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The paradox of power: The relationship between self-esteem and gratitude

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ABSTRACT

In contrast to earlier research, the three studies reported here find that the most powerful individuals are also the most grateful, and that self-esteem plays a role in explaining this relationship. Study 1a ($N = 109$) reveals a strong, positive relationship between individuals' perceived power and gratitude. Study 1b ($N = 194$) replicates this and finds that self-esteem mediates this positive power-gratitude relationship. Study 2 ($N = 212$) manipulates power and shows its downstream effects on gratitude through self-esteem, again providing support for the positive relationship of power to gratitude through self-esteem. We argue that because gratitude is predicated on recognition that others value oneself, power amplifies rather than undercuts feelings of gratitude. We discuss possible boundary conditions.

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Gratitude; power;
self-esteem

The current literature finds that power increases a self-focused orientation (e.g., Fiske, 2014; Keltner, Gruenfeld, & Anderson, 2003), which can impede the formation and maintenance of quality relationships (Fiske, 1993; Inesi, Gruenfeld, & Galinsky, 2012). One specific route by which power is argued to exert a deleterious impact on relationships is via reduced feelings of gratitude (Inesi et al., 2012, Study 2). When power is activated, it is argued to offer an alternate explanation for others' positive actions. Rather than viewing favors as benevolently bestowed, they are seen as currying future repayment from one with resources (Inesi et al., 2012). When power instigates this sort of "cynical attribution," it undercuts gratitude for these favors thus short circuiting the myriad relationship benefits that gratitude is known to confer (Inesi et al., 2012). This previous research manipulated power and examined concomitant differences in imagined gratitude felt toward a co-worker. In the current studies we take a wider purview of power, both measuring self-perceived influence as well as manipulating it, and its relationship to experiences of gratitude. If we follow the logic of earlier research on power and gratitude, we should find that those high in power are the least grateful. We provide an alternate possibility.

Power has been defined in the literature as both control over resources (e.g., money, status, decision-making) due to differential social standing as well as self-perceived influence over these things (see Anderson, John, & Keltner, 2011). In line with the view that self-esteem serves to indicate one's standing in the social domain (Leary & Baumeister, 2000), those high in power have also been found to have higher self-esteem (Fast, Gruenfeld, Sivanathan, & Galinsky, 2009; Wojciszke & Struzynska-Kujalowicz, 2007). Further, differences in self-esteem have been shown to impact perceptions of others' benevolence, with those high in self-worth being more likely to see others' actions as born out of positive regard for the self (DeHart, Murray, Pelham, & Rose, 2002; Murray, Holmes, & Griffin, 2000; Murray, Holmes, Griffin, Bellavia, & Rose, 2001). Feelings of gratitude rest on perceiving another as having acted out of benevolence toward the self (Algoe, 2012). In fact, recent research suggests that those higher in self-esteem experience more gratitude than those lower in self-esteem (Forest & Wood, 2012; Zhang, Zhang, Yang, & Li, 2017). Taken together then, these lines of research

suggest a process that runs counter to the prevailing view of power. Rather than power restricting recognition of others' kindnesses, power may actually increase feelings of gratitude via increases in self-esteem.

Power and gratitude: the role of self-esteem

Gratitude is a positive emotional experience felt when one recognizes that others (e.g., people, God, nature) play a positive role in their lives (McCullough, Kilpatrick, Emmons, & Larson, 2001). Gratitude has been conceptualized as the positive emotion felt at a single point in time following a positive outcome brought about by another (e.g., Bartlett & DeSteno, 2006) as well as a general tendency to appreciate the good that others have brought into one's life (McCullough, Emmons, & Tsang, 2002). Importantly, gratitude is distinct from other positive emotional experiences (e.g., pride, admiration, positivity) as it indicates recognition of the good in one's life brought about by an agent other than the self (Algoe & Haidt, 2009). Gratitude is argued to play an important role in building and maintaining social relationships by drawing attention toward those who show care for us (Algoe, 2012) and by encouraging prosocial and affiliative behaviors (Bartlett, Condon, Cruz, Baumann, & DeSteno, 2011). Vital to the experience of this positive emotion is recognition that kind actions have been bestowed by others out of care for oneself (Algoe, 2012). If an agent is perceived to act for other reasons (e.g., self-gain) individuals feel indebted or suspicious, not grateful (Tsang, 2006). Indeed, how grateful individuals feel for an action is, in part, predicted by their perception of the benefactors' perceived responsiveness for them (i.e., how thoughtful and concerned the benefactor is perceived to be toward them) (Algoe, Haidt, & Gable, 2008).

