

Power Affects Performance When the Pressure Is On: Evidence for Low-Power Threat and High-Power Lift

Sonia K. Kang¹, Adam D. Galinsky², Laura J. Kray³,
and Aiwa Shirako⁴

Personality and Social
Psychology Bulletin
1–10

© 2015 by the Society for Personality
and Social Psychology, Inc
Reprints and permissions:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/0146167215577365
pspb.sagepub.com



Abstract

The current research examines how power affects performance in pressure-filled contexts. We present *low-power-threat* and *high-power-lift* effects, whereby performance in high-stakes situations suffers or is enhanced depending on one's power; that is, the power inherent to a situational role can produce effects similar to stereotype threat and lift. Three negotiations experiments demonstrate that role-based power affects outcomes but only when the negotiation is diagnostic of ability and, therefore, pressure-filled. We link these outcomes conceptually to threat and lift effects by showing that (a) role power affects performance more strongly when the negotiation is diagnostic of ability and (b) underperformance disappears when the low-power negotiator has an opportunity to self-affirm. These results suggest that stereotype threat and lift effects may represent a more general phenomenon: When the stakes are raised high, relative power can act as either a toxic brew (stereotype/low-power threat) or a beneficial elixir (stereotype/high-power lift) for performance.

Keywords

power, stereotype threat, stereotype lift, expectations, performance pressure

Received September 23, 2013; revision accepted February 16, 2015

In the 1960s, Jane Elliott, a third-grade teacher in Iowa, poignantly demonstrated that group expectations can have dramatic effects on performance (see Peters, 1987). Elliott separated her students into two groups based on the color of their eyes. The blue-eyed students were made the advantaged caste, getting more recess time, greater access to the water fountain, and second helpings of food. Having brown eyes, an insignificant and neutral physical marker only the day before, was transformed into an extremely negative label that completely undermined the ability of these brown-eyed students to perform intellectually. Indeed, although the stigmatized brown-eyed children took 5.5 min to complete a word task on the day they were in a disadvantaged position, they were able to complete the task in less than half the time—a mere 2.5 min—when they were liberated from the suffocating hold of the stigmatizing label the very next day. This remarkable classroom demonstration suggests that performance decrements can result from the mere perception of stigma. The idea that stigma can undermine performance not only through discrimination but also due to coping with the perception of stigma itself has become a research phenomenon called stereotype threat (Steele & Aronson, 1995).

In the current research, we explore a related phenomenon that we call the *low-power-threat effect*. We examine whether

similar effects can emerge in situations when a person in a low-power role is placed in a high-stakes and pressure-filled situation. We propose that the mere perception that one currently occupies a low-power position in a high-stakes situation can lead to underperformance. Similarly, just as the stereotype threat literature posits a corresponding stereotype lift effect, we propose a *high-power lift* effect, where a person in a high-power role who is placed in a high-stakes and pressure-filled situation experiences enhanced performance.

The Relationship Between Stereotypes and Performance

The force of stereotype threat to interfere with performance has been demonstrated among multiple social groups in a variety of achievement domains, including African Americans

¹University of Toronto, Ontario, Canada

²Columbia University, New York City, NY, USA

³University of California, Berkeley, USA

⁴Google, New York City, NY, USA

Corresponding Author:

Sonia K. Kang, University of Toronto, Toronto, ON, M5S3G3, Canada.
Email sonia.kang@utoronto.ca

on intellectual tasks, White men on athletic tasks, women on math tasks, and both men and women on negotiation tasks (Aronson et al., 1999; Gonzales, Blanton, & Williams, 2002; Kray, Galinsky, & Thompson, 2002; Kray, Thompson, & Galinsky, 2001; Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995; Stone, Lynch, Sjomeling, & Darley, 1999). Any negative performance-related stereotype for one's ascribed group can give rise to stereotype threat and result in reduced performance on stereotype-relevant tasks. More recent work on stereotype threat spillover paints an even grimmer picture—stereotype threat is so taxing that it negatively affects stigmatized individuals on any subsequent task requiring self-control (Inzlicht & Kang, 2010).

Stereotype threat arises from two conditions (Steele & Aronson, 1995). First, an individual must belong to an ascribed social group (e.g., women) with a consensually shared stereotype (e.g., women are bad at math). Second, the stereotyped task must be self-relevant and, therefore, be considered high-stakes; that is, performance on the task must be perceived as diagnostic of the individual's true ability (e.g., a female math student completing her Advanced Placement calculus exam). Understanding that a task is diagnostic of underlying ability puts the self on the line and results in palpable pressure. Under these conditions, stereotype threat disrupts performance via three interrelated mechanisms: physiological stress, over-monitoring of one's performance, and the wasting of cognitive resources through active control and suppression of negative thoughts and emotions (Schmader, Johns, & Forbes, 2008).

In addition to negative stereotypes, social groups may also be associated with positive stereotypes (e.g., men are good at math, Blacks are good athletes), and interestingly, a similar but converse phenomenon—stereotype lift—has also been found to occur. Although stereotype lift has been examined much less commonly than stereotype threat, there is evidence that positive stereotypic expectations lead to improved performance, especially when the task implicates the self (Steele, 1997; Walton & Cohen, 2003). In a meta-analysis of stereotype threat and lift studies, Walton and Cohen showed that simply presenting a test as diagnostic of ability was sufficient to boost performance for positively stereotyped groups.

As well as affecting performance on individual tasks, stereotype threat also affects relative performance on interdependent tasks. Research in the domain of negotiations show that presenting a negotiation as diagnostic of ability heightens the stakes and can lead to either stereotype threat or lift, depending on the valence of the stereotype. In high-stakes negotiations, women underperform compared with men when they are led to believe that men are better negotiators (Kray et al., 2001), but women perform better than men when presented with positive stereotypes about women and negotiations (Kray et al., 2002). Just as stereotypes can create these relative performance decrements and enhancements, we argue that power differentials inherent in one's social roles can also produce analogous performance effects.

