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The detrimental effects of power on confidence, advice taking, and accuracy

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ABSTRACT

Incorporating input from others can enhance decision quality, yet often people do not effectively utilize advice. We propose that greater power increases the propensity to discount advice, and that a key mechanism explaining this effect is elevated confidence in one's judgment. We investigate the relationships across four studies: a field survey where working professionals rated their own power and confidence and were rated by coworkers on their level of advice taking; an advice taking task where power and confidence were self-reported; and two advice taking experiments where power was manipulated. Results consistently showed a negative relationship between power and advice taking, and evidence of mediation through confidence. The fourth study also revealed that higher power participants were less accurate in their final judgments. Power can thus exacerbate the tendency for people to overweight their own initial judgment, such that the most powerful decision makers can also be the least accurate.

Introduction

People encounter advice on a regular basis, whether it emanates from professional colleagues, close personal sources, strangers rating consumer products and services, or computer-generated recommender systems. Knowing how and when to combine input from external sources with one's own judgments has important implications for decision quality. Yet, particularly when an initial judgment has already been formed, there is a robust and consistent tendency for people to overweight their own judgment and discount the advice of others when making estimates and choices, which can be to the detriment of judgmental accuracy (Harvey & Fischer, 1997; Heath & Gonzalez, 1995; Sniezek & Buckley, 1995; Soll & Larrick, 2009). For both theoretical and practical reasons, therefore, the conditions under which people are more or less likely to incorporate advice from others into their own decisions has been a topic of interest in behavioral decision making research (e.g., Bonaccio & Dalal, 2006; Harvey & Fischer, 1997; Sniezek & Van Swol, 2001; Yaniv & Kleinberger, 2000). In this paper, we examine how *power* might influence advice taking. Understanding whether and how power affects advice taking is particularly critical. The decisions made by powerful individuals in business, government, and other leadership roles arguably have some of the most serious and broad-reaching consequences for organizations and society, and yet the very experience of power may hinder powerful individuals from taking advice, and thus from making effective decisions.

Research on factors influencing the willingness to take advice has often focused on the level of expertise of the judge (i.e., the person making the particular decision or judgment) (e.g., Harvey & Fischer, 1997; Soll & Larrick, 2009), the judge's perceptions of the advisor (e.g., Gino, Shang, & Croson, 2009), or features of the specific decision making task at hand, such as task difficulty (e.g., Gino & Moore, 2007) or the cost (Gino, 2008) and timing (e.g., Sniezek & Buckley, 1995) of advice. There is also a small amount of research that has investigated how the judge's internal psychological state can influence advice taking. For instance, Gino and Schweitzer (2008) examined how emotions unrelated to the advice context can affect advice taking. The authors found that, relative to people in a neutral emotional state, people who feel incidental gratitude are more receptive of advice because they are more trusting, but the reverse is true for people who feel incidental anger.

Our paper seeks to provide further insight into how psychological states or mindsets might influence advice taking by examining how the psychological experience of power affects a decision maker's willingness to revise his or her own factual judgments in response to input from others. Integrating research on advice taking with the literature on power, we hypothesize that greater power will be associated with less advice taking, even when the advice is freely available and can improve performance. Moreover, we propose that confidence in one's own judgment is a key mechanism for this effect. Specifically, we argue that the experience of

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power elevates confidence in the accuracy of one's judgments and decisions, which in turn results in less advice taking. In addition, we find that this reduced advice taking can lead to ultimate judgments that are less accurate.

Our investigation contributes to several literatures. We contribute to the advice taking literature by examining the potential for power, an important and pervasive social psychological factor, to impede advice taking behavior, and we identify confidence as a key mediator for this effect. In addition, we rule out two alternative mechanisms: affect and perspective taking. Our work also speaks to the power literature by demonstrating a dysfunctional effect of elevated power on outcomes that have not previously been investigated in that literature (i.e., advice taking and objective performance). Moreover, whereas prior research in both the advice taking and the power literatures has typically been conducted in the laboratory, we conducted not just experimental research, but also a multi-source field survey, which allows us to examine generalizability to real world contexts. Finally, our findings are relevant to researchers interested in judgmental confidence in that we identify the potential for power to elevate confidence and demonstrate its negative downstream consequences for judgmental accuracy.