There is reason to expect that individuals who perceive themselves as powerful also see themselves as worthy of others' responsiveness, thus increasing their odds of feeling grateful. Power is linked to increased self-esteem (Fast et al., 2009; Wojciszke & Struzynska-Kujalowicz, 2007). Considerable research has shown that differences in self-esteem predict differential perceptions of others' care and value of the self. For instance, those low in self-esteem are more pessimistic in their view of what others think about them (DeHart et al., 2002; Murray et al., 2000, 2001), including underestimating others' love and positive regard (DeHart et al., 2002; Murray et al., 2001). As gratitude rests on the recognition that another has done a kindness out of care for and value of oneself (see Algoe, 2012), those with higher self-esteem are likely more inclined to feel grateful for others' favors than those lower in self-esteem. Indeed, research has shown that those high in self-esteem exhibit more gratitude than those low in self-esteem (Forest & Wood, 2012) and that self-esteem is one mechanism by which attachment styles impact gratitude experienced (Zhang et al., 2017). This research, then, supports the prediction that self-esteem may serve as a mechanism for power's *positive* impact on gratitude, not the diminishment of it. The studies reported here examine power (both measured self-perception and recall manipulation) and its link to the experience of gratitude.

Study 1a

The goal of Study 1a was a straight-forward assessment of the directionality between one's personal sense of power and one's experiences of gratitude. A finding that power and gratitude are negatively correlated would provide additional support for previous research that argues power impedes gratitude (Inesi et al., 2012, Study 2). While a finding that power is positively correlated with gratitude would provide initial evidence that another mechanism may be at work.

Participants

We aimed to collect 100 participants for this initial, correlational study. One hundred and fifteen participants on Mechanical Turk initiated the study for payment. Three participants were cut as they failed to complete the study. Three additional participants were cut for failing the attention check¹ thus leaving 109 participants (53 women, $M_{\text{age}} = 36.39$, age range = 19–70).

Procedure

Participants completed demographic questions, the Sense of Power Scale (SP) (Anderson, John, & Keltner, 2011), followed by the Gratitude Questionnaire-6 Item Form (GQ-6) (McCullough et al., 2002). The SP is a measure of one's *perceived* power vis-à-vis others rather than a measure of one's social-structural standing. In as much as perceived and structural power do not perfectly align, perceived power is an important predictor of behavioral and cognitive outcomes (see Anderson et al., 2011). The measure has been widely used to capture differences in individuals' sense of their own power in relationships (e.g., Anderson & Galinsky, 2006; Dubois, Rucker, & Galinsky, 2015; Fast, Sivanathan, Mayer, & Galinsky, 2012). It consists of eight items (1-strongly disagree, 7-strongly agree) with statements that include: *In my relationships with others*: "I can get people to listen to what I say." "My ideas and opinions are often ignored" (reverse-scored) (Cronbach's alpha was .84 or higher for all scales reported in this paper).

The GQ-6 measures peoples' experience of gratitude via 6-items (1-strongly disagree, 7-strongly agree). Importantly, the GQ-6 is not equivalent to general positivity or happiness (McCullough et al., 2002) and has been widely used to capture differences in how grateful people are feeling (e.g., McCullough et al., 2002; O'Connell, O'Shea, & Gallagher, 2017; see Wood, Froh, & Geraghty, 2010). Statements include: "I am grateful to a wide variety of people" and "Long amounts of time can go by before I feel grateful to something or someone" (reverse-scored). Materials for all three studies are available at the following link: <https://osf.io/kv3t2/>

Results

In opposition to previous research on power and gratitude, the bivariate correlation indicated a strong, positive relationship. High power individuals self-reported experiencing *more* gratitude, $r = .49$, $p = .00$, 95% CI:[.33, .66]. Study 1b aimed to replicate this initial finding and to explore self-esteem as a mechanism for the positive power-gratitude relationship.