Hierarchy and Power-Based Threat

Hierarchy, based in power and status, is the most prevalent and basic form of social organization in the world (Magee & Galinsky, 2008). Because hierarchy establishes order, reduces conflict, and facilitates coordination (Halevy, Chou, & Galinsky, 2011; Kwaadsteniet & van Dijk, 2010), individuals are keenly aware of their place in hierarchies (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006). Although status and power are distinct concepts (status is the respect conferred on an individual or group by others; power is control over resources), they are mutually reinforcing (Magee & Galinsky, 2008).

The behavioral consequences of high and low power can be organized and understood according to the behavioral approach and inhibition systems (Gray, 1982; Keltner, Gruenfeld, & Anderson, 2003). High power is associated with approach-related attention, affect, cognition, and behaviors, which help propel an individual toward his or her goals (Galinsky, Gruenfeld, & Magee, 2003; Guinote, 2007b). By engaging in these approach responses, power can enhance performance. For example, men high in testosterone (a physiological marker of dominance and power) perform better on math tests than low-testosterone men, but only when the test is diagnostic of underlying ability—one of the foundational elements necessary for stereotype threat to occur (Josephs, Newman, Brown, & Beer, 2003).

In contrast, low power is associated with inhibitory responses such as heightened anxiety, uncertainty, and attention to threats; negative emotions; and avoidance and response inhibition. Lacking status and power can increase awareness of threats and uncertainty (Keltner et al., 2003), amplify anxiety and stress (Barkow, 1975; Mazur, 1985), and disrupt goal-directed cognition and behavior (Guinote, 2007a, 2007b; Slabu & Guinote, 2010). Lacking power in a situation can impair executive functioning (Smith, Jostmann, Galinsky, & van Dijk, 2008), which is also a key mechanism for how stereotype threat affects performance (Schmader et al., 2008). Accordingly, the gender gap in math performance widens in societies in which women occupy few high-power roles and positions (Guiso, Monte, Sapienza, & Zingales, 2008).

From Stereotype-Based Performance to Power-Based Performance

Situating the effects of high and low power within the behavioral approach and inhibition systems makes clear a link between the mechanisms underlying these effects and the effects associated with stereotype threat. Performance decrements associated with stereotype threat are well understood as arising from a combination of mechanisms that reduce working-memory efficiency, including increased physiological stress, over-monitoring of performance and other situational cues, and active suppression of stereotypic thoughts and anxious feelings (Schmader et al., 2008). Just as stereotype threat

increases physiological stress, low power is associated with engagement of the behavioral inhibition system (Keltner et al., 2003), which triggers the body's stress response (Gray, 1982, 1987). Just as stereotype threat is associated with negative thoughts and feelings, so too is a state of low power (Keltner et al., 2003).

A related literature on "choking" under pressure highlights similarities between stereotype threat and high pressure (e.g., Baumeister, 1984, 1985; Baumeister & Showers, 1986; DeCaro, Thomas, Albert, & Beilock, 2011). Choking under pressure occurs when an individual strives to do well and has various incentives for superior performance, but the high pressure to perform ends up leading to performance decrements (Baumeister, Hamilton, & Tice, 1985; Baumeister & Showers, 1986; Beilock & Gray, 2007). Distraction theories propose that pressure damages performance by shifting attention and working-memory resources away from the task at hand and toward task-irrelevant thoughts and worries (e.g., Beilock & Carr, 2001; Beilock & DeCaro, 2007; Markman, Maddox, & Worthy, 2006). Stereotype threat is similarly associated with a preoccupation with task-irrelevant concerns that interfere with working-memory capacity, a central resource critical to maintaining high task performance (Schmader et al., 2008). Therefore, the combination of low power and high pressure should present a particularly toxic brew for underperformance.

Whereas the combination of low power and high pressure may undermine performance, high-power states are likely associated with performance enhancement, similar to what is seen under stereotype lift. For example, high power is associated with increased goal-focused cognition and behavior (Galinsky et al., 2003; Guinote, 2007a, 2007b; Whitson et al., 2013), which should lead to improved task performance. In negotiations, high power leads to more assertive opening moves and better economic outcomes relative to low power (Magee, Galinsky, & Gruenfeld, 2007). Although the mechanisms underlying stereotype lift are not as well understood, high power is likely to give rise to high-power lift—the same types of effects that have been observed under stereotype lift.

In the current research, we explore whether power threat and lift effects emerge in situations where people are temporarily placed in roles that connote low or high power. We propose that individuals experiencing heightened pressure will underperform whenever expectations are held low and perform better when expectations are raised high. We argue that differential expectations for performance might come from the attributes associated with an ascribed group membership, as has been demonstrated extensively in stereotype threat work, or as we examine in the current research, they may result from asymmetries in the power associated with one's situational role. When one role is perceived as less powerful than another in a pressure-filled, interdependent performance context, we propose that individuals occupying the low-power role will suffer performance deficits.

Our broad model proposes that performance will suffer whenever the stakes are raised high and expectations are held low. Specifically, we propose that simply occupying low-power positions when the stakes are raised high can produce threat effects, whereas occupying high-power positions in pressure-filled situations can produce performance lift. Thus, low-power threat and high-power lift result from the combination of performance pressure and power differentials. To establish the existence of these effects, we use the context of negotiations.

