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Looking through the eyes of the powerful

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Abstract

Across four experiments, we test the idea that power decreases metastereotyping, and that this effect is mediated by reduced perspective taking. Metastereotypes refer to the beliefs that members of group A share about the stereotypes that members of specific outgroup B typically have about ingroup A. We propose that the dominant psychological orientation of the powerless is aimed at seeing how others see them. In an intergroup situation they are therefore inclined to activate and apply metastereotypes. In the first three experiments we consistently find that low power leads to more metastereotyping than high power and control (in Experiment 3). Specifically, we show this effect with three different manipulations of power, namely a role manipulation (Experiment 1), experiential priming (Experiment 2), and parafoveal priming (Experiment 3). In the fourth experiment we uncover the mediating role of perspective taking. Together these findings provide strong evidence that powerlessness leads to metastereotyping.

Key Words:

Power, Metastereotype, Stereotype, Perspective Taking, Intergroup relations, Perception

Remember your last meeting with your supervisor, your boss, or your professor. Most likely, the opinion of this powerful person about you was very important, and therefore you probably tried to predict what (s)he thought about you. In this research, we shed light on an important source of such predictive information, namely *metastereotypes*. Metastereotypes refer to the beliefs that a member of group A has about the stereotypes that members of a specific outgroup B typically have about members of ingroup A. Stated differently, metastereotypes are thoughts about “how *I* think that *they* think *we* are like”. Metastereotypes are different from auto- or self-stereotypes because they have a *relational* component. The metastereotype that the Dutch have of the French is not (necessarily) the same as the metastereotype that Germans have of the French (Vorauer, Main, & O’Connell, 1998; Vorauer, Hunter, Main, & Roy, 2000).

Research suggests that metastereotypes can have important effects on behavior. Research indicates that if people believe someone holds negative thoughts about them, their interactions with that person will be dramatically affected, and will become laden with negative emotions about that interaction (Vorauer, et al., 1998). In fact, the way in which we behave toward an outgroup member may in fact be more strongly be determined by how we think they typically think about us (a metastereotype) than by how we think they typically are like themselves (a stereotype). Research by Oldenhuis, Gordijn, and Otten (2008) for example showed that if students from former East Germany were activated the metastereotype that West Germans think East Germans are lazy, than the activation of this metastereotype leads to behavioral assimilation and makes the East German students in fact adopt a lazier work-related attitude. For this reason, metastereotypes may have strong assimilative effects. If we think they like us, we

will behave more benevolent toward them than when we think they do not (see also Kamans, Gordijn, Oldenhuis, & Otten, 2008; Sigelman & Tuch, 1997; Winslow, 2004).

It is however yet largely unknown when exactly metastereotypes become activated. What we do know is that metastereotypes only become activated when in an intergroup situation there is some situational cue that makes it relevant to determine how one is seen by the outgroup, and we do know that mere exposure is no sufficient condition for metastereotype activation (Vorauer et al., 2000). Apart from that, the reasons for metastereotype activation remain largely unknown. Here we study the effect of power on metastereotyping and we propose that metastereotypes are especially like to become activated and used in a situation of low power or *powerlessness*.

Power has been defined in many different ways, but common to most definitions is that power involves the ability of the powerful party to influence the outcomes of the powerless party (Dahl, 2005/ 1961; Fiske & Berdahl, 2005; Weber, 1914/ 1978). A first reason why powerlessness should lead to metastereotyping is that where power is associated with approach and the possibility to gain rewards, powerlessness is associated with inhibition and a prevention of threats and losses (Keltner, Gruenfeld, & Anderson, 2003; see also Anderson & Berdahl, 2002; Galinsky, Gruenfeld, & Magee, 2003; Guinote, 2007; Lammers & Galinsky, in press, Lammers, Galinsky, Gordijn, & Otten, in press, Smith & Bargh, 2008). An orientation to prevent losses means that the powerless will try to predict possible threats in order to avoid them. In an intergroup setting in which one is faced with a powerful outgroup member who can influence and control one's outcomes, a good way to predict threats is to try and predict how that powerful outgroup member sees one, based on the social groups that one belongs to. That is, one

way to reach this goal in such situations is to activate and use metastereotypes (see Vorauer et al., 2000).

A second reason why power should be negatively related to metastereotyping is that while high power is associated with a tendency to treat others as means to one's own ends (Gruenfeld, Inesi, Magee, & Galinsky, in press; Keltner et al. 2003; Kipnis, 1972), powerlessness is associated with a tendency to see oneself as a means to the ends of others (Keltner et al., 2003; Overbeck, Tiedens, & Brion, 2006). If one sees oneself as a tool in the attainment of the goals of others, it should be highly relevant to ascertain how one is seen by that other person. After all, this can help in determining whether and in what manner this other person will use his or her "tool". Again, in an intergroup situation, one way to do this is to activate and use metastereotypes (Vorauer et al., 1998, 2000).

A third branch of evidence that supports our prediction that power is negatively related to metastereotyping comes from the twin observations that metastereotyping seems to require perspective taking, while power is negatively related to perspective taking. First, metastereotyping involves perspective taking (Vorauer et al., 2000). In Vorauer et al.'s (1998) studies, for example, White Canadians activated extremely negative metastereotypes (cruel, selfish, and unfeeling, among others) about their own group when interacting with First Nation Canadians. It is unlikely that these very negative ingroup descriptions that White Canadians gave were based on personal views on their own group. Instead, it seems that the White Canadians in some way considered the perspective of First Nation Canadians outgroup on their ingroup. Based on this, they tried to assess how these First Nation Canadians would see White Canadians.

The second observation is that power is negatively related to perspective taking. Snodgrass (1985; 1992) for example noted that subordinates are much more sensitive to how their leaders think about them than vice versa. Testing directly the effect of power on perspective taking, Galinsky, Magee, Inesi, and Gruenfeld (2006) found that power made people less likely to spontaneously take another person's perspective, and made them more self-oriented. Finally, in negotiations, people who are low in power are more influenced by their opponents than people who are high in power (Van Kleef, De Dreu, Pietroni, & Manstead, 2006).