Study 1b

We expected to replicate the positive relationship between perceived power and gratitude. Further, we expected to find the positive power-gratitude relationship through differences in self-esteem. One might argue that power is related to other positive outcomes (e.g., optimism and general positivity), in addition to self-esteem, and any one of these may equally well predict increased gratitude. Thus, we also test these alternative mechanisms, optimism (Study 1b), and general positivity (Study 2). Optimism is a positive assessment of the future. It has been measured by asking participants to indicate how likely they believe they are to experience positive (e.g., having house double in value) and negative (e.g., experiencing disease) outcomes in the future (Weinstein, 1980). Optimism is related to both power and gratitude. Power is known to play a causal role in boosting optimism (Anderson & Galinsky, 2006; Fast et al., 2009), and dispositional gratitude is known to correlate with optimism (McCullough et al., 2002). If we show that an indirect effects model with self-esteem is better fitting than one with optimism this would begin to bolster our argument that self-esteem acts as one mechanism for the positive power-gratitude relationship.

Participants

Two hundred and ten participants initiated the study on Mechanical Turk for payment. Nine of these did not complete the study and were cut from the data. Seven more participants were excluded for failing an attention check, leaving 194 participants (84 women, $M_{\text{age}} = 35.37$, age range = 18–65).

Sample size

We used recommendations provided by Fritz and MacKinnon (2007) to determine the sample size needed to test indirect effects. Anticipating medium effects of the independent variable on the mediator (*a*), and mediator on the dependent variable (*b*), it was determined that we would need a sample size of $N = 150\text{--}200$. Effect size estimates were derived from previous research demonstrating associations among power and self-esteem (Fast et al., 2009; Wojciszke & Struzynska-Kujalowicz, 2007) and self-esteem and gratitude (Forest & Wood, 2012).

Procedure

Participants were told that the study examined how people think about themselves and how they think about others. As in Study 1a, participants completed the SP and GQ-6, followed by a measure of optimism (adapted from Weinstein, 1980; see Lerner & Keltner, 2001), global self-esteem (Rosenberg, 1965) and demographic questions.

Optimism measure

We used an adaptation of Weinstein's (1980) optimism measure to assess participants' perceptions of the likelihood of future positive and negative events. Participants were asked to rate the likelihood that they would experience 14 different life events (-4 -extremely unlikely to 4 -extremely likely). Items included "have your achievements displayed in a newspaper" and "have your car stolen" (reverse-scored).

Self-esteem measure

Participants completed a global measure of self-esteem (Rosenberg, 1965). Participants were asked to answer 10 questions on a 4-point Likert scale (1-Strongly Disagree to 4-Strongly Agree). Questions include, "I feel that I am a person of worth, at least on an equal plane with others" and "At times I think that I am no good at all" (reverse-scored).

Results

Descriptives

Descriptive statistics and bivariate correlations among key study variables are provided in Table 1. Bivariate correlations revealed that perceived power related to study variables in expected directions; specifically, those who reported greater power also reported greater self-esteem, optimism, and gratitude. Men and women did not differ in power, gratitude, or self-esteem. However, there were gender differences in ratings of optimism ($t(191) = 2.49, p = .01$), such that men reported greater optimism ($M = .45, SD = 1.21$) relative to women ($M = .02, SD = 1.17$).

Model fit

We employed structural equation modeling via Mplus v. 6.11 (Muthén, & Muthén, 2011) to examine the indirect effect of self-esteem, specifying a partial multiple mediation model wherein self-esteem and optimism mediated the power-gratitude association (Figure 1). Power was significantly and positively

Table 1. Descriptive statistics and bivariate correlations among Study 1 variables.

| | N | M | SD | 1 | 2 | 3 | 4 |
|----------------|-----|------|------|--------|--------|--------|---|
| 1. Power | 194 | 4.97 | 1.16 | – | | | |
| 2. Self-Esteem | 194 | 2.14 | .69 | .65*** | – | | |
| 3. Optimism | 194 | .28 | 1.12 | .42*** | .46*** | – | |
| 4. Gratitude | 194 | 5.56 | 1.20 | .53*** | .61*** | .36*** | – |

*** $p = .00$.

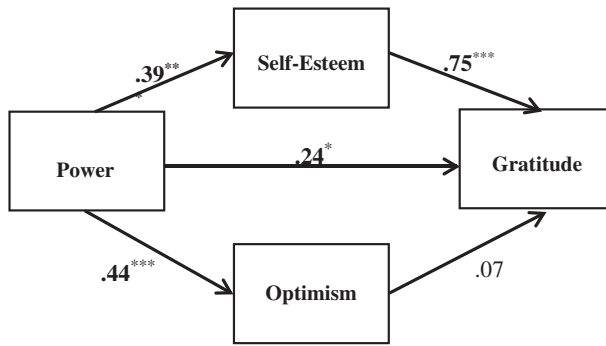


Figure 1. Multiple mediation model (Model 1).