Because negotiations are inherently interdependent tasks, power differences naturally emerge between negotiation roles, making negotiations an ideal context to explore the hypothesis that the combination of power differences and performance pressure can lead to threat/lift-like effects. Past research, for example, has found that positive and negative stereotypes drive bargaining outcomes (Kray et al., 2002). Consistent with stereotype threat and lift processes, these performance differences are more pronounced when the negotiation is diagnostic of ability and, therefore, has greater implications for the self (Kray et al., 2001). Indeed, as mentioned previously, Kray and her colleagues demonstrated both that men show stereotype lift and that women show stereotype threat whenever negotiations are diagnostic of ability.

We propose that when the pressure is on (i.e., because a diagnostic negotiation has performance implications for the self), the impact of power differences will be most apparent. In such cases, we hypothesize that low-power negotiators will live down to the diminished expectations inherent to their low-power role, whereas high-power negotiators will live up to the positive ones inherent in their role. We propose that making a negotiation high-stakes and filled with pressure will magnify power-consistent performance effects.

Overview of Studies

Across three experiments, we examined our proposed low-power threat and high-power lift effects, the idea that simply making a negotiation high-stakes (i.e., diagnostic of underlying ability) will lower outcomes for negotiators who are perceived to have low power and improve outcomes for negotiators who are perceived to have high power. We test this hypothesis across two different roles: recruiters/candidates and sellers/buyers. Because previous work has generally confounded the content of stereotypes with relative rank differences in society, we attempt to disentangle these effects by examining same-gender dyads. In Experiment 3, we seek to establish that threat-like processes are at work by exploring whether opportunities to self-affirm (a common intervention for reducing threat effects; Martens, Johns, Greenberg, & Schimel, 2006) can eliminate the effect of performance pressure on outcomes. Overall, we explore whether role-based differences in power in pressure-filled situations are sufficient to produce underperformance.

Experiment I

Our first experiment explored the power-threat effect in the context of a job negotiation. We investigated the hypothesis that simply making a negotiation diagnostic of ability will accentuate the effect of power on performance. We used a popular multi-issue job negotiation involving a recruiter and candidate called “New Recruit” (Neale, 1997). We expected that the candidate role would be seen as less powerful than the recruiter role. We predicted that the low-power candidate would feel threatened when the negotiation was diagnostic of ability and perform worse, but that the high-power recruiter would be lifted by the pressure and perform better in this circumstance.

Power Pretests

Previous research has found that this particular recruiter–candidate negotiation presents a role-based power advantage for the recruiter (Anderson & Thompson, 2004). We conducted our own pretest to confirm that the recruiter and candidate role materials created differences in perceived power (for study details, see Supplemental Material). We asked 22 participants whether the candidate or recruiter generally has more power in employment negotiations, anchored at (1) *the candidate* and (5) *the recruiter*. Our power index differed significantly from the midpoint of the scale ($M = 2.27$, $SD = 0.67$), $t(21) = -5.08$, $p < .001$, 95% confidence interval (CI) = [2.13, 2.41], demonstrating that the recruiter was seen as having more power.

We conducted a second pretest manipulation check to ensure that perceptions of power and related performance expectations were affected by the role manipulation only (i.e., by adopting the role of the recruiter or candidate) and not by the diagnosticity manipulation that we would be using in all of our experiments (204 participants, 66% male; for study details, see Supplemental Material). Results revealed only a significant main effect of power, $F(1, 200) = 43.26$, $p < .001$, $\eta_p^2 = 0.18$, 95% CI for difference = [0.68, 1.25], such that recruiters ($M = 5.38$, $SD = 0.95$) reported feeling greater power than did candidates ($M = 4.42$, $SD = 1.13$). Neither the main effect of diagnosticity nor the Power \times Diagnosticity interaction was significant, $F_s < 1$, *ns*. Therefore, this second pretest confirmed that the role manipulation of recruiter versus candidate affects perceived power, whereas the diagnosticity manipulation does not.

After establishing the power differential inherent in the recruiter and candidate roles across two separate pretests, we conducted an experiment to examine the effects of power and pressure on performance in a negotiations task. We predicted that the high stakes of a diagnostic negotiation would create a threatening situation for the low-power candidate and undermine their performance, whereas the high-power recruiter would likely experience enhanced performance.

Method

Design and participants. Participants were 134 students (60% female) who participated in same-sex dyads. Twenty-four of the participants were students in an executive education program for school principals who participated as part of a pedagogical exercise. The remaining 110 participants were undergraduate students recruited from the University of Toronto Mississauga who were compensated with CAD \$15 for their participation. Sample size was based on the number of students enrolled in available classes and a survey of effect sizes in the power and negotiations literatures. To control for possible sample effects, participant sample was included as a covariate in analyses; an identical pattern of results was obtained without participant sample as a covariate.

Participants were randomly assigned to a 2 (power: low power, candidate, vs. high power, recruiter) \times 2 (diagnosticity: non-diagnostic vs. diagnostic) design.

Materials and Procedure

Participants were given 20 minutes to prepare and 30 minutes to negotiate.

Negotiation task. The negotiation task “New Recruit” (Neale, 1997) concerns an employment negotiation in which a job candidate and a recruiter must negotiate eight issues relevant to both parties (e.g., salary, benefits, vacation time, region of placement). This task has been used in previous examinations of stereotype threat in the context of negotiations (Kray et al., 2002; Kray et al., 2001). The negotiation occurs in dyads, with one member randomly assigned to be the candidate and the other randomly assigned to be the recruiter. Each negotiator is instructed to reach the agreement on all eight issues that is best for them. The role materials present preferences for each negotiator by assigning points to issues (greater points indicate stronger preferences). The goal of the negotiation is to earn as many points as possible. Two issues were purely distributive, meaning that the parties’ preferences were in complete opposition (e.g., the candidate wanted a higher salary and the recruiter wanted to pay a lower salary, and this issue was worth the same number of points to each of them). Two issues were compatible, meaning that the parties’ preferences were identical (e.g., both the candidate and the recruiter wanted the candidate to work in San Francisco, and this issue was worth the same number of points to each of them). The remaining issues formed two pairs of issues with integrative potential, meaning that one party cared more about Issue A and the other party cared more about Issue B. For example, the candidate wanted a higher bonus and the recruiter wanted to pay a lower bonus, but the candidate cared more about this issue; that is, a bonus was worth up to 4,000 points for the candidate, but only 1,600 points for the recruiter. In contrast, vacation time was

worth 4,000 points for the recruiter and only 1,600 points for the candidate. If both parties conceded on the issue they cared less about, both parties could benefit in terms of the number of points they earned. Each role had the same maximum and minimum for both distributive and integrative potential (−8,400 to 13,200 points). During the negotiation, participants are free to discuss the issues however they choose. Dyads must come to an agreement on all eight issues in the 30 minutes provided.

