefore, individuals with higher social power will be more inclined to categorize the target person based on social categories than obtain any individual information. Additionally, during the course of daily life, leaders who have social power must transform the many activities of an organization into a cohesive mission, while the followers of the organization must focus on carrying out the details. People with high social power (such as managers, mayors and presidents) may view stimuli in terms of the "big picture" and focus on the gist of a situation. Thus, higher social power corresponds with the "bigger picture." Because social individuals can be represented as persons ("his name is James") or as members of a social category ("he is male") (Brewer 1988; Fiske and Neuberg 1990), when individuals learn about someone, those with higher social power will be more inclined to assume that such a person is male (the results of broad social categorization and perceiving coherence), and they will not want to obtain any individual information ("his name is James," which is the result of processing personal information). Second, social categorization is the foundation of stereotype activation, and a related stereotype will be automatically activated during social interaction when an individual is classified into a certain social category (Allport 1954; Dovidio et al. 1986; Zhang et al. 2018) because a firm connection has been established between a certain social category and the corresponding stereotype characteristics in an individual's conceptual structure (Stephan and Stephan 1993; Müller and Rothermund 2014).

Based on how social power affects social categorization and the relationship between social categorization and stereotype activation, we proposed that high social power, compared to low social power, can increase stereotyping through the process of social categorization. We therefore conducted two experiments to examine how different levels of social power (high compared to low) affect occupational gender stereotyping, which is the confirmed common gender stereotype (White et al. 1998; White and White 2006). We conducted Study 1 to determine whether higher social power can increase occupational gender stereotyping using a self-report questionnaire. We hypothesized the scores rating the extent to which males and females were suitable for a position with males and females as the participants, those in the high social power-primed condition would score higher on stereotyping than the scores of the participants in the LSPP condition. In Study 2, we examined the relationship between social power and occupational gender stereotyping using an explicit matching task, which is a classic paradigm that is used to prove the activation of stereotypes by reaction time

(White Jr. et al. 2009). We expected that the HSPP participants, who are more inclined to use stereotyping, may expect congruent stereotype content (such as "architects") after the priming category (such as "male"). The HSPP participants would be slower in responding to the stimulus target word in incongruent trials (women–architect) because activated gender–occupation stereotypes would interfere with the processing of the target words themselves (architect).

Study 1

Method

Ethics statement

This study was reviewed and approved by the Committee for the Protection of Subjects at Central China Normal University, School of Psychology Ethics Committee. Written consent was also obtained from each participant before the experiment according to the established guidelines of the committee. This procedure was followed in study 2 as well.

Participants and design

The participants were 51 university students (22 males with a mean age of 21.43 years and ages that ranged from 17 to 29). The participants were randomly assigned to either the HSPP condition (23 participants) or the LSPP condition.

Stimulus materials and procedure

First, 20 university students who did not participate in the main experiment were told to write as many occupations as possible that suited males, females or neutral occupations (suited to both males and females). There were no criteria for the number of occupations that participants had to write. We chose the top 10 most frequently identified occupations that were determined to be typically male, top 10 most frequently identified occupations that were determined to be typically female, and top 10 most frequently identified occupations that were determined to be typically neutral. Thirty participants (14 males) who did not participate in the main experiment rated occupations on 9-point scales that ranged from 1 (*extremely suited to females*) to 9 (*extremely suited to males*). Then, we chose eight (from high score to low score) typically male occupations ($M = 6.72$, SD = .92; general manager, surgeon, diplomat, director, driver, architect, mathematician, and welder), eight (from low score to high score) typically female occupations ($M = 2.63$, SD = .47; nanny, nurse, secretary, conductor, cashier, kindergarten teacher, hour labor, and typist), and eight (scores closest to

5) typically neutral occupations ($M = 4.94$, SD = .29; writer, secondary school teacher, presenter, singer, actor, employee, civil servant, and self-employed). A one-way analysis of variance showed a significant difference among the three occupation types, $F(2, 21) = 86.55$, $p < .001$, and post hoc comparisons showed that all differences between any two types were significant, $ps < .001$.