related to self-esteem ($b = .39, p = .00$), and optimism ($b = .44, p = .00$); in turn, self-esteem ($b = .75, p = .00$) and power ($b = .24, p = .02$) were significantly related to gratitude; optimism did not relate to gratitude ($b = .07, p = .38$). Model fit improved to acceptable standards (X^2 goodness-of-fit = .001, $p = .98$; CFI = 1.00, TLI = 1.02, RMSEA = .00, SRMR = .001) after trimming optimism from the model (Kline, 2011). As the simple indirect effect model was fully saturated, we specified the direct effect as the parameter estimate for c' as estimated in the trimmed model (Figure 2, Model 2, $b = .25$); this enabled the estimation of model fit. The trimmed model demonstrated significantly better fit, in comparison to the larger multiple mediation model (X^2 Difference Test = 37.12, $df = 2, p = .00$).

Indirect effects

As reported in Table 2, power was significantly and positively related to self-esteem ($b = .39, p = .00$), and gratitude ($b = .25, p = .01$). Participants at higher levels of perceived power reported greater self-esteem and gratitude. There were significant indirect effects of power on gratitude through self-esteem ($Z = .30, p = .00$; BC 95% CI: [.19, .43]; Table 3). That is, power related to greater gratitude due to greater levels of self-esteem.

Replicating Study 1a, participants reporting high power also reported high gratitude. Further, self-esteem played an important role in mediating this relationship. Importantly, an alternative model with optimism as the mediator did not have the same impact as self-esteem.² This is the first research, to our knowledge, that finds self-esteem as a mechanism for the positive power-gratitude relationship.

Study 2

To this point, we have found that self-perceived power is positively related to gratitude. We have also found that self-esteem acts as a mechanism for this relationship. While our first two studies investigated power as a measured variable, Study 2 manipulated power and tested for the downstream

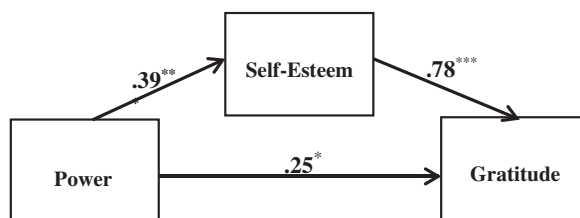


Figure 2. Simplified indirect effect model. (Model 2).

Table 2. Unstandardized path coefficients, standard errors, and bias-corrected confidence intervals for simple indirect effect model.

| Parameter | Unstandardized B | SE | 95% BC CI | |
|---|------------------|-----|-----------|-------|
| | | | Lower | Upper |
| Model 2 | | | | |
| 1. Self-Esteem ON Power Gratitude ON | .39*** | .04 | .30 | .47 |
| 2. Power | .25** | .10 | .05 | .44 |
| 3. Self-Esteem | .78*** | .14 | .51 | 1.10 |

** $p = .01$, *** $p = .00$; Note: Zero within 95% BC CI indicates non-significance

Table 3. Indirect effects and bias-corrected confidence intervals.

| Indirect Effects | Point Estimate | 95% BC CI | |
|--------------------------|----------------|-----------|-------|
| | | Lower | Upper |
| 1. Self-Esteem (Model 2) | .30 | .19 | .43 |

Note: Zero within 95% BC CI indicates non-significance; bolded point estimates are statistically significant indirect effects; indirect effects were tested in separate models.

consequences on self-esteem and gratitude. If self-esteem is the mechanism by which power positively influences gratitude, then we expect to continue to find a positive relationship, *through self-esteem*, between manipulated power and gratitude. We also tested another possible mechanism for power's influence on gratitude: general positivity. One might argue that power is simply boosting general positivity and that this is driving the increase in self-reported feelings of gratitude. Indeed, research has shown that those higher in power experience more positivity (Anderson & Berdahl, 2002), and researchers have found that individuals high in gratitude are also high in positivity (McCullough et al., 2002). To rule out this alternative explanation, we tested positivity's indirect effect against that of self-esteem on the power-gratitude relationship.