Theoretical background

Within the advice taking literature, individuals are said to "take advice" when they modify their own initial judgment based on a recommendation or judgment from another source (for a review, see Bonaccio & Dalal, 2006). A robust finding is that people tend to not alter their judgments much based on inputs from others (Harvey & Fischer, 1997). This phenomenon of egocentric discounting of advice (Yaniv, 2004; Yaniv & Kleinberger, 2000) echoes a long tradition in social and cognitive psychology showing that people tend to persevere in their beliefs in the face of new information (Nisbett & Ross, 1980).

Belief perseverance, and more specifically advice discounting, can have a harmful effect on judgmental accuracy. For example, many recent studies of advice taking have looked at quantity estimation tasks (e.g., "How high is Niagara Falls?"), where participants' estimates of facts can be compared to the true (i.e., objectively verifiable) answer, and where advice is operationalized as another person's estimate (e.g. Gino & Schweitzer, 2008; Yaniv, 2004). In these and other advice taking situations, it is typically quite difficult to determine one's own accuracy relative to the advisor (Soll & Larrick, 2009). As such, an effective strategy for the judge is to average his or her initial estimate with the estimate from the advisor. Averaging serves to reduce error, particularly when the judge's and advisor's estimates fall on opposite sides of the true answer with sufficient frequency (Larrick & Soll, 2006). When advice is heavily discounted or ignored, however, people miss out on this fundamental benefit of averaging, and accuracy may suffer as a result (Mannes, 2009; Soll & Larrick, 2009; Yaniv, 2004). Thus, any variable that intensifies the tendency to ignore advice is likely to harm accuracy. We propose that power is one such variable.

Power has been typically defined as an individual's capacity to influence others, stemming in part from his or her control over resources, rewards, or punishments (Emerson, 1962; French & Raven, 1959; Keltner, Gruenfeld, & Anderson, 2003). A growing body of research has shown that power has strong effects on those who possess it, and as such, can be viewed as not just a structural or relational construct (Emerson, 1962), but also as an individual psychological state or mindset (Keltner et al., 2003). Once activated by conscious or non-conscious cues, the psychological experience of power can alter cognition and behavior in predictable ways (Galinsky, Gruenfeld, & Magee, 2003; Keltner et al., 2003; Smith & Trope, 2006). For instance, power has been shown to increase the use of stereotypes (Fiske, 1993; Georgesen & Harris, 1998, 2000; Goodwin, Gubin, Fiske, & Yzerbyt, 2000) and reduce competency in estimating the interests and positions of other people (Keltner & Robinson, 1997).

Power and advice taking

We propose that another important behavior that could be affected by power is advice taking. As power increases, we predict that the tendency to take advice will decrease, thereby exacerbating the natural inclination people have to discount advice from others, even when that advice could help them to perform better or make better decisions. Because power involves control over valuable resources (e.g., Emerson, 1962; Keltner et al., 2003), powerful individuals are by definition less dependent on others and more free to act independently. Thus, when making judgments and decisions, power might lead people to perceive less need for involvement from others, placing greater weight on their own initial judgment. Along these lines, Morrison and Rothman (2008) argued in a conceptual paper that elevated power explains why leaders are often unreceptive to employee input, and related empirical findings suggest that concerns about losing power can result in managers resisting decision aids or group decision making processes (See & Clemen, 2011). Moreover, individuals primed to experience greater power exhibit a reduced tendency to consider the perspective of others, such that they are less likely to adopt another individual's visual perspective, and are more likely to presume that others will evaluate a comment from the same vantage point as themselves (Galinsky, Magee, Inesi, & Gruenfeld, 2006).

Other findings that are relevant to our prediction come from Galinsky, Magee, Gruenfeld, Whitson, and Liljenquist (2008), who found that high power individuals are less affected by situational cues when engaged in creative tasks and when asked to express their attitudes. For example, participants primed with a high power mindset produced drawings that were less affected by salient examples that were provided to them, and in another study, they were more likely to express their true feelings about a tedious task rather than conforming to the positive attitudes expressed by others. These findings, particularly those related to attitude conformity, are consistent with the broad idea that power can reduce sensitivity to external information, which might include advice from others.