The participants arrived at the laboratory individually, and they were greeted by two experimenters (one male and one female). Each participant was told that he or she must complete two unrelated tasks. The first was an imagination and writing task. The power of a supervisor over their subordinate is an example of social power (Lammers et al. 2009). For example, army officers have a large amount of social power over their troops, who must closely follow their orders. In the present study, we primed the different levels of social power (high versus low) by asking the participant to imagine himself/herself as an army officer with different power (high-power commander vs low-power company commander). Chinese kriegspiel ("Jun Qi" in Chinese) is a very popular game in China, and almost everyone can play this game (Wang et al. 2008). In this game, pieces are military officers with different power, such as commander (high power) and company commander (low power). Before the experiments (both in study 1 and 2), the participants were asked whether they were familiar with game. All participants reported that they are very familiar with Chinese kriegspiel, and all participants were familiar with military ranks and know that the power of the commander is higher than the company commander. Based on the power-primed condition, participants were asked to imagine himself/herself as a commander (HSPP) or company commander (LSPP): "imagine that you are a commander (the chief executive of the military region)/company commander (company commander is a subordinate officer of the commander, there are 5 other official ranks between them) of a military region. What do you think you should do to manage your subordinates and troops?" Participants used a sheet of paper divided into 20 lines to write about what he or she thought. The whole priming task lasted 7 min. Immediately afterward, all participants completed a manipulation check indicating the extent to which he or she felt powerful on 11-point scales, from 1 (*not at all*) to 11 (*very much*). Immediately after the priming task, the participants answered five mood-related questions. They indicated how they currently felt overall on an 11-point scale, from −5 (*very negative*) to +5 (*very positive*). They also indicated on 9-point scales how "tense," "calm," "happy," and "discouraged" they felt, ranging from 0 (*not at all*) to 8 (*very much*) (Smith and Trope 2006). Prior studies have found that high and low power are linked with approach and avoidance, respectively (Keltner et al. 2003), as well as with positive and negative mood (Smith and Trope 2006) with regard to the effects of power on stereotyping

being driven by differences in positive, negative, approach-related, or avoidance-related moods. To address the potential influence of mood, we had the participants report their mood on several dimensions to assess all of these factors separately (Smith and Trope 2006).

Next, the participants were asked to complete an "unrelated task," which was rating on an 11-point scale, from 1 (*extremely suited to females*) to 11 (*extremely suited to males*), the extent to which the eight typically male occupations, eight typically female occupations, and eight neutral occupations were suited to males or females. Immediately after completing the task, the participants were asked two questions to examine their awareness of the influence of the first task on the second task (Bargh and Chartrand 2000). The first question was used to assess the participants' thoughts on the possible purpose and hypothesis of the study. The second question was used to ascertain if the participants thought the first task might have affected their performance on the second task and, if so, in what way.

Results

Manipulation checks

The participants' ratings of their feeling of power were analyzed using *t* tests, with the power-priming condition (HSPP, LSPP) as the between-subjects variable. As expected, the analysis revealed that HSPP participants ($M = 6.35$, $SD = 2.01$) reported feeling more power than the LSPP participants ($M = 4.32$, $SD = 1.47$), $t(49) = 4.15$, $p < .01$, $d = 1.19$. The gender of the participants did not affect the priming of social power, $t(49) = .17$, $p = .87$, and there was no significant difference in the reported feeling of power between male participants ($M = 5.18$, $SD = 2.01$) and female participants ($M = 5.27$, $SD = 2.01$).