Thus, these twin observations, that perspective taking is positively related to metastereotyping and power is negatively related to perspective taking, further support the idea that power is negatively related to metastereotyping. Showing this effect of power on metastereotyping is the first goal of the current paper. Moreover, the above reasoning suggests that the effect of power on metastereotyping should be mediated by perspective taking. In Galinsky et al.'s (2006) account, high power people are less likely to take other people's perspective because they are less motivated to form accurate impressions of others (Keltner & Robinson, 1997). We expect the opposite effect for low power people; because they are more motivated to predict and comprehend what others are like and how they think of them, they will be more likely to take other people's perspective. In a "pure" intergroup situation, where no individuating information is available, this means relying on metastereotypes. Furthermore, metastereotyping could in essence be seen as the intergroup equivalent of interpersonal perspective taking, as demonstrated by Galinsky et al. Interestingly, however, is that although the effects of perspective taking have often been related to improving intergroup relations, and have

been shown to decrease stereotyping and improve intergroup relations (Galinsky & Moskowitz, 2000; Galinsky, 2002; Vescio, Sechrist, & Paolucci, 2003), and although Galinsky et al. (2006) also speculate on the role of perspective taking in the effect of power on stereotyping, the effect of perspective taking on metastereotyping has surprisingly never been given empirical attention. Therefore, the second goal of the current paper is to study this effect, and to demonstrate that perspective taking can explain the negative effect of power on metastereotyping.

Importantly, as we argue that that the powerless are more inclined to metastereotype because a situation of powerlessness orients the individual to predict how others see and behave toward them, we expect that our hypothesized effect of power on metastereotyping extends to both negative and positive metastereotypes. We expect this to be the case based on an analogous set of research that aims to answer the question whether the valence of stereotypes change when people stereotype to satisfy different goals (Van den Bos & Stapel, 2008). This research departs from the observation that stereotypes can serve multiple goals, most notably self-enhancement (Fein & Spencer, 1997; Schwinghammer, Stapel, & Blanton, 2006; Tesser, 1988) and comprehension goals (Fiske & Taylor, 1991; Macrae & Bodenhausen, 2000; Strack, 2004). If people stereotype to *enhance* their self-worth, then they only use *negative* stereotypes. After all, only negative stereotypes derogate the other and hence enhance the self. If, on the other hand, people stereotype to *comprehend* others, then they use *both* positive and negative stereotypes. After all, both are equally useful in understanding others (Van den Bos & Stapel, 2008). Analogous to this reasoning, we hypothesize that if low power people metastereotype to predict and comprehend how others think of them, then they should

also use *both* positive and negative metastereotypes. If, on the other hand, they metastereotype to repair their self-worth (which might for example be low because they feel powerless) then they will only use *positive* metastereotypes. For this reason, we expect that the effect of power on metastereotyping is independent from the valence of that metastereotype.

Overview of the Experiments

In our first three experiments we aim to show the simple effect of power on metastereotyping, using different manipulations of power. In role manipulations (e.g., Anderson & Berdahl, 2002) participants are randomly allocated to play either a powerful or a powerless role in a (usually staged) interaction with another participant, playing for example the role of judge, or of defendant. In priming manipulations the experience (Galinsky et al., 2003) or the mere concept (Bargh, Raymond, Pryor, & Strack, 1995) of power is activated. As both have their advantages and disadvantages, it is best to combine both (Lammers, 2008). We will therefore manipulate power in Experiment 1 using a role method. Participants will be given a powerful or powerless role in a power structure, and have the ability to change other people's behavior. Next, in Experiment 2 we will use an intergroup adaptation of Galinsky, et al.'s (2003) experiential power prime. Finally, in Experiment 3 we will use parafoveal priming of power related concepts (Bargh & Pietromonaco, 1982).

Throughout these three experiments we will place participants of group A in a position of either high or low power (or control, in Experiment 3), toward a bogus member of group B. The advantage of using bogus outgroup members is that it allow us to hold the behavior or the outgroup member constant, only varying the power relation of

the participants toward that outgroup member. After manipulating power, we will measure both metastereotype activation – how these concepts pop up in the mind – and metastereotype application – how participants apply these metastereotypes to explicitly indicate how they expect to be seen by others (Gilbert & Hixon, 1991). We will also measure non-metastereotypical filler items to rule out that low power leads to the activation of any trait, and that the effect is specific to metastereotypes. In the last Experiment we will use a mediation analysis and show that the effect of powerlessness on metastereotyping is mediated by perspective taking (Baron & Kenny, 1986).

In measuring metastereotyping, we depart from the assumption that groups to a certain degree share the same metastereotypes. Past research has shown that metastereotypes – at least for some intergroup relations - are culturally shared. For example, most White Canadians expect First Nation Canadians to see them as selfish, arrogant, and closed-minded (Vorauer et al., 1998). But of course, any individual's thought on how members of an outgroup typically see his or her ingroup is a proper metastereotype. There might for example be some White Canadians who think that First Nation Canadians see them as romantic and passionate. However, as we cannot determine any individual's unique thoughts about how their group is seen by an outgroup, we rely on such culturally shared metastereotypes to measure metastereotyping.