Diagnosticity manipulation. Embedded in the general instructions was the identical manipulation of negotiation diagnosticity used by Kray et al. (2001, Experiment 1). Both the candidate and recruiter were given the same manipulation within each dyad. Dyads in the *diagnostic condition* were told that the negotiation was a diagnostic tool to assess their negotiating skills and was an “accurate gauge of (their) genuine negotiating abilities and limitations.” Further, they were told that their performance was “diagnostic of their performance in negotiation courses and real-world negotiations.” Dyads in the *non-diagnostic condition* were told that the negotiation was created to familiarize them with the core concepts involved in negotiations and was “not an accurate gauge of their genuine negotiating abilities and limitations,” and that their performance on this task was not diagnostic of future negotiations performance.

Results and Discussion

We predicted that candidates would secure worse outcomes and that recruiters would secure better outcomes in the diagnostic condition. The overall value of each negotiator’s point total was submitted to a 2 (power: low power, candidate, vs. high power, recruiter) × 2 (diagnosticity: non-diagnostic vs. diagnostic) mixed-model ANCOVA with power as a within-dyad factor, diagnosticity as a between-dyad factor, and participant sample entered as a covariate.

As hypothesized, the interaction between role and diagnosticity condition was significant, $F(1, 64) = 4.98, p = .029, \eta_p^2 = 0.07$. As illustrated in Figure 1, candidates performed worse in the diagnostic condition ($M = 3,835.48, SD = 2,273.40$) than in the non-diagnostic condition ($M = 4,986.11, SD = 1,830.40$), $t(65) = -2.29, p = .025, d = 0.56$, 95% CI for difference = [149.03, 2,152.22]. Recruiters showed the reverse pattern, obtaining better outcomes in the diagnostic condition ($M = 5,396.77, SD = 2,081.74$) than in the non-diagnostic condition ($M = 4,313.89, SD = 2,476.42$), $t(65) = 1.92, p = .059, d = 0.47$, 95% CI for difference = [−43.92, 2,209.69]. The performance of recruiters and candidates did not differ in the non-diagnostic condition, $t(35) = 1.01, p = .32$. However, when stakes were raised high in the diagnostic condition, the performance of recruiters was significantly better than that of candidates, $t(30) = -2.16, p = .039, d = 0.47$, 95% CI for difference = [82.58, 3,040.00].

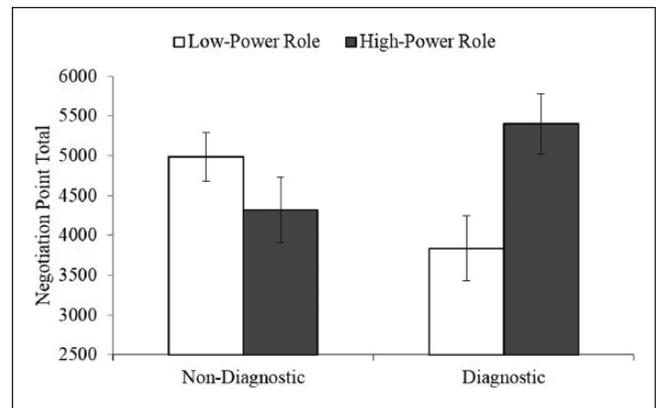


Figure 1. Performance of participants in the low-power role (candidates) and high-power role (recruiters) under non-diagnostic and diagnostic conditions in Experiment 1.

Note. Values represent negotiation point total, with higher values indicating better performance. Error bars represent ± 1 standard error.

Together, these results suggest that the difference in the diagnostic condition reflects a combination of both low-power threat and high-power lift effects for the candidates and recruiters, respectively. When the negotiation was high-stakes because it was diagnostic of underlying ability, those in the low-power role performed worse, whereas those in the high-power role performed better. These results provide support for our hypothesis that power differentials and high-stakes pressure combine to affect performance. All that is needed to produce performance differences are power differences between roles in a high-pressure, diagnostic situation.

Experiment 2

The second experiment was designed to extend the previous experiment by using a different negotiation exercise and testing whether diagnosticity would also affect another important negotiation outcome—the tendency to make the first offer. Making the first offer is a good index of assertiveness in negotiations (Galinsky & Mussweiler, 2001; Magee et al., 2007).

We used a buyer–seller negotiation case called “Synertech–Dosagen” (see Galinsky, Leonardelli, Okhuysen, & Mussweiler, 2005; Galinsky & Mussweiler, 2001; Galinsky, Mussweiler, & Medvec, 2002; Kray et al., 2001) about two pharmaceutical firms, Synertech and Dosagen. In the negotiation, Synertech would like to buy a biotechnology plant that Dosagen has up for sale.

The buyer (Synertech) is generally perceived to have less power than the seller (Dosagen) because the buyer has a weaker and more precarious Best Alternative to a Negotiated Agreement (BATNA). Indeed, one of the most important sources of power is one’s BATNA. Having a strong alternative provides a negotiator with power because it makes them

less dependent on the current negotiation opponent for meeting their needs (Fisher, Ury, & Patton, 2011; Mannix & Neale, 1993; Pinkley, Neale, & Bennett, 1994; Sondak & Bazerman, 1991).