Stereotyping

The scores for typically male and female occupations (the scores for the typically male occupations plus reverse-scored typically female occupations) served as the dependent measure of interest. The Cronbach's alpha of the whole scale was .69. We hypothesized that if social power priming can increase stereotyping, the scores for the participants in the high social power-primed condition would be higher than the scores of the participants in the LSPP condition. As expected, the scores of the HSPP participants were significantly higher than those of the LSPP participants, $t(49) = 2.37$, $p = .02$, $d = .68$ (see Table 1). We also analyzed the scores of male and female stereotyping separately, and we found that the scores of the HSPP participants were significantly higher than those of the LSPP participants for both

Table 1 Means and standard deviations of the scores on male and female stereotyping for HSPP and LSPP

	HSPP		LSPP	
	M	SD	*M*	SD
Male stereotyping	69.43	7.87	64.86	8.47
Female stereotyping	70.82	8.58	65.79	8.45
Mean of male and female stereotyping	70.13	6.95	65.32	7.42
Neutral occupations	49.09	4.04	48.61	4.62

male and female stereotyping. There were significant differences in male stereotyping between the scores of the HSPP participants and the LSPP participants, $t(49) = 3.93$, $p = .05$, $d = .57$. There were also significant differences in female stereotyping between the scores of the HSPP participants and those of the LSPP participants, $t(49) = 4.43$, $p = .04$, $d = .60$[1] (see Table 1).

Discussion

The above results indicated that high social power priming increased occupational gender stereotyping. Of course, these results could be due to simple response bias, such that HSPP participants always have higher scores than LSPP participants (Smith and Trope 2006). If the HSPP participants had higher scores not only on typically female and male occupations but also on neutral occupations than the LSPP participants, the above results would not be due to manipulation of different levels of social power. To check this alternative explanation, we also analyzed the scores that were obtained for the neutral occupations. There were no significant differences in the scores for neutral occupations between the HSPP participants and the LSPP participants, $t(49) = .39$, $p = .70$, $d = .11$ (see Table 1). Thus, the difference between the HSPP and LSPP participants cannot be reduced to response bias.

We expected that there was a direct link between power and stereotyping, and one that does not require a mediator of mood. However, according to the prior studies, the effects

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[1] The results of a 2 (social power: high versus low) × 2 (occupations: stereotypical occupations versus neutral occupations) ANOVA was the same as the analysis in the text. The analysis revealed that the social power × occupation interaction was significant, $F(1, 49) = 4.43$, $p < .05$, $\eta^2 = .08$. A simple effects analysis demonstrated that the scores on stereotypical occupations for the HSPP participants were significantly higher than the scores for the LSPP participants, $F(1, 49) = 5.61$, $p < .05$, $\eta^2 = .10$. Alternatively, there were no significant differences between the scores on neutral occupations for the HSPP participants and the scores for the LSPP participants, $F(1, 49) = .15$, $p > .10$, $\eta^2 = .03$.

Table 2 The correlation between overall mood, positive effect and negative effect

	Overall mood		Positive effect		Negative effect
	Study 1	Study 2	Study 1	Study 2	
Overall mood					
Positive effect	.38**	.51**			
Negative effect	−.37**	−.28*	−.29*	−.47**	

(*$p < .05$, ** $p < .01$)

of power priming on stereotyping could simply be a result of power priming changing the participants' moods (Bodenhausen et al. 1994). Therefore, we also tested whether the link between power and stereotyping could be explained by a third factor, mood (i.e., positive versus negative affect, approach-related versus avoidance-related affect) (Keltner et al. 2003; Smith and Trope 2006). The participants' assessments of their levels of "happy" and "calm" moods were averaged to measure positive affect, and "tense" and "discouraged" mood assessments were averaged to measure negative affect. The correlation between the items "overall mood" and "positive affect" was significant (see Table 2). The correlation between the items "overall mood" and "negative affect" was also negative and significant. The correlation between the items "positive affect" and "negative affect" was also negative and significant. Approach-related affect was calculated by averaging the responses to "happy" and "discouraged (reverse scored)," and avoidance-related affect was calculated by averaging responses to "calm" and "tense (reverse scored)." Priming conditions did not influence any of these affect indices ($ps > .2$) or the overall mood item ($p > .05$). Furthermore, these mood indices were not correlated with the stereotyping scores ($ps > .2$). The funneled debriefing procedure indicated that none of the participants guessed the hypothesis under investigation, and all of the participants reported that the first task did not affect the second task.

The results of Study 1 showed that, compared to low power priming, high social power priming increased occupational gender stereotyping, and this effect was not mediated by mood.