Pilot Study

In these four experiments we make use of intergroup relations between existing social groups. This has the advantage that rich socially shared metastereotypes exist and that as a consequence metastereotype activation and application can easily be measured. The disadvantage is however, that in these social groups some power relations may

already exist. Although the existing power relation towards the outgroup is the same for all participants, and the hoc loco manipulation of power is placed “on top” of this pre-existing relation, a small concern might be that the degree to which the manipulation matches with the existing relation may influence the results. We therefore first conducted a pilot study to examine such pre-existing power relations. Participants ($N = 48$, mean age 22.6 years, 37 women and 11 men) completed a questionnaire in return for a pencil, and judged twelve pairs of social groups, including the pairs of groups we used in the studies reported in the manuscript. For each pair, they indicated whether one of the two groups was more powerful than the other (on 7 point Likert scales, with 4 = neutral). One-sample t tests showed that although participants rated women as less powerful than men, $t(47) = 2.85, p = .01$, they did not rate Psychology students more or less powerful than Business students, $t(47) = .96, p = .34$, and did not rate young people as more or less powerful than older people, $t(47) = -1.05, p = .75$.¹ Thus, in two of the three intergroup relations we use in these experiments, the in- and outgroup were seen as equally powerful, making it unlikely that pre-existing power relations influence the results. Moreover, because we will use many different in- and outgroups, we also feel assured that the effects are not dependent on those specific groups.

Experiment 1

In our first experiment, we manipulated power by using a role manipulation of power, following the method used by Anderson and Berdahl (2002). We simulated the working environment of an advertisement agency, and randomly distributed participants to either play a powerful role, in which they controlled others, or play a powerless role, in which they were controlled by others.

Method

Participants and design. A total of 30 participants (16 females, 14 males, all Psychology students at a Dutch university), who were paid € 7.50 or received study credit, were assigned randomly to one of two experimental conditions (low vs. high power).

Procedure. Upon arrival in the lab, students were made to believe that the experiment was about cooperation between Psychology and Business students in a marketing simulation. Participants were ostensibly led in one room that provided room to psychology students while the other was allegedly provided for business students. Both Psychology and Business students were able to observe each other via a web cam and monitor. In reality, however, the monitor showed a prerecorded series of images of actors playing the roles of Business students. Participants were then told that the marketing simulation would feature a task to find a new brand name for a type of toothpaste. In this simulation one group - the employees – would generate possible names. The other group – the supervisors - would subsequently judge the suggestions made by the employees. Next, the employees would give new suggestions, on the basis of the judgment of the employees, etc. This process would continue for three rounds, after which the supervisors would give a final judgment of the work done by the employees, and would distribute a number of tickets for a lottery, to reward the employees. In the *low power* condition, participants were asked to play the role of employees, while in the *high power* condition they played the role of the supervisors. In both conditions the two groups communicated through standardized forms which were handed to the experimenter who acted as a mailman between the two groups. In reality however, there was no group of Business

students present, and the experimenter simulated the behavior of the other group in a standardized way. That is, in the low power condition he made a constant number of rejections and critical remarks with a red pen, while in the high power condition he wrote down a constant number of suggestions for the new toothpaste brand. Using a computer network, the experimenter was also able to change the movies played on the monitor, to make sure that the images on the participants' reflected the actual progress of the experiment in a realistic way.

Measures. After three rounds of generating and correcting, the students completed two questionnaires. The first questionnaire was a supposedly unrelated study in the completion of word fragments. In reality it was an implicit measure of metastereotype activation (Gilbert & Hixon, 1991). Among the 40 items were seven positive metastereotypes (Dutch translations of compassionate, empathizing, gentle, humane, kind, social, and warm) and seven negative metastereotypes (free-floating, nagging, oversensitive, sentimental, shallow, soft, and wooly). The remaining items were added as non-metastereotypical filler items. Scores for activation of positive and negative metastereotype activation were computed as the proportion of words completed as matching a metastereotype. The content of these items was based on two pilot-studies. In a first study ($N = 40$), Psychology students freely generated metastereotypes of Business students. In a second study ($N = 18$), Psychology students rated these items as metastereotypical or not. Items were picked if they significantly deviated from the neutral middle of a 7-point scale, $p < .01$, in which 1 is 'they do not think we are like that', and 7 is 'they do think we are like that'.

Next, participants were asked to rate on a list with twenty personality traits whether they expected that their interaction partners (i.e., the outgroup of business students) would find these traits applicable to their group ('I think the other group of students thinks my group is ...') using 7-point Likert scale items (1 = strongly disagree, 7 = strongly agree). Among these personality items were three positive metastereotypes (social, warm, kind; Cronbach's $\alpha = .66$) and three negative metastereotypes (soft, oversensitive, shallow; Cronbach's $\alpha = .65$). The remainder consisted of non-metastereotypical irrelevant filler items (e.g. intelligent, incompetent, moody, etc).

Next, participants were given a power manipulation check, consisting of two 7-point Likert items ('During the interaction I felt our group was in power' and 'During the interaction I felt the other group was in power' (reverse scored), Pearson's $r = .60, p = .001$). Finally, participants were thanked and debriefed.

Results and Discussion

A Oneway Analysis of Variance (ANOVA on the manipulation check showed that participants in the high power condition ($M = 4.53, SD = .83$) did in fact feel more powerful than participants in the low power condition ($M = 3.42, SD = 1.34$), $F(1, 26) = 7.01, p = .01, \eta^2 = .22$.²

An ANOVA on the measures of positive and negative metastereotype activation with power as a between subjects factor and valence as a within subjects factor showed a significant main effect of power, $F(1, 25) = 4.32, p = .05, \eta^2 = .15$, that was not qualified by valence, $F(1, 25) = 2.59, p = .12$. Participants in the low power condition activated more metastereotypes ($M = .36, SD = .11$) than participants in the high power condition ($M = .27, SD = .10$). Activation of the non-metastereotypical filler items was equal

between low power ($M = .19$, $SD = .07$) and high power ($M = .23$, $SD = .10$) participants, ($p = .23$). Two paired t-tests showed that for low power participants, activation of the metastereotypical items was higher than activation of the non-metastereotypical items, $t(14) = 3.64$, $p = .004$, but was not higher for high power participants, $t(14) = 1.30$, $p = .22$.