Participants

Two hundred and seventy-nine participants initiated the study on Mechanical Turk for payment. Fifty of these participants initiated but did not complete the study and were cut from the data. Of the remaining 229, 14 participants were removed as they failed an attention check. Three raters blind to the purpose of the study read through the power manipulation writings. All three raters judged three participants as failing to follow the power manipulation instructions, leaving 212 participants (99 women, $M_{\text{age}} = 34.49$, age range = 20–71). Participants were randomly assigned to the high power ($n = 103$) or neutral ($n = 109$) condition.

Sample size

We again used recommendations provided by Fritz and MacKinnon (2007). Based on results of Study 1, we predicted medium effects for power on self-esteem and self-esteem on gratitude. We predicted a large effect of group condition on state power, given previous research using this manipulation (Galinsky, Gruenfeld & Magee, 2003). It was determined that a sample size of at least $N = 115$ would provide sufficient power for testing group differences in power and indirect effects.

Procedure

Participants were told that the study examined “personality differences in how people view others and in how they remember information”. Participants completed the power manipulation (power, neutral). They then completed an emotion questionnaire which included the state power item, followed by the SP³ and a power manipulation refresher for 1-minute. They finished by completing measures of self-esteem and gratitude as used previously, and basic demographics.

Power manipulation

We adopted a recall procedure used by others to manipulate power (Galinsky, Gruenfeld & Magee, 2003). Unlike the previous investigation of power and gratitude (Inesi et al., 2012), we chose a recall measure that moved beyond participants' work-related hierarchical experiences. Participants were asked to write about a memory for 4 minutes. Those in the high power condition were asked to:

Please describe a situation in which you had power over another individual or individuals. By power we mean a situation in which you controlled the ability of another person or persons to get something they wanted or were in a position to evaluate those individuals. What happened, who was there, how did you have power over others?

Those in the neutral condition were asked to:

Please recall your day yesterday. What did you do? Did you go out or stay home? If you went out, where did you go? Who did you see and what did you talk about? What kind of mood were you in?

Power and emotion ratings

Upon completing the power manipulation, participants completed 7 questions about their current state, including current feelings of power. Questions used in the analyses were: "How powerful do you currently feel?" and "How positive do you currently feel?" (1-not at all, 7-extremely).

Results

In support of our manipulation, those participants in the high power condition reported feeling more powerful than those in the neutral condition $t(210) = -4.37, p = .00, 95\% \text{ CI}_{\text{difference}} [-1.33, -.50]$; it should be noted that we collapsed across gender due to an absence of gender differences. Condition differences for self-esteem and gratitude did not reach significance. Thus, differences in manipulated power did not directly impact differences in gratitude. However, examining indirect effects does not necessitate that the direct effects are significant (Hayes, 2009) so we again tested our proposed model in which power impacts gratitude through self-esteem. Means and standard deviations are reported in Table 4. All bivariate correlations were significant and as expected (Table 5).

Model fit

In line with Study 1, we examined model fit for a sequential mediation model wherein condition predicted gratitude via power and self-esteem (Figure 3, Model 3). We also examined a model in which condition related to gratitude through power and positivity. Condition ($b = -.06, p = .66$) and power ($b = .03, p = .64$) did not directly relate to gratitude (Table 6); similarly, condition did not directly relate to self-esteem ($b = -.03, p = .69$). However, power significantly related to self-esteem

Table 4. Means, standard deviations and p values for differences between high and neutral power conditions.

| Variable | High (power) condition | | Neutral (power) condition | | p |
|-------------|------------------------|------|---------------------------|------|-----|
| | M | SD | M | SD | |
| State Power | 4.29 | 1.45 | 3.38 | 1.59 | .00 |
| Self-Esteem | 3.14 | .66 | 3.00 | .65 | .16 |
| Gratitude | 5.52 | 1.17 | 5.41 | 1.23 | .51 |

Table 5. Bivariate correlations among Study 2 measured variables.

| | N | 1 | 2 | 3 |
|----------------|-----|--------|--------|---|
| 1. State power | 212 | – | | |
| 2. Self-Esteem | 212 | .42*** | – | |
| 3. Gratitude | 212 | .28*** | .62*** | – |