Study 2

Method

Participants and design

The participants were 51 university students (20 males with a mean age of 21 years and ages that ranged from 18 to 25)

who did not participate to study 1. The participants were randomly assigned to either the HSPP commander prime condition (30 participants) or the LSPP company commander condition.

Stimulus materials and procedure

We chose six typically male occupations (general manager, surgeon, diplomat, architect, mathematician, and welder) and six typically female occupations (nanny, nurse, secretary, conductor, cashier, and kindergarten teacher) from the experimental materials that were used in Study 1.

The participants arrived at the laboratory individually, and they were greeted by two experimenters (one male and one female). Each participant was told that he or she must complete two unrelated tasks. The social power-primed manipulation was identical to that in Study 1. Immediately afterward, all of the participants completed a manipulation check, which indicated the extent to which he or she felt powerful on 11-point scales that ranged from 1 (*not at all*) to 11 (*very much*). Then, the participants answered five mood questions. They indicated how they currently felt on an 11-point scale, from −5 (*very negative*) to +5 (*very positive*). On 9-point scales, they indicated how "tense," "calm," "happy," and "discouraged" they felt, from 0 (*not at all*) to 8 (*very much*) (Smith and Trope 2006). After that, the participants completed a task to measure their degree of stereotyping (White et al. 2009). The participants were seated facing a computer screen (Dell Computer, 19-inch display, 1280 × 1024 resolution). The participants were primed with the gender category of either "Women" or "Men," followed by a word (occupation), which was either consistent (e.g., Women: nurse) or inconsistent (e.g., Women: architect) with gender–occupation stereotypes. The target words included the aforementioned six typically male occupations and six typically female occupations. Each target word (presented four times) was paired with gender categories (male and female), which produced a total of 24 congruent word pairs and 24 incongruent word pairs. The participants' task was to quickly indicate, by means of a keypress ("F" or "J"), whether the priming words matched or did not match gender–occupation stereotypes according to shared occupational gender stereotypes. The response keys were counterbalanced across the sample. Match responses to congruent combinations and mismatch responses to incongruent combinations were deemed to be correct, while mismatch responses to congruent combinations and match responses to incongruent combinations were deemed to be incorrect. In each trial, a fixation cross was first presented at the center of the screen for 250 ms. The prime words were then presented for 500 ms, followed by target words that appeared for 1000 ms. The inter-trial interval was 1000 ms.

Table 3 Reaction time to stereotype-incongruent and stereotype-congruent stimuli by HSPP and LSPP

	HSPP		LSPP		Mean of HSPP and LSPP	
	M	SD	M	SD	M	SD
Stereotype-incongruent stimuli	827.94	84.35	766.39	83.79	802.59	88.28
Stereotype-congruent stimuli	791.97	103.39	740.77	88.25	770.89	99.33

As in Study 1, immediately after the task, the participants were asked two questions to examine their awareness of the influence of the first task on the second task (Bargh and Chartrand 2000).

Results

Manipulation checks

The participants' ratings of their feeling of power were analyzed using t tests with the power-priming condition (HSPP, LSPP) as the between-subjects variable. As expected, the analysis indicated that the HSPP participants ($M = 6.20$, SD = 2.43) reported feeling more power than the LSPP participants ($M = 4.29$, SD = 1.49), $t(49) = 3.21$, $p = .002$, $d = .93$. The gender of the participants did not affect the priming of social power, $t(49) = .91$, $p = .37$, and there is no significant difference on the reported feeling of power between male participants ($M = 5.05$, SD = 2.45) and female participants ($M = 5.64$, SD = 2.16).

Stereotyping

Given the presence of outliers in the data set, the response times that were outside 3 standard deviations and the trials on which the errors made were excluded from the analysis (134 trials for all of the participants) (White et al. 2009). Prior to the statistical analysis, we performed a log transformation of the data. However, for ease of interpretation, the untransformed means are reported. We first tested whether the occupational gender stereotypes were activated. The t test revealed that the participants' judgment latencies of stereotype-incongruent word pairs were significantly slower than those of stereotype-congruent word pairs, $t(50) = 3.51$, $p < .01$, $d = .34$ (see Table 3). Although prior research proposed that social power can decrease stereotyping (Lammers et al. 2009), the above results indicated that both the HSPP participants and the LSPP participants held occupational gender stereotypes.