In line with the results of Experiment 1, we predicted that the diagnostic condition would produce a better outcome for the high-power seller (i.e., higher selling prices) relative to the non-diagnostic condition.

Power Pretest

As in Experiment 1, we first established that power differences existed in a buyer–seller negotiation. We used the role materials of “Synertech–Dosagen,” where each negotiator had an alternative (BATNA). We predicted that negotiators would see the buyer as having less power in this negotiation because they had a relatively worse BATNA. We conducted a pretest (for study details, see Supplemental Material) to verify perceptions of power within these negotiation roles. After reading a description of the negotiation, participants rated who had more power on a scale from 1 (*seller has more power*) to 7 (*buyer has more power*). A one sample *t* test showed that the sample mean was significantly less than the midpoint of the scale ($M = 2.70$, $SD = 1.32$), $t(29) = 5.41$, $p < .001$, 95% CI = [2.45, 2.94], indicating that participants saw the seller as having more power.

Method

Design and participants. Participants were 60 male MBA students enrolled in a negotiations course. Sample size was determined by the number of students enrolled in the course. The negotiation exercise, involving the sale of a biotechnology plant, took place during the first day of a 10-week course. The sole negotiation issue was sale price. Participants were randomly assigned to one of four conditions in a 2 (power: low power, buyer, vs. high power, seller) \times 2 (diagnosticity: non-diagnostic vs. diagnostic) design.

Procedure

Participants were given a cover sheet with general negotiation instructions, along with specific role information. Participation occurred in dyads, and one member of the dyad was randomly assigned to play the role of the buyer, Synertech (low power), and the other member was randomly assigned to play the role of the seller, Dosagen (high power). Participants within the same dyad received the same information about diagnosticity. Participants were given 15 minutes to prepare and 30 minutes to negotiate the sale of the pharmaceutical plant.

Power manipulation and negotiation details. Sellers were told that their best alternative to this negotiation would be to strip the plant and sell the equipment separately at a profit of \$17 million. Buyers were told that if they could not reach a deal,

they would have to build a new plant at a cost of \$25 million and that it would take a year to recruit and train a whole new workforce, gain Food and Drug Administration (FDA) approval, and become fully operational. By reaching an agreement with the seller, however, they could retain the seller’s workforce and start production quickly at a plant that already had FDA approval. They were additionally told that current market conditions meant that moving early was beneficial.

Diagnosticity manipulation. Embedded in the general instructions was the same diagnosticity manipulation used in Experiment 1.

Dependent variables. After the negotiation, each dyad reported the final sale price. Dyads also indicated who had made the opening offer, which served as a measure of assertiveness.

Results and Discussion

Negotiation outcome. We predicted that the sale price would be higher in the diagnostic condition than in the non-diagnostic condition, indicating a worse outcome for the low-power buyer relative to the high-power seller. Consistent with this prediction, the purchase price was higher in the diagnostic condition ($M = \$23.71$ million, $SD = \$3.21$ million) than in the non-diagnostic condition ($M = \$21.14$ million, $SD = \$1.84$ million), $t(28) = 2.77$, $p = .01$, $d = 0.98$, 95% CI of difference = [0.67, 4.48].

We also checked for outliers, and one settlement price in the diagnostic condition was more than three standard deviations from the overall sample mean. When we removed this data point, the effect of diagnostic condition was still significant, $t(27) = 2.55$, $p = .017$, $d = 0.95$, 95% CI of difference = [0.37, 3.40].

First offer. Prior research suggests that lacking power decreases the likelihood of making a first offer (Magee et al., 2007). Consistent with this research, buyers made the first offer only 35% of the time in the diagnostic condition compared with 69% of the time in the non-diagnostic condition, $\chi^2(1) = 3.39$, $p = .06$. Thus, the diagnosticity manipulation affected the relative assertiveness of the negotiators.

Overall, presenting the negotiation as diagnostic of ability appeared to threaten low-power buyers and embolden high-power sellers, reifying power differences. When performance pressure was high, power differences predicted assertiveness and final prices. These results again suggest that role-based power asymmetries affect negotiation outcomes especially when the stakes are raised high.

Experiment 3

The first two experiments provide evidence that performance effects that parallel stereotype threat and lift effects can

result from unequal power in a pressure-filled, interdependent context. The third experiment was designed to provide further evidence for this claim. If low-power threat is driving the differences found in the first two experiments, then providing an opportunity to neutralize the threat should eliminate the relationship between lower power and heightened pressure.

Self-affirmation research has shown that threats to the self do not have to be tackled directly but can be neutralized indirectly, simply by contemplating a valued aspect of the self (Steele, 1988). Affirming the self can affect intra-psychic processes (e.g., the persistence of ruminative thought; Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999) and interpersonal processes (e.g., defensive reactions to the threatening success of close others; Tesser & Cornell, 1991). In a longitudinal study, Cohen and colleagues (Cohen, Garcia, Apfel, & Master, 2006; Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009) found that having seventh-grade Black students reflect on important personal values in a series of structured writing assignments immediately reduced the racial achievement gap by 40% and continued to show positive effects 2 years later.

If threat processes underlie the findings from our first two experiments, then providing negotiators an opportunity to affirm a valued aspect of the self should eliminate these effects. To test this hypothesis, we used the same buyer-seller negotiation as in Experiment 2 and created a sense of pressure for all negotiators by telling them that the negotiation was diagnostic of their ability. Half of those assigned to the low-power role (i.e., the buyers) were given an opportunity to affirm a valued aspect of the self just before the negotiation; the remaining buyers reflected on an unimportant value. We predicted that the final agreement would produce a better outcome for buyers when they had an opportunity to self-affirm, because self-affirmation neutralizes the threat associated with the toxic combination of low power and high stakes.