*** $p = .00$.

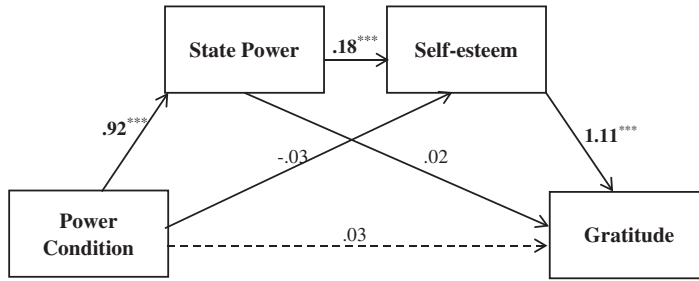


Figure 3. (Model 3) condition to state power to self-esteem to gratitude.

Table 6. Unstandardized path coefficients, standard errors, and bias-corrected confidence intervals for Model 3: condition to gratitude through state power and self-esteem.

| Parameter | Unstandardized B | SE | 95% BC CI | |
|----------------------------|------------------|-----|-----------|-------|
| | | | Lower | Upper |
| Model 3 | | | | |
| 1.State Power ON Condition | .92*** | .21 | .51 | 1.32 |
| 2. Power | .18*** | .03 | .12 | .23 |
| 3. Condition | -.03 | .08 | -.21 | .12 |
| 4. Power | .02 | .05 | -.07 | .13 |
| 5. Self-esteem | 1.11*** | .14 | .83 | 1.38 |
| 6. Condition | -.06 | .12 | -.30 | .19 |

*** $p = .00$; Note: Zero within 95% BC CI indicates non-significance

($b = .18, p = .00$) and self-esteem significantly related to gratitude ($b = 1.11, p = .00$). Constraining the direct effect at zero, Model 3 demonstrated good fit to the data (X^2 goodness-of-fit = .162, $p = 0.69$; CFI = 1.00, TLI = 1.03, RMSEA = .000, SRMR = .006). An alternative sequential mediation model was also tested, wherein state power and positivity mediated the condition-gratitude association. There was no direct effect between condition and gratitude ($b = -.06, p = .67$) or between power and gratitude ($b = -.01, p = .88$); similarly there were no direct effects of condition on positivity ($b = -.09, p = .66$). Power was significantly related to positivity ($b = .59, p = .00$). This model also demonstrated adequate fit to the data (X^2 goodness-of-fit = 0.153, $p = .70$; CFI = 1.00, TLI = 1.03, RMSEA = .00, SRMR = .006).

Model comparison was conducted via an examination of AIC and BIC fit statistics (Kline, 2011). The model in which condition predicted gratitude via state power and self-esteem (AIC = 1759.248, BIC = 1796.171) was a substantially better fitting model with smaller AIC and BIC values, relative to the model in which condition predicted gratitude via state power and positivity (AIC = 2133.257; BIC = 2170.180). As such, we retained our proposed model (Model 3) and interpreted the indirect effects.

Indirect effects

Results revealed significant indirect effects of condition on self-esteem through manipulated power ($Z = .16, p = .001$; BC 95% CI:[.08, .28]) and condition on gratitude through manipulated power and self-esteem ($Z = .18, p = .002$; BC 95% CI:[.09, .32]; Table 7). Thus, we again find support for self-esteem as an important mechanism for power’s impact on gratitude.⁴

Thus, while Study 2 did not show manipulated power directly impacting differences in general feelings of gratitude, we found that through self-esteem manipulated power indirectly impacted feelings of gratitude as predicted. In other words, manipulated power was associated with self-esteem, which in turn was positively related to gratitude.

Table 7. Indirect effects and bias-corrected confidence intervals.

| Indirect Effects | Point Estimate | 95% BC CI | |
|-------------------------------|----------------|-----------|-------|
| | | Lower | Upper |
| 1. State-power | .16 | .08 | .28 |
| 2.State-power and Self-esteem | .18 | .09 | .32 |

Note: Zero within 95% BC CI indicates non-significance; bolded point estimates statistically significant indirect effects; indirect effects were tested in separate models.