On the other hand, while the findings for attitude conformity are suggestive with respect to our hypothesis, there are also reasons to think that such findings will not necessarily generalize to advice taking when making factual judgments, as these are distinct phenomena with different underlying motives. In the case of attitude conformity, the information from others is subjective, as there are no "right" or "wrong" answers. In contrast, in the case of advice taking, both the advice and one's own judgment can be objectively evaluated against a true answer. This means that adjusting one's own initial judgment based on factual advice can enable one to improve objective performance, which is not the case for attitudes. Indeed, the proposed motives for taking advice often center on the desire to improve objective accuracy (e.g., Yaniv, 2004; Yaniv & Kleinberger, 2000), whereas attitude conformity is typically explained by social pressure and the desire to avoid social sanctions (Dittes & Kelley, 1956). Consistent with these distinctions, there is evidence that people exhibit different patterns of influence when encountering attitudes vs. factual judgments. Goethals and Nelson (1973), for example, showed that people are more influenced by *similar* others in the case of attitudes (likely reflecting social acceptance concerns), yet are more influenced by *dissimilar* others in the

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case of factual judgments (likely reflecting instrumental accuracy benefits from incorporating advice).

Such instrumental reasons to incorporate factual advice (i.e., the potential to improve performance accuracy) actually raise questions about whether power will indeed reduce advice taking. Powerful individuals are more likely to attend to goal-relevant information than are low power individuals (Fiske, 2010; Galinsky et al., 2003; Guinote, 2007b). Thus, as noted by Galinsky et al. (2008), the powerful may sometimes show greater sensitivity to situational cues (i.e., other people and external information) when such sensitivity advances their goals (Guinote, 2008; Overbeck & Park, 2001). Since elevated power has been associated with the ability to selectively focus on information in the environment that is most relevant to the task or situation at hand (Guinote, 2007a; Smith, Jostmann, Galinsky, & van Dijk, 2008), power might actually lead to *more,* rather than less, advice utilization.

In sum, past research on power is not fully conclusive with respect to the direction of the relationship between power and advice taking. However, we argue that although the instrumental logic for the powerful to take more advice is compelling, the weight of the theoretical and empirical work reviewed above (e.g., Galinsky et al., 2006, 2008; Keltner et al., 2003; Morrison & Rothman, 2008; See & Clemen, 2011) suggests that when making judgments and decisions powerful individuals will more often perceive less need for input from others, even though the advice could help them perform better. Based on this tendency, as well as the proposed mediating effect of confidence we discuss in the following section, we predict that power will lead individuals to place greater weight on their own initial judgments and be less likely to modify their factual judgments based on advice.

Hypothesis 1. Greater power will be associated with less advice taking.

The mediating role of confidence in judgment

To explain why power might make people less likely to revise their initial judgment in response to advice, we argue that a critical mechanism is confidence in the accuracy of one's own judgment. Previous published research has not directly examined the relationship between power and confidence in accuracy. There is, however, research on the relationship between power and more global forms of confidence. Brinol, Petty, Valle, Rucker, and Beccera (2007: 1043) found that individuals in higher power conditions reported a higher "general level of confidence in themselves," as well as higher confidence in the thoughts underlying their attitudes toward a vaccination policy. As these authors note, people might develop an association between power and self-confidence based on experiences with powerful individuals, who tend to display behaviors that convey confidence (e.g., see Cansler & Stiles, 1981; De Paulo & Friedman, 1998; Fast, Sivanathan, Mayer, & Galinsky, 2011; Fragale, 2006; Hall, Coats, & Smith LeBeau, 2005). As a result, because power and confidence can come to be associated in people's minds, when power is activated, this may also activate confidence. Building from this logic, we suggest that power may elevate confidence in the accuracy of one's own judgment.

Other evidence that power may increase confidence in one's judgment stems from research showing a positive relationship between power and self-evaluations of one's capabilities and performance (Georgesen & Harris, 1998). In addition, research in the tradition of construal level theory has documented that some types of power are associated with the use of language that conveys certainty (Magee, Milliken, & Lurie, 2010; Smith & Trope, 2006). There is also evidence that power directly increases psychological states that may be related to confidence, such as optimism and sense of control over future events (Anderson & Galinsky, 2006; Fast, Gruenfeld, Sivanathan, & Galinsky, 2009). Thus, we expect that power might also have a cognitive effect on how people evaluate the accuracy of their own judgments.

Hypothesis 2. Greater power will be associated with greater confidence in one's judgment.