An ANOVA on the measures of positive and negative metastereotype application with power as a between subjects factor and valence as a within subjects factor also showed a significant main effect of power, $F(1, 25) = 9.41$, $p = .005$, $\eta^2 = .27$, that was not qualified by valence, $F(1, 25) = .31$, $p = .58$. Participants in the low power condition expected the outgroup to see them in more metastereotypical terms ($M = 4.21$, $SD = .37$), than the participants in the high power condition ($M = 3.73$, $SD = .43$). Application of the non-metastereotypical filler items was equal between low power ($M = 3.64$, $SD = .29$) and high power ($M = 3.66$, $SD = .44$) participants, ($p = .87$). Two paired t-tests showed that for low power participants, application of the metastereotypical items was higher than application of the non-metastereotypical items, $t(14) = 5.75$, $p < .001$, but was not higher for high power participants, $t(14) = 1.02$, $p = .33$.

These results show that powerlessness leads to metastereotype activation and application (Gilbert & Hixon, 1991) compared to high power. Moreover, this effect was not qualified by valence, indicating a general effect of power on metastereotyping. Finally, we did not find any effect of power on the activation or application of the non-metastereotypical filler items, showing that low power only increases activation and application of items that are metastereotypical, and high power does not. This was confirmed by two sets of t-tests which confirmed that low power participants activated

and applied metastereotypical items more strongly than neutral items, while high power participants did not.

In this experiment we made use of a power manipulation with high face validity, by recreating an advertisement agency in which participants had either a powerful controlling role. Such role manipulations do however also have disadvantages (Galinsky et al., 2003). To gain further evidence of the effect of power on metastereotyping, we decided to prime the feeling of power in the next experiment. An often used method to prime power is Galinsky et al.'s (2003) experiential power prime. In this method, participants are asked to remember an episode in their life in which they personally felt powerful or powerless. Because we are interested in power in an intergroup setting, we decided to adapt this method by asking participants to write about why their ingroup was either more or less powerful, compared to the outgroup. As may be recalled, our Pilot study showed that our participants typically do not rate young people as more or less powerful than older people, $t(47) = -1.05$, $p = .75$. We therefore expected that this adapted version of the experiential power prime might be effective in changing people's ideas about the power relation between two groups.

Experiment 2

Method

Participants and design. A total of 97 participants (52 females, 45 males, mean age 22 years, all students at a Dutch university), who were paid € 7 for participating, were assigned randomly to one of the two experimental conditions (low vs. high power).

Procedure. Participants entered the lab and were seated in individual cubicles, behind PCs that administered the entire experiment. They were instructed that this

experiment was about the relationship between younger (i.e. people in their 20s to 30s) and older people (i.e. people in their 60s) in business life. Participants were then given an adapted version of Galinsky et al.'s (2003) experiential power prime task. Specifically, participants in the high (low) power conditions were asked to write a short essay for 5 minutes about why compared to younger people older people are more (less) powerful in business.

After this, to simulate an intergroup setting, participants were shown a graphical depiction of a workplace, in which both older and younger people worked, and were asked to imagine they worked there. Specifically, they were shown eleven snapshots of colleagues. Of the eleven colleagues, six photos depicted older men and women (of around 55 to 65 years of age), and five photos of young men and women (in their 20s to 30s). One of the depicted younger people was represented as a silhouette with the word "you" in it. In the high (low) power condition, the older people were indicated to be the assistants (bosses) while the younger people were bosses (assistants)

Measures. Participants were then instructed to complete a supposedly unrelated task that was presented as a study on the completion of word fragments. In reality, as in Experiment 1, this was an implicit measure of metastereotype activation. Among the 40 items there were ten words related to the positive metastereotype (e.g. active, open to experience, spontaneous), ten words related to the negative metastereotype (e.g. impolite, spoiled, reckless). As stereotypes of age groups have been studied extensively, we used existing literature (Hummert, 1990; Kite, Deaux, & Miele, 1991; Schmidt & Boland, 1986; Wentura & Brandstädter, 2003) to obtain these. As fillers we used twenty irrelevant non-metastereotypical items (e.g. intelligent, incompetent, moody, etc).

Participants then completed a list of twenty personality trait items, that asked whether participants expected the older people to apply certain attributes to them ('I think the older people would think we younger people are ...'), using 100-point Likert scale items (1 = strongly disagree, 100 = strongly agree). Among the items were five positive metastereotypes (spontaneous, lively, active, joyful, open; Cronbach's $\alpha = .75$) and five negative metastereotypes (idle, impolite, disrespectful, spoiled, lazy; Cronbach's $\alpha = .75$), and ten non-metastereotypical items. Like in Experiment 1, we used these as explicit measures.

Results and Discussion

Two raters, both blind to experimental condition and one blind to predictions read each participants' essay, and rated on a nine point scale whether they thought older people were described as more powerless (-4), neutral (0) or more powerful (4) compared to young people. The interrater reliability was high, $r(97) = .97, p = .001$, and ratings were therefore averaged. A one-way analysis of variance (ANOVA) conducted on the averaged ratings revealed a significant effect of condition on the ascribed power in the essay, $F(1, 95) = 504.99, p = .001$, showing that participants in the low power condition had indeed described older people as less powerful ($M = -2.81, SD = 1.19$) than participants in the high power condition ($M = 2.73, SD = 1.24$).

An ANOVA on the measures of positive and negative metastereotype activation with power as a between subjects factor and valence as a within subjects factor showed a significant main effect of power, $F(1, 95) = 5.20, p = .02, \eta^2 = .05$, that was not qualified by valence, $F(1, 95) = 1.90, p = .17$. Participants in the low power condition activated more metastereotypes ($M = .35, SD = .10$), than participants in the high power condition

($M = .30$, $SD = .11$). There was no effect on the non-metastereotypical filler items; participants in the low power condition activated these to the same degree ($M = .29$, $SD = .11$) as participants in the high power condition ($M = .28$, $SD = .10$), $p = .61$. As in Study 1, two paired t-tests showed that for low power participants, activation of the metastereotypical items was higher than activation of the non-metastereotypical items, $t(47) = 3.34$, $p = .002$, but was not higher for high power participants, $t(48) = 1.14$, $p = .26$.