General discussion

Theory and previous research have argued that viewing others' kind actions as born out of care and concern for oneself (e.g., perceived responsiveness) is one of the important antecedents for feeling gratitude (Algoe, 2012). High self-esteem has been shown to boost recognition of others' care and concern for oneself (DeHart et al., 2002; Murray et al., 2001). Taken together these two lines of research suggested to us that power's positive impact on self-esteem (Fast et al., 2009; Wojciszke & Struzynska-Kujalowicz, 2007) may be one of the mechanisms for power boosting feelings of gratitude, not diminishing it. That is, those who feel powerful are more likely to view others' actions as high in perceived responsiveness and, therefore, to feel grateful for a kind action. The studies reported here provide initial evidence for this view. In opposition to previous research (Inesi et al., 2012, Study 2), we find support for a strong, *positive* relationship between power and gratitude. In two studies, we find that self-perceived power is robustly and positively related to feelings of gratitude. We also find that self-esteem acts as a mechanism for this relationship. In a third study we find that manipulated power is also positively related to gratitude *through* differences in self-esteem. Thus, we find support for our hypothesis that self-esteem acts as a mechanism for power's positive impact on gratitude. Importantly, self-esteem predicted gratitude in a way that neither positivity nor optimism did. To our knowledge, this is the first research to find a positive relationship between power and gratitude and to offer self-esteem as one mechanism for this relationship.

Limitations and future directions

There are several areas that we believe warrant further study. First, a continued investigation of the boundaries around power's positive relationship to gratitude is needed. While our work finds a robust, positive relationship between power and gratitude, earlier work did not (Inesi et al., 2012, Study 2). We argue that self-esteem acts as a mechanism for increasing powerful individuals' feelings of gratitude while earlier work argued that power decreases a benevolent view of others' kindnesses (Inesi et al., 2012). A closer examination of when power produces a suspicious view and when it produces a benevolent view of others' actions is needed to reconcile these disparate findings.

Second, current research has only begun to understand the relationship between self-esteem and gratitude. We expect that self-esteem impacts gratitude through changes in *perceived responsiveness*. That is, those higher in self-esteem are more likely to see others' kind acts as born out of care for and value of themselves than those lower in self-esteem. If one fails to see a kind act as responsive to the self then less (or no) gratitude will be felt (Algoe et al., 2008). Further research is needed to clarify the proposed relationship between self-esteem, perceived responsiveness and gratitude. To our mind, this would help clarify when power instigates a cynical attribution, as previously found, and when it is linked to viewing others' actions as responsive, as proposed here.

Finally, the current studies explored power's relationship to self-reported feelings of gratitude while previous work (Inesi et al., 2012) examined power's impact on gratitude in an imagined, work-related scenario. Future work should examine how power relates to gratitude *in vivo*.

Conclusion

The relationship between power and the positive emotion gratitude is clearly complex. In three studies, we find that power can be positively related to recognition of others' benevolent roles in our lives, with self-esteem acting as a mechanism for this positive relationship.

Notes

1. For all studies, we imbedded questions that asked participants to select a particular option in order to determine if they were truly attending to the study. If participants did not select the correct answer, their data was deleted from the study.
2. Examination of an additional alternative model, wherein gratitude predicted self-esteem (versus self-esteem predicting gratitude) demonstrated an acceptable fit to the data (AIC: 833.69; BIC: 853.29). Preacher and Kelley (2011) recommend comparing standardized indirect effect estimates for indirect effect models that fit the data comparably well. Examination of standardized effects revealed that the standardized indirect effect in our original model (indirect effect of gratitude; standardized $ab = .16$) was larger than that revealed in the alternative model (indirect effect of self-esteem: standardized $ab = .12$).
3. In addition to SP, we employed the single item, "How powerful are you currently feeling?" as a more accurate representation of state changes in power. There were no condition differences in power as assessed by the Sense of Power scale. However, in line with studies 1a and 1b, Sense of Power did relate to self-esteem ($b = .37$, $p = .000$) and gratitude ($b = .33$, $p = .001$) in the expected direction.
4. As in Study 1b, we tested an alternative model, wherein gratitude predicted self-esteem (versus self-esteem predicting gratitude); this demonstrated an acceptable fit to the data (AIC: 1759.094; BIC: 1796.017). Examination of standardized effects revealed that the standardized indirect effect in our model (indirect effect of gratitude; standardized $ab = .08$) was larger than that revealed in the alternative model (indirect effect of self-esteem: standardized $ab = .05$).

Disclosure statement

No potential conflict of interest was reported by the authors.

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Data availability statement

The data described in this article are openly available in the Open Science Framework at <https://osf.io/kv3t2/>

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