Method

Participants and design. Participants were 88 MBA students assigned to same-sex pairs (33 male pairs, 11 female pairs). Sample size was determined based on the number of students enrolled in available classes. The negotiation task occurred during the first day of a 10-week negotiations course and was presented as diagnostic of ability.

Participants were randomly assigned to one of four conditions in a 2 (no self-affirmation vs. self-affirmation) \times 2 (power: low power, buyer, vs. high power, seller) design.

Procedure

Participants were given a cover sheet with general negotiation instructions and specific role information. All participants were given the diagnosticity instructions used in

Experiments 1 and 2. Participants were given 15 minutes to prepare and 30 minutes to negotiate.

Affirmation manipulation. Prior to negotiating, participants completed a two-page value survey (modeled on the Allport, Vernon, & Lindzey, 1960, scale of Values that Steele & Liu, 1983, first used to demonstrate self-affirmation effects). Participants rank ordered the six dimensions from most important to least important (see Tesser & Cornell, 1991). Buyers in the *self-affirmation condition* spent 5 minutes writing “about the meaning and relevance of your *most* important value in the context of negotiations.” Buyers in the *non-self-affirmation condition* wrote about the meaning and relevance of their *least* important value. Because reflecting on an unimportant value is a neutral manipulation that keeps constant the act of engaging in self-reflective writing (Cohen et al., 2006), sellers also reflected on their least important value.

Dependent variables. After the negotiation, each dyad reported the final sale price. Dyads also indicated who had made the opening offer, which served as a measure of assertiveness.

Results and Discussion

Negotiation outcome. Because all negotiations were described as diagnostic of ability, we predicted that buyers would feel threat in the non-self-affirmation condition but that this threat would be neutralized in the self-affirmation condition. We, therefore, predicted a lower purchase price (i.e., a better outcome for the buyers) when buyers were given a chance to self-affirm. As predicted, the purchase price was lower in the self-affirmation condition ($M = \$20.93$ million, $SD = \$1.98$ million) than in the non-self-affirmation condition ($M = \$22.36$ million, $SD = \$1.80$ million), $t(42) = 2.51, p = .016, d = 0.76, 95\% \text{ CI of difference} = [0.28, 2.58]$.

First offer. The buyer made the first offer only 30% of the time in the non-self-affirmation condition, but this proportion almost doubled in the self-affirmation condition (57%), $\chi^2(1) = 3.19, p = .07$.

Similar to Study 2, when the negotiation was described as diagnostic of underlying ability and there was no opportunity to self-affirm, the negotiator in the low-power role agreed to a worse deal. However, when the threat was reduced via self-affirmation (Experiment 3), the low-power negotiator achieved a better outcome and was relatively more likely to act assertively by making the first offer. Despite the fact that the negotiation was described as diagnostic of ability for all negotiators, the sale price in the affirmation condition was close to that of the non-diagnostic condition in Experiment 2, suggesting that the threat created by lacking power was neutralized.

General Discussion

Across three experiments, we found evidence for low-power threat and high-power lift: The combination of power differentials and performance pressure determined negotiation outcomes. We observed that high performance pressure combined with low power lowered negotiation performance (low-power threat); performance suffered most when the stakes were raised high and expectations were held low. In contrast, this pressure enhanced performance for those in the high-power role (high-power lift).

When a negotiation was made diagnostic of ability, power-based disparities between the negotiating parties were magnified. Regardless of whether power was derived from roles or through BATNAs and regardless of whether the negotiation involved a buyer–seller or recruiter–candidate, the negotiator perceived to have less role-based power procured worse outcomes relative to their high-power counterpart, but only when the negotiation was high-stakes and pressured filled (i.e., diagnostic of underlying ability).

On a positive note, whenever threat was reduced by making the negotiation non-diagnostic (Experiment 2) or via self-affirmation (Experiment 3), the low-power negotiator achieved a better outcome. The effect of the affirmation manipulation supports our assertion that our observed effects are related to threat. Affirmations neutralized the threat to the self that the role (being less powerful) and the situation (the pressure created from the task being diagnostic of ability) brought to bear. Although we acknowledge that we did not measure the mechanism via which self-affirmation reduced power-threat effects, theoretical accounts of stereotype threat suggest that self-affirmations decrease threat effects by preventing losses in working-memory efficiency (Schmader et al., 2008). We propose that the same mechanism applies here, allowing low-power individuals to maintain performance in high-stakes situations by avoiding the depletion of executive resources.

It is worth speculating on whether the results presented here depend on the interdependent nature of negotiations. In the present experiments, one role was perceived to be less powerful vis-à-vis the competing role. There was no absolute rank, it only appeared in relative comparison. Generally speaking, power is by nature a relative state—indeed, the very definition of power as asymmetric control over valued resources in a social relationship highlights its comparative nature (Magee & Galinsky, 2008). Importantly, most stereotypes also carry with them an implicit comparison. For example, Caucasians are stereotyped as non-athletic, but only in comparison with African Americans. Likewise, women are expected to do worse in math, but only relative to men. That is, one group is stereotyped to lack an ability that another group possesses. The interdependent nature of negotiations highlights this comparative process, thus making it an ideal context for exploring our proposed low-power threat and high-power lift effects. These comparisons still exist but

are often more implicit in most stereotype-driven performance domains (Walton & Cohen, 2003). As Festinger (1954) noted, we cannot understand our abilities without engaging in some type of social comparison.