The aim of the present study was to examine whether HSPP participants would stereotype more than LSPP participants. According to the theory of conceptual priming and

spreading activation, a longer reaction time to stereotype-inconsistent stimuli reflects difficulty in accessing information that is stored in an individual's semantic memory that is associated with a social category (Neely 1977). We proposed that it is easier for HSPP participants to extract stereotype-related information. HSPP participants, who are more inclined to use stereotyping, may expect stereotype-congruent content more (such as "architects") than LSPP participants after the priming category (such as "male"), such that the HSPP participants' reactions to stereotype-incongruent word pairs would be slower than those of the LSPP participants. The t test revealed that, in keeping with our predictions, the HSPP participants' judgment latencies of stereotype-incongruent word pairs were significantly slower than those of the LSPP participants, $t(49) = 2.56$, $p = .01$, $d = .75$ (see Table 3). We also analyzed responses to the gender–stereotype matching stimuli. There were no significant differences between the scores of the HSPP participants and those of the LSPP participants, $t(49) = 1.78$, $p > .05$, $d = .54$. The analysis of error rate revealed there were no significant differences in the error rate of the match and mismatch responses between the high-power- and low-power-primed participants, ps $> .5$.

Discussion

One may posit that HSPP participants' judgment latencies to gender–stereotype matching stimuli should be faster than those of LSPP participants because LSPP participants stereotype less. We did not think that we would find support for this hypothesis because, compared to stereotype-incongruent stimuli, stereotype-congruent stimuli are not sensitive indicators of how high and low social power affects stereotyping. Thus, we raised the question, why are stereotype-incongruent stimuli more sensitive indicators? One reason is that because the ability to detect the occurrence of unexpected novel stimuli is critical for survival, perceivers preferentially pay attention to novel stimuli that are unexpected and out of context, such as stereotype-incongruent stimuli (a female driver) (Ranganath and Rainer 2003; Theeuwes 1994; Yantis 1998). In addition, because powerful individuals have an ability to focus on vital information (such as unexpected

novel stimuli) and inhibit peripheral information (Guinote 2007a; Higgins 1996), and powerful individuals preferentially pay attention to the salient aspects of the stimulus (Higgins 1996), both HSPP and LSPP individuals may preferentially pay more attention to stereotype-incongruent stimuli than to stereotype-congruent stimuli. Based on the above reasons, we thought that stereotype-incongruent stimuli (compared to stereotype-congruent stimuli) would be more sensitive indicators of how high and low social power affected stereotyping, and we only focused on the effect of power on stereotype-incongruent stimuli.

As in Study 1, we also analyzed the influence of power on affect. The participants' assessments of their levels of "happy" and "calm" moods were averaged to measure positive affect, and "tense" and "discouraged" mood assessments were averaged for negative affect. The correlation between the items "overall mood" and "positive affect" was significant (see Table 2). The correlation between the items "overall mood" and "negative affect" was negative and significant. The correlation between the items "positive affect" and "negative affect" was also negative and significant. Approach-related affect was calculated by averaging the responses to "happy" and (reverse scored) "discouraged," and avoidance-related affect was calculated by averaging the responses to "calm" and (reverse scored) "tense." The priming conditions did not influence any of these affect indices ($ps > .6$) or the overall mood item ($p > .05$). Furthermore, these mood indices were not correlated to the reaction time ($ps > .4$). The results of Study 2 again showed that, compared to the LSPP condition, HSPP increased occupational gender stereotyping, and these effects were not mediated by mood.