An ANOVA on the measures of positive and negative metastereotype application with power as a between subjects factor and valence as a within subjects factor showed a significant main effect of power, $F(1, 95) = 3.96$, $p = .049$, $\eta^2 = .04$, that was not qualified by valence, $F(1, 95) = .81$, $p = .37$. Participants in the low power condition expected the outgroup to see them more in metastereotypical terms ($M = 68.53$, $SD = 8.77$), than participants in the high power condition ($M = 65.02$, $SD = 9.20$). There was no effect on the degree to which participants expected members of the outgroup to apply the non-metastereotypical filler items; participants in the low power condition applied these to the same degree ($M = 43.58$, $SD = 10.45$) as participants in the high power condition ($M = 41.61$, $SD = 10.62$), $p = .36$. Two paired t-tests showed that for low power participants, application of the metastereotypical items was higher than application of the non-metastereotypical items, $t(47) = 11.13$, $p < .001$, but this was also the case for high power participants, $t(48) = 12.34$, $p < .001$.

These findings again show that powerlessness leads to metastereotyping, on both implicit and explicit measures, showing evidence for both activation and application. Again, we did not find an effect of power on the activation or application of the non-

metastereotypical filler items. For the activation data this was again confirmed by two sets of t-tests which confirmed that low power participants activated and applied metastereotypical items more strongly than neutral items, while high power participants did not. We however find that low and high power participants both applied metastereotypical items more strongly than neutral items. This is not highly problematic, however, as it most likely merely reflects a baseline effect, meaning that all participants feel that it is more likely that older people see them in metastereotypical terms. Importantly, however, low power people do that more strongly.

This experiment adds to the previous experiment, by manipulating an intergroup-adapted version of Galinsky et al.'s (2003) experiential power prime. Nonetheless, in this experiment power was still manipulated on a conscious level. To give further evidence for the effect of power on metastereotyping, we therefore tried to manipulate the power of participants' ingroup versus the outgroup outside conscious awareness, using parafoveal priming (Bargh & Pietromonaco, 1982; see also: Bargh et al., 1996; Chen et al., 2001). Experiment 3 further added to the previous experiments by including a control condition.

Experiment 3

Method

Participants and design. A total of 97 participants (mean age 20.1 years, all female, and all students at a Dutch university), who received course credit for participating, were assigned randomly to one of three experimental conditions (low power, control, high power).

Procedure. After signing informed consent forms, participants were seated behind personal computer in individual cubicles, and were told that the experiment would consist of different unrelated parts.

The first part of the experiment consisted of a power manipulation, by means of a parafoveal priming task. This part was presented as an unrelated study about attention processes. Participants were instructed that in this task stimuli would appear either left or right to a cross in the center of the screen (the fixation point), and that they should attempt to press as quickly and as accurately as possible either the left (z) or the right (m) key on the keyboard. Participants were instructed that they should focus at the fixating point and keep a distance of about 50-60 cm from the screen, to obtain best results.

The experiment consisted of a trial block of ten trials and four experimental blocks of twenty-four trials each. Between each block, there was a brief intermission. During the blocks, the fixation point appeared after a random time between 2000 and 3000 ms and stayed on the screen for 1000 ms. The fixation point was then replaced by the stimulus, either about four centimeters left or right and either above or below the fixation point. Each stimulus was presented for 100 ms, immediately followed by a mask, which also stayed on the screen for 100 ms. The location of the stimulus and mask was randomized and equally distributed within participants. After each block, participants received feedback on their accuracy and performance.

As the aim of the priming session was to manipulate the (female) participants' feeling of power as women versus men, the concept of women and power related words were primed alternately. In the low power condition, half of the stimuli consisted of words that indicate powerlessness (powerless, dependent, weak, and subordinate) and

half of the stimuli read “we women”. In the high power condition, half of the stimuli consisted of words that indicate power (power, powerful, influential and authority), while the other half of the stimuli read “we women”, to obtain the opposite effect. In the control condition all stimuli were non-words.

After completing the priming procedure, participants read that in the next part they would have a discussion with a male participant. The computer would find them a male chat partner and a topic to discuss about. After some seconds the computer supposedly found a discussion partner, identified as J.V., a same aged student of the opposite gender (i.e. male). To make his gender more salient, it was also said that the computer had picked out a male student on purpose, because the researchers were interested in discussion between students of opposite genders.

Measures. Participants were then told that before receiving the topic to discuss about and the subsequent discussion, they first had to complete an unrelated task, that again was presented as a study into word construction, but that served as an implicit measure of metastereotype activation, as in previous experiments. Among the word fragment items there were five words relevant to the positive metastereotype of men (social, empathetic, modest, friendly, nice), and five words that were related to the negative metastereotype (oversensitive, chatter, gossipier, nagger, complainer). The content of these items was based on Frey, Tropp, and Boyle (2004), and were validated in a small pilot study ($N = 16$) that showed that each of these ten adjectives was seen as metastereotypical by women, $p < .01$.

The same ten metastereotypes were also measured explicitly, by asking participants ‘Do you expect J.V. thinks you are’ (on 9 point Likert scales, 1 =

strongly do not, 9 = strongly do; positive metastereotypes Cronbach's $\alpha = .68$, negatives Cronbach's $\alpha = .87$).

Next, participants completed a manipulation check by answering eight 9 point Likert scale questions about whether they expected themselves to feel powerful, self-assured, self-confident and independent, and whether they expected they would feel powerless, insecure, timid and dependent (all reverse-scored) while discussing with "J.V.". These items were averaged to form a manipulation check of power (Cronbach's $\alpha = .74$). Next, participants were asked whether they had recognized words during the priming task and, if so, what words they had recognized.