In the current research, we operationalized power in two different ways. First, we leveraged the inherent power difference between recruiters and candidates in an employment context. Second, we used a buyer–seller negotiation and operationalized power through the strength of their alternatives (i.e., their BATNAs). Regardless of how power was operationalized, we documented low-power threat and high-power lift. Recent work suggests that priming power can have the same effects as role-based effects of power (for a review, see Galinsky, Rucker, & Magee, 2015). We would predict similar low-power threat and high-power lift effects with primed power. That is, priming a negotiator with low or high power in a high-stakes negotiator would undermine and enhance performance, respectively. Both objective and subjective power differences place the disadvantaged negotiator at risk and benefit the advantaged negotiator when the pressure is on.

Conclusion

Three experiments provide evidence that placing people under the spell of power-based expectations while ratcheting up the pressure can give rise to performance effects similar to stereotype threat and lift effects. The threat to the self in interdependent performance contexts can come from many sources, from stereotypes to hierarchical rank. Fortunately, being given the opportunity to affirm an important self-value can neutralize that threat. Thinking about what we value can be enough to diminish threat-based performance decrements and help people achieve lofty possibilities. Similarly, lowering the pressure (by making the negotiation non-diagnostic of ability) also reduced the effect of power on negotiated outcomes.

The current research documents an important link between power and performance: Performance is most affected whenever there are power differences in high-pressure situations. The results have documented both a low-power threat and a high-power lift effect: Performance pressure can disrupt or enhance performance when the pressure is on. In combination with previously examined stereotype threat and lift effects, the current results suggest a general principle: Differences in relative power affect performance most when the stakes are raised high.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Supplemental Material

The online supplemental material is available at <http://pspb.sagepub.com/supplemental>.

References

- Allport, G. W., Vernon, P. E., & Lindzey, G. (1960). *Study of values* (3rd ed.). Boston, MA: Houghton Mifflin.
- Anderson, C., Srivastava, S., Beer, J. S., Spataro, S. E., & Chatman, J. A. (2006). Knowing your place: Self-perceptions of status in face-to-face groups. *Journal of Personality and Social Psychology, 91*, 1094-1110.
- Anderson, C., & Thompson, L. L. (2004). Affect from the top down: How powerful individuals' positive affect shapes negotiations. *Organizational Behavior and Human Decision Processes, 95*, 125-139.
- Aronson, J., Lustina, M. J., Good, C., Keough, K., Steele, C. M., & Brown, J. (1999). When white men can't do math: Necessary and sufficient factors in stereotype threat. *Journal of Experimental Social Psychology, 35*, 29-46.
- Barkow, J. H. (1975). Prestige and culture: A biosocial interpretation. *Current Anthropology, 16*, 553-572.
- Baumeister, R. F. (1984). Choking under pressure: Self-consciousness and paradoxical effects of incentives on skillful performance. *Journal of Personality and Social Psychology, 46*, 610-620.
- Baumeister, R. F. (1985). The championship choke. *Psychology Today, 19*, 48-52.
- Baumeister, R. F., Hamilton, J. C., & Tice, D. M. (1985). Public versus private expectancy of success: Confidence booster or performance pressure? *Journal of Personality and Social Psychology, 48*, 1447-1457.
- Baumeister, R. F., & Showers, C. J. (1986). A review of paradoxical performance effects: Choking under pressure in sports and mental tests. *European Journal of Social Psychology, 16*, 361-383.
- Beilock, S. L., & Carr, T. H. (2001). On the fragility of skilled performance: What governs choking under pressure? *Journal of Experimental Psychology: General, 130*, 701-725.
- Beilock, S. L., & DeCaro, M. S. (2007). From poor performance to success under stress: Working memory, strategy selection, and mathematical problem solving under pressure. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 33*, 983-998.
- Beilock, S. L., & Gray, R. (2007). Why do athletes "choke" under pressure? In G. Tenenbaum & R. C. Ecklund (Eds.), *Handbook of sport psychology* (3rd ed., pp. 425-444). Hoboken, NJ: John Wiley.
- Cohen, G. L., Garcia, J., Apfel, N., & Master, A. (2006). Reducing the racial achievement gap: A social-psychological intervention. *Science, 313*, 1307-1310.
- Cohen, G. L., Garcia, J., Purdie-Vaughns, V., Apfel, N., & Brzustoski, P. (2009). Recursive processes in self-affirmation: Intervening to close the minority achievement gap. *Science, 324*, 400-403.
- DeCaro, M. S., Thomas, R. D., Albert, N. B., & Beilock, S. L. (2011). Choking under pressure: Multiple routes to skill failure. *Journal of Experimental Psychology: General, 140*, 390-406.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117-140.
- Fisher, R., Ury, W. L., & Patton, B. (2011). *Getting to yes: Negotiating agreement without giving in*. London, England: Penguin Books.
- Galinsky, A. D., Gruenfeld, D. H., & Magee, J. C. (2003). From power to action. *Journal of Personality and Social Psychology, 85*, 453-466.
- Galinsky, A. D., Leonardelli, G. J., Okhuysen, G. A., & Mussweiler, T. (2005). Regulatory focus at the bargaining table: Promoting distributive and integrative success. *Personality and Social Psychology Bulletin, 31*, 1087-1098.
- Galinsky, A. D., & Mussweiler, T. (2001). First offers as anchors: The role of perspective-taking and negotiator focus. *Journal of Personality and Social Psychology, 81*, 657-669.
- Galinsky, A. D., Mussweiler, T., & Medvec, V. H. (2002). Disconnecting outcomes and evaluations: The role of negotiator focus. *Journal of Personality and Social Psychology, 83*, 1131-1140.
- Galinsky, A. D., Rucker, D. D., & Magee, J. C. (2015). Power: Past findings, present considerations, and future directions. In J. A. Simpson & J. F. Dovidio (Associate Eds.), M. Mikulincer & P. R. Shaver (Eds.), *APA Handbook of Personality and Social Psychology. Vol. 3: Interpersonal relations* (pp. 421-460). Washington, DC: American Psychological Association.
- Gonzales, P. M., Blanton, H., & Williams, K. J. (2002). The effects of stereotype threat and double-minority status on the test performance of Latino women. *Personality and Social Psychology Bulletin, 28*, 659-670.
- Gray, J. A. (1982). *The neuropsychology of anxiety*. New York, NY: Oxford University Press.
- Gray, J. A. (1987). *The psychology of fear and stress*. New York, NY: Cambridge University Press.
- Guinote, A. (2007a). Power affects basic cognition: Increased attentional inhibition and flexibility. *Journal of Experimental Social Psychology, 43*, 685-697.
- Guinote, A. (2007b). Power and goal pursuit. *Personality and Social Psychology Bulletin, 33*, 1076-1087.
- Guiso, L., Monte, F., Sapienza, P., & Zingales, L. (2008). Culture, gender, and math. *Science, 320*, 1164-1165.
- Halevy, N., Chou, E. Y., & Galinsky, A. D. (2011). A functional model of hierarchy: Why, how, and when vertical differentiation enhances group performance. *Organizational Psychology Review, 1*, 32-52.
- Inzlicht, M., & Kang, S. K. (2010). Stereotype threat spillover: How coping with threats to social identity affects aggression, eating, decision-making, and attention. *Journal of Personality and Social Psychology, 99*, 467-481.
- Josephs, R. A., Newman, M. L., Brown, R. P., & Beer, J. M. (2003). Status, testosterone, and human intellectual performance: Stereotype threat as status concern. *Psychological Science, 14*, 158-163.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*, 265-284.
- Koole, S., Smeets, K., van Knippenberg, A., & Dijksterhuis, A. (1999). The cessation of rumination through self-affirmation. *Journal of Personality and Social Psychology, 77*, 111-125.
- Kray, L. J., Galinsky, A. D., & Thompson, L. (2002). Reversing the gender gap in negotiations: An exploration of stereotype