General discussion

Prior studies have mainly explored how social power affects stereotyping in relation to power's social function (the motivational and emotional function of power), and they found that, compared to personal power, social power decreases stereotyping (Overbeck and Park 2001; Chen et al. 2004). The present research further extends these prior studies by exploring how a mind-set that is primed by different levels of social power (high and low social power) influences occupational gender stereotyping from the perspective of how social power affects cognitive processing, that is, social categorization. Study 1 showed that HSPP increased occupational gender stereotyping. Compared to the LSPP condition, the participant scores in the HSPP condition were higher. Study 2 showed that the HSPP participants' reactions to stereotype-incongruent word pairs were slower than those of the LSPP participants. Our results are in line with prior studies that have shown that a primed mind-set can affect subsequent

information processing, such as stereotyping (McCrea et al. 2012). McCrea et al. (2012) found that manipulating construal-level mind-set through an unrelated task moderated the stereotyping of self and others. Relative to a more concrete construal-level mind-set, a more abstract construal-level mind-set increased the activation and use of relevant stereotypes in both judgment and behavior. The present study found that mind-set that is primed by high social power can also increase the activation of occupational gender stereotypes.

Prior studies have mainly focused on power's effect on stereotyping from the perspective of the social function (motivational and emotional) of power (Fiske 1993; Goodwin et al. 2000; Overbeck and Park 2001). Researchers have proposed that because people with social power must care for the feelings of others in the process of social communication, an individual with social power tends to focus on individuating information (Lammers et al. 2009). For example, managers must feel responsible for their subordinates' performance, and thus pay more attention to learn what their employees think (Bass 1998). Prior studies have shown that, compared to personal power, social power decreases stereotyping (Overbeck and Park 2001; Chen et al. 2004; Lammers et al. 2009), but they did not explore how different social power affects stereotyping (Overbeck and Park 2001; Chen et al. 2004; Lammers et al. 2009). In addition to the social function of social power, social power can also affect the cognitive processing of social categorization, that is, improve people's ability to perceive coherence and cause people to categorize stimuli at a higher level (greater breadth of categorization) (Smith and Trope 2006). In the present study, based on how social power affects social categorization and the relationship between social categorization and stereotyping, we further proposed that different levels of social power (high versus low) may have different effects on stereotyping through their effect on the process of social categorization. The present study showed that, compared to the LSPP participants, the HSPP participants were more inclined to use category-based representation and then use occupational gender stereotyping. Based on the present study, further research can be conducted to explore how to reduce the activation of stereotyping. For example, people in positions with high social power can focus on the details of the larger problem, which can reduce the tendency to stereotype others.

At the core of theorizing about social identity and social perception is the notion that individuals can be represented either as discrete persons or as members of a group (Brewer 1988; Fiske and Neuberg 1990). A key goal of research on social perception has been to identify the factors that determine how social targets are represented and how such representations will ultimately affect

judgments and guide behavior (McCrea et al. 2012). Our study adds to this literature by showing that the representation of social targets can be affected by different levels of social power. In the present work, we found that, compared to lower social power, higher social power can increase stereotyping.

Limitations and future directions

Several limitations of this study should be considered along with the results. First, our experiments did not include a control condition. We found that the HSPP participants engaged in more stereotyping than the LSPP participants. This finding leads us to raise the question: Do LSPP individuals engage in more stereotyping than other participants in a control condition? Although it is difficult to determine, compared to a control condition, what level of "low" social power can increase stereotyping (critical value of social power that can affect stereotyping compared to the control condition), and future studies should systematically explore this issue using other models of social power. Second, we only used occupational gender stereotypes to explore how high and low social power affect stereotyping. Future studies should use other stereotypes to validate the robustness of the effect of different levels of social power on stereotyping. Third, we only used Chinese participants in the present studies and found higher social power increases stereotyping, Future studies should use participants from other cultural background to validate this effect. Finally, although we decided our sample based on prior studies (Claypool and Bernstein 2014), the sample was not very large. We will validate the effect of different levels of social power on stereotyping using a larger sample and other statistical methods, such as regression analysis, to explore the correlation between self-reported powers and stereotyping in future studies.

Overall, the present study demonstrated that, relative to a low social power mind-set, a high social power mind-set increases occupational gender stereotyping.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflicts of interest.

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