Results

During free recall of stimuli, none of the participants correctly reproduced any of the power related primes, indicating that the manipulation was achieved outside participants' conscious awareness. A one-way analysis of variance (ANOVA) on the power manipulation check scale showed a marginal effect of the manipulation, $F(2, 93) = 2.43, p = .09, \eta^2 = .05$. See top row of Table 1 for means (and SDs). Contrast analysis showed that low power participants ($M = 5.78, SD = .95$) did feel less powerful than high power participants ($M = 6.25, SD = .53$), $t(93) = 2.13, p = .04$, while control participants ($M = 5.89, SD = 1.06$) did not differ significantly from either one of the two experimental conditions (p 's $> .10$)

An ANOVA on the measures for positive and negative metastereotype activation with power as a between subjects factor and valence as a within subjects factor showed a significant main effect of power, $F(2, 93) = 4.37, p = .01, \eta^2 = .09$, that was not qualified by valence, $F(2, 93) = 1.91, p = .15$. See middle row of Table 1. Contrast analysis

showed that low power participants expected the outgroup to see them in more metastereotypical terms ($M = .34$, $SD = .15$) than control participants ($M = .28$, $SD = .16$), $t(93) = 1.74$, $p = .08$, or high power participants ($M = .23$, $SD = .12$), $t(93) = 2.93$, $p = .004$. The difference between high power and control participants was not significant, $t(93) = 1.20$, $p = .23$. Like in Studies 1 and 2 There was no effect of power on the activation of non-metastereotypical items between participants in the low power ($M = .24$, $SD = .15$), control ($M = .19$, $SD = .13$), or high power conditions ($M = .23$, $SD = .17$), $p = .41$, see bottom row of Table 1. As in previous studies, three paired t-tests showed that for low power participants, activation of the metastereotypical items was higher than activation of the non-metastereotypical items, $t(34) = 4.22$, $p < .001$, showed that for control participants this difference was smaller but also significant, $t(31) = 2.97$, $p = .006$, and showed that there was no difference for high power participants, $t(29) = 0.00$, $p = 1.0$. A similar ANOVA on the measures for positive and negative metastereotype application did not yield significant results, $F(2, 93) = .34$, $p = .71$.

These findings again show - as in the previous experiments - that low power leads to more metastereotype activation than high power, and it adds to it by showing that low power leads to more metastereotype activation than control, and that high power non-significantly decreases metastereotyping compared to control. Given that the control conditions sits neatly in between the low and high power conditions, it seems that the effect of power on metastereotyping is linear. Again, we found no effect on the activation of non-metastereotypical items. This was further confirmed by three sets of t-tests which showed that - as in the previous two experiments - low power participants activated

metastereotypical items more strongly than neutral items, while high power participants did not. Control participants activated them somewhat more.

Experiment 3 moreover activated power completely unaware, using parafoveal lexical priming. Two apparent stains on the results of Experiment 3 are however that we did not find an effect on metastereotype application, and that the effect on the manipulation check was only marginal. Concerning the first point, however, we feel that although we did not find a significant effect on metastereotype application this is in a way understandable as this might be a more controlled process. The fact that we do find (apparently automatic) metastereotype activation suggests that there is both a controlled and an automatic component to the effect of power on metastereotyping, and that lexical priming only activates the latter (as e.g. Bargh, Chen, & Burrows, 1996). Concerning the second point, we note that (to our knowledge) Experiment 3 is not only the first study to manipulate power with parafoveal priming, but also the first priming study of power that shows an effect on a manipulation check. For example, in the classic papers by Chen et al. (2001, 2004) or Galinsky et al. (2003), no manipulation checks are employed to test whether participants really felt more powerful afterwards. This is not strange since these effects are thought to be outside participants' awareness. We therefore are not too much bothered by the lack of a strong effect on the manipulation check.

In the next experiment we aim to uncover the process behind the effect of power on metastereotyping by taking into account the role of perspective taking. As may be remembered, Galinsky et al. (2006) showed that perspective taking is negatively related to power. It would make sense to expect that perspective taking is positively related to

metastereotyping. We therefore expect to be able to show in the next experiment, that perspective taking mediates the effect of power on metastereotyping.

Experiment 4

Method

Participants and design. Hundred thirty-nine Dutch students (mean age 20.9 years, 84 women and 56 men), took part in this study for a reward of €7, and were randomly assigned to one of two experimental conditions (low vs. high power).

Procedure. After signing informed consent forms, participants were seated behind PCs in individual cubicles. The procedure was similar to the manipulation we used in Experiment 2. Again, participants were told that the experiment was about job circumstances in organizations with a mixed job force of both young and old people, they completed the same experiential prime adaptation, and were again shown the snapshots and office background used in Experiment 2.

Measures. After completing the power manipulation, participants completed a scale to measure to what degree they inclined to take the perspective of the outgroup. This scale is based on the empathy subscale of Davis' (1983) Interpersonal Reactivity Index, which Galinsky et al. (2006, in their introducing study) have shown to be sensitive to the same effect of power on perspective taking as more direct measures of perspective taking. Different than in the IRI, items referred not to a stable disposition but to the present intention to take the perspective of the outgroup. For example, items read 'While at work, I would be inclined to see things from the older people's perspectives' or 'I think I would find it easy now, to see things from the perspective of the older people' (1 = fully disagree, 9 = fully agree, 10 items, Cronbach's $\alpha = .69$).

Next we measured metastereotype application using the same ten items that we used in Experiment 2. As a manipulation check, experienced power was measured by asking participants in random order ten questions how powerful they felt during the experiential priming task (e.g., 'I felt powerful when I was working on the writing task', fully disagree (1), fully agree (9), Cronbach's $\alpha = .78$).