- regeneration. *Organizational Behavior and Human Decision Processes*, 87, 386-410.
- Kray, L. J., Thompson, L., & Galinsky, A. D. (2001). Battle of the sexes: Gender stereotype confirmation and reactance in negotiations. *Journal of Personality and Social Psychology*, 80, 942-958.
- Kwaadsteniet, E. W., & van Dijk, E. (2010). Social status as a cue for tacit coordination. *Journal of Experimental Social Psychology*, 46, 515-524.
- Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power and status. *The Academy of Management Annals*, 2, 351-398.
- Magee, J. C., Galinsky, A. D., & Gruenfeld, D. H. (2007). Power, propensity to negotiate, and moving first in competitive interactions. *Personality and Social Psychology Bulletin*, 33, 200-212.
- Mannix, E. A., & Neale, M. A. (1993). Power imbalance and the pattern of exchange in dyadic negotiation. *Group Decision and Negotiation*, 2, 119-133.
- Markman, A. B., Maddox, W. T., & Worthy, D. A. (2006). Choking and excelling under pressure. *Psychological Science*, 17, 944-948.
- Martens, A., Johns, M., Greenberg, J., & Schimel, J. (2006). Combating stereotype threat: The effect of self-affirmation on women's intellectual performance. *Journal of Experimental Social Psychology*, 42, 236-243.
- Mazur, A. (1985). A biosocial model of status in face-to-face primate groups. *Social Forces*, 64, 377-402.
- Neale, M. A. (1997). *New recruit*. Evanston, IL: Northwestern University, Kellogg School of Management, Dispute Resolution Research Center.
- Peters, W. (1987). *A class divided: Then and now* (Expanded ed.). New Haven, CT: Yale University Press.
- Pinkley, R. L., Neale, M. A., & Bennett, R. J. (1994). The impact of alternatives to settlement in dyadic negotiation. *Organizational Behavior and Human Decision Processes*, 57, 97-116.
- Schmader, T., Johns, M., & Forbes, C. (2008). An integrated process model of stereotype threat effects on performance. *Psychological Review*, 115, 336-356.
- Slabu, L., & Guinote, A. (2010). Getting what you want: Power increases the accessibility of active goals. *Journal of Experimental Social Psychology*, 46, 344-349.
- Smith, P. K., Jostmann, N. B., Galinsky, A. D., & van Dijk, W. W. (2008). Lacking power impairs executive functions. *Psychological Science*, 19, 441-447.
- Sondak, H., & Bazerman, M. H. (1991). Power balance and the rationality of outcomes in matching markets. *Organizational Behavior and Human Decision Processes*, 50, 1-23.
- Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. *Journal of Experimental Social Psychology*, 35, 4-28.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental psychology* (Vol. 21, pp. 261-302). San Diego, CA: Academic Press.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613-629.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69, 797-811.
- Steele, C. M., & Liu, T. J. (1983). Dissonance processes as self-affirmation. *Journal of Personality and Social Psychology*, 45, 5-19.
- Stone, J., Lynch, C., Sjomeling, M., & Darley, J. M. (1999). Stereotype threat effects on Black and White athletic performance. *Journal of Personality and Social Psychology*, 77, 1213-1227.
- Tesser, A., & Cornell, D. P. (1991). On the confluence of self processes. *Journal of Experimental Social Psychology*, 27, 501-526.
- Walton, G. M., & Cohen, G. L. (2003). Stereotype lift. *Journal of Experimental Social Psychology*, 39, 456-467.
- Whitson, J. A., Liljenquist, K. A., Galinsky, A. D., Magee, J. C., Gruenfeld, D. H., & Cadena, B. (2013). The blind leading: Power reduces awareness of constraints. *Journal of Experimental Social Psychology*, 49, 579-582.