Results

A one-way analysis of variance (ANOVA) with experimental condition as a between participant factor on the manipulation check, showed a significant effect of power, $F(1, 137) = 15.35, p < .001, \eta^2 = .10$. Participants in the powerful condition felt more powerful ($M = 6.12, SD = .84$) than participants in the powerless condition ($M = 5.57, SD = .79$).

A similar ANOVA with experimental condition as a between participant factor on the measure for perspective taking, showed a significant effect of power, $F(1, 137) = 12.20, p = .001, \eta^2 = .08$. As expected, participants in the powerless condition took more the perspective of the outgroup ($M = 5.76, SD = .77$) than did participants in the powerful condition ($M = 5.31, SD = .69$).

A third ANOVA with experimental condition as a between participant factor on the measure for metastereotyping, showed a marginal significant effect of power, $F(1, 137) = 3.48, p = .06, \eta^2 = .03$. As expected, the powerless metastereotyped more ($M = 5.97, SD = .40$) than the powerful ($M = 5.84, SD = .38$).

Mediation. Next we analyzed whether perspective taking mediated the effect of power on metastereotyping, using hierarchical regression analysis. The direct effect of power (-1, +1) on metastereotyping initially was $\beta = -.16, t(1, 137) = -1.87, p = .06$. After

adding the mediator perspective taking, $\beta = .22$, $t(136) = 2.54$, $p = .01$, the direct effect of power decreased and became non-significant, $\beta = -.09$, $t(136) = -1.09$, $p = .28$. A Sobel test confirmed that this partial mediation is significant, Sobel's $Z = -2.06$, $p = .03$.³

Finally, we tested an alternative model to demonstrate that metastereotyping did not mediate the effect of power on perspective taking. This showed that metastereotyping did not significantly mediate the effect of power on perspective taking, Sobel's $Z = -1.50$, $p = .13$.

Discussion

The results of Experiment 4 replicate the negative effect of power on metastereotyping that we found in Experiments 1 to 3. Although this effect itself was marginally significant, it was - more importantly - significantly mediated by the scale for perspective taking. This showed that the powerless metastereotype more, at least in part because they are more likely to take the outgroup's perspective on their own group.

General discussion

Across four experiments, using different social categories and different power manipulations, we found that powerlessness (low power) leads to the activation and application of metastereotypes, through an increased tendency to take other people's perspective. In Experiment 1, we showed that powerlessness leads to metastereotyping by using a role manipulation. In Experiment 2, we replicated this finding by using an adapted intergroup version of Galinsky et al.'s (2003) experiential power manipulation. In Experiment 3 we primed power using parafoveal priming and again found that powerlessness leads to metastereotyping. Because participants were unaware of the content of the last manipulation, we can say that the relationship between power and

metastereotyping is at least partially a non-conscious one. Finally, in Experiment 4, we showed that the effect of power on metastereotyping can be at least partially explained by the increased perspective taking among the powerless.⁴ Given the variety of power manipulations and the variety of intergroup relations, we can say the effect of power on metastereotyping is robust.

Across these studies we consistently showed – as expected - that this effect of power on the activation and application of metastereotypes was unaffected by the valence of those metastereotypes. That is, low power people use both negative and positive metastereotypes. This strongly supports our idea that metastereotyping serves as a tool for prediction and comprehension (Van den Bos & Stapel, 2008). If people metastereotype to comprehend and make sense of others, then this should not be limited to positive or to negative metastereotypes, but extend to both (cf. Vorauer et al., 2000, Study 6).

The negative effect of power on metastereotyping that we found in our series of experiments goes in the opposite direction of the positive effect of power on other-stereotyping that is hypothesized by Fiske (1993) and extensively supported by later findings (De Dreu & Van Kleef, 2004; Dépret & Fiske, 1999; Ebenbach & Keltner, 1998; Goodwin, Gubin, Fiske, & Yzerbyt, 2000; Goodwin, Operario, & Fiske, 1998; Rodríguez-Bailón, Moya, & Yzerbyt, 2000). At the same time, however, recent findings show boundary conditions to the idea that power always leads to more heuristic processing and other-stereotyping (Chen et al., 2001; Chen, Ybarra, & Kiefer, 2004; Overbeck & Park, 2001, 2006; Vescio, Snyder, & Butz, 2003). These findings have in common that they show that whether the powerful engage in other-stereotyping or not is

dependent on the goals that come with having that position of power. If the specific characteristics and idiosyncrasies of the subordinates are irrelevant for the powerful to obtaining those goals, then the powerful are likely to stereotype their subordinates. If, however, those idiosyncrasies are of some use to the powerful in obtaining their goals, then they are not likely to stereotype their subordinates, but - on the contrary - will tend to individuate them. Thus, in explaining the effect of having power on other-stereotyping, the goals that accompany that position of high power are crucial. Our findings on the effect of powerlessness on metastereotyping are consistent with this idea. Lacking power makes it relevant to determine how one is seen by others. Stated otherwise, powerlessness leads to the goal of obtaining metaperceptive information. Because metastereotypes offer this information, metastereotyping can help obtaining this goal.

On the surface, our findings seem to be inconsistent with research by Vorauer et al. (1998, 2000) who studied metastereotyping among White Canadians toward First Nation Canadians. Obviously, White Canadians are the higher status group in Canada, and Whites typically have more power than First Nation Canadians. We note however, that Vorauer et al. (1998, 2000) did not compare metastereotyping between members of these groups, but only made comparisons within the group of White Canadians. Thus, what Vorauer et al (1998, 2000) showed is that in certain intergroup situations members of high power (or at least, high status) groups also activate metastereotypes. This is completely consistent with the data that we gained. If we turn to the data of our first three experiments, we can see that although low power consistently lead to more metastereotyping than high power (and control), overall and in each experiment metastereotype activation and application was also higher than the activation and

application of irrelevant non-metastereotypical items. Of course, these data cannot be compared that easily, as the items differ, but the overall image shows a certain baseline activation and application of metastereotypes across all participants (both high and low power). This makes sense, because for both low and high power participants the same intergroup setting is there. Although metastereotypical information is less relevant for high power participants, it will still be activated in an intergroup setting.

Possible moderators

Although we consistently found strong evidence that powerlessness leads to metastereotyping, there might also be boundary conditions to this effect. Our experiments placed participants in ‘pure’ intergroup situations; participants were faced with outgroup members who were only identified by their group membership and power position, and who did not offer any personal information. Most likely, if in real life a perceiver and an outgroup member become more familiar over the course of time, and the situation becomes more interpersonal and less intergroup in nature, the effect of powerlessness on metastereotyping will diminish, as alternative channels for obtaining information how one is seen by the powerful other open up. In that case, the powerless will have an alternative to relying on metastereotypic information, and should rather favor individuating information (Fiske & Neuberg, 1990; Fiske, Lin, & Neuberg, 1999; Neuberg & Fiske, 1987). It seems likely that for relationships that do not turn more interpersonal we might find an opposite effect; the negative effect of power may actually strengthen over time.

A different moderator of the effect of power on metastereotyping might be the nature of the power relation, most notably whether participants see the relation as

legitimate or not. Previous research (Lammers, et al., in press) has shown that such differences in the nature of power relations can strongly influence the motivations that people have and, as a consequence, the effects of power. In the current experiments we did not manipulate the legitimacy of the power relation, but it seems likely that the power relations that we created were relatively legitimate and fair. In fact, Lammers et al.'s findings suggest that, unless the power manipulation is explicitly illegitimate, participants perceive the power relation as relatively legitimate. Also, in our experiments, the power distance (Mulder, 1977) between the two parties was rather small. In such legitimate and close power relations, the powerless still have some ability to hold the powerful accountable, and thus have some control over possible sanctions (Keltner et al., 2003; Lerner & Tetlock, 1999; Tetlock, 1992). For this reason the powerless will be motivated to predict how they are seen by the powerful, to predict and prevent such sanctions. If, however, the power distance increases, and if the powerful exercise their power in a more naked form (Russell, 1960), then it might become less useful for the powerless to predict how they are seen by the powerful, as appeals or other attempts to prevent and resist sanctions become ineffective and futile. Possibly, the powerless will refrain from metastereotyping in such circumstances, simply because it offers them no advantage.

Finally, there might also be situations in which the powerful will be motivated to metastereotype in order to predict how they are seen by their subordinates. This will particularly be the case if a power relation becomes instable. In Keltner et al.'s (2003) power-approach model, stability is suggested to be an important moderator of the effects of power, because an instable power relation makes the powerful focus their attention on preventing losses (inhibition), while it allows the powerless to focus on gains (approach),

thus flipping the effects of the power-approach model. Correspondingly, instability of a power relation might also flip the effect of power on metastereotyping, because if the powerful are faced with the possibility that they might lose their power, quick knowledge about how they are seen by their subordinates might help them to regain stability or thwart a revolt.

Conclusion

Power has been characterized as the most important concept in the social sciences (Russell, 1960). It is therefore fortunate that experimental social psychology gives considerable attention to the effects of power. Unfortunately, however, social psychology has traditionally devoted more attention to the effects of having, rather than lacking power (Branscombe, Schmitt, & Harvey, 1999). The current manuscript shows the value of giving attention to the goals and motivations that are associated with *lacking*, rather than having power. This is important because a power hierarchy always takes the shape of a pyramid, with a small top of high power leaders and a broad base of low power subordinates. From a simple quantitative viewpoint, social psychology should therefore direct at least equal attention to what it means to lack power. The current research does this from an intergroup perspective, but there is no reason to assume that for future research this would not be equally fruitful from an interpersonal perspective. Such research can build on the reliable effect that we report here: the powerless are especially likely to engage in metaperception.

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Notes

¹ Concerning Experiment 1 we note that the Pilot study included both Psychology students and other university students. A separate analysis on the difference in power between Psychology and Business differences with solely the Psychology students showed the same non-significant effect, $t(15) = .72, p = .48$.

² In Experiment 1, one participant was removed from the analysis because he skipped several pages of the survey. Two participants were removed following outlier analysis procedures described by Cohen, Cohen, West, and Aiken (2003). Specifically, we employed Cook's D values, studentized residuals and graphical examination of the respective index plots. Deletion did not change the results in a meaningful way. For similar reasons, one participant was removed in Experiment 3, although again this did not change the results in a meaningful way.

³ The manipulation check of power further mediated the above effect. After adding the manipulation check as a mediator, $\beta = -.16, t(136) = -1.87, p = .06$, the direct effect of the experimental condition decreased to $\beta = -.11, t(136) = -1.20, p = .23$, which accounted for marginal significant mediation, Sobel's $Z = -1.69, p = .09$. After adding in a third step the mediator perspective taking, $\beta = .19, t(135) = 2.21, p = .03$, the effect of the power manipulation check itself also decreased to $\beta = -.12, t(135) = -1.40, p = .16$, showing that the effect of power on metastereotyping is mediated by both perceived power and by perspective taking.

⁴ As a side-note, in Experiment 2 we also tested - as an alternative explanation - whether ingroup homogeneity (cf. Guinote, Judd, & Brauer, 2002) mediated the effect of power

on metastereotyping (4 items, $\alpha = .70$). We found this not to be the case. There was no effect of perceived ingroup homogeneity on metastereotype activation, $\beta = .06$, $p = .62$, or application, $\beta = .11$, $p = .33$.

Table 1

Results of Experiment 3. Means (and SDs) for the manipulation check, the level of metastereotype activation and activation of non-metastereotypical filler items.

	Low power	Control	High power
Manipulation check of power	5.78 (.95)	5.89 (1.06)	6.25 (.53)
Metastereotype Activation	.34 (.15)	.28 (.16)	.23 (.12)
Filler items Activation	.24 (.14)	.19 (.13)	.23 (.17)