As confidence in one's judgment increases, the perceived need to incorporate advice will typically decrease, as past research has linked higher confidence in one's accuracy to less advice taking (Gino & Moore, 2007; Harvey & Fischer, 1997; Soll & Larrick, 2009). It stands to reason that people should rely more on their own initial judgment (i.e., take less advice) when they are substantially more accurate than others. However, greater confidence in one's judgment does not necessarily imply greater objective accuracy. In fact, the correlation between confidence and accuracy, though positive, is often weak. This means that although highly confident individuals tend to be more accurate than average, they also tend to be *overconfident* about their absolute level of accuracy (e.g., Dawes & Mulford, 1996; Erev, Wallsten, & Budescu, 1994; Juslin, Olsson, & Bjorkman, 1997; Klayman, Soll, González-Vallejo, & Barlas, 1999). Moreover, when people feel confident in their own accuracy, they are likely to also perceive that they are more accurate relative to others (e.g., Chambers & Windschitl, 2004; Krueger & Mueller, 2002; Larrick, Burson, & Soll, 2007; Moore & Healy, 2008; Moore & Small, 2007). Thus, people's confidence in their accuracy can lead them to use too little advice from others. If power causes confidence to be artificially inflated, this would only serve to exacerbate overconfidence and advice underutilization. Taken together, we hypothesize that elevated confidence will mediate the negative relationship between power and advice taking.

Hypothesis 3. Elevated confidence mediates the effect of power on advice taking.

We tested the hypothesized relationships in four studies. Study 1 was a field survey incorporating responses from multiple sources. Working professionals provided self-ratings of their power and confidence, and a set of their co-workers provided ratings of their advice taking behavior. In contrast to the majority of the research on the effects of power, and the majority of research on advice taking, this study enabled us to investigate the relationships between power, confidence, and advice taking by employees in real workplace contexts, while also minimizing single source and self-report biases. Study 2 was an advice taking task where we measured power and examined its relationship to confidence in one's judgment and actual advice taking behavior. We also included measures of positive and negative affect in this study. Past research has suggested that affect is related to both power (Berdahl & Martorana, 2006) and advice taking (Gino & Schweitzer, 2008), so we felt it was important to test affect as an alternative or additional mechanism. Study 3 was an experiment where we manipulated power and examined its causal effects on confidence and advice taking behavior. We also tested perspective taking (i.e., the extent to which an individual tends to consider the thoughts and feelings of others) as a potential additional mechanism in this study. Perspective taking has been shown to be related to power (Galinsky et al., 2006), and failure to take the perspective of others might plausibly reduce the tendency to take advice from others separate from the effect of confidence. Finally, in Study 4 we examined not only the causal effects of power on advice taking via judgmental confidence, but also the impact of these effects on the accuracy of participants' final judgments.

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Study 1: Multi-source field survey

Method

Sample

Participants were 208 incoming business graduate students at a private southeastern university who took part in the survey before starting their graduate program. The 208 represented 98% of the eligible sample. Thirty-six percent of the participants were female, and 50% were from the United States, 26% from countries in Asia, 9% from countries in the Middle East, 7% from countries in Latin America, and 6% from countries in Europe. Participants worked in a range of organizations (median number of employees = 2000), and a variety of functional areas (accounting, engineering, finance, sales/marketing, R&D, etc.). Participants' average tenure in their current organization was 3.8 years, average number of direct reports was 7, and age ranged from 22 to 39 (mean age = 28).

Design

The measures used for the present investigation were embedded within a larger survey instrument intended to assess leadership traits, skills, and behaviors. Each participant provided ratings of his or her own power and confidence, and a group of their coworkers provided ratings of the participant's typical advice taking behavior. The surveys were conducted online and took approximately 20 min to complete. All of the survey items used a 6-point response scale, where higher numbers correspond to stronger agreement with the statement. Participants received course credit for participating in the survey.

Procedure

Participants were contacted by email approximately 6 weeks before the first term of their graduate program began, when the majority was still working full-time. Participants were asked to complete the survey as a pre-term requirement for a leadership module in their upcoming orientation. Participants were also asked to enter into the survey program the names and email addresses for 2–5 colleagues (although more could be entered if desired) from their current or most recent employment who had worked with them closely enough to rate their behaviors. Although respondents could list peers, team members, supervisors, or direct reports, we used just peers and team members as our "coworker" respondents. In other words, we excluded anyone who was designated as a supervisor or direct report. The coworkers were sent an email automatically generated by the survey software which provided a link to a voluntary survey about the focal individual. The coworkers were assured that their responses would be confidential. The average number of coworkers that rated each participant was 4.1 (SD = 2.0), with 94% of the sample (n = 196) having at least two coworker ratings.

Measures

Advice taking was the dependent variable of interest and was assessed with two items on the coworker survey. Specifically, coworkers were instructed to think about their experiences with the focal individual and rate the extent to which that individual (1) "is open to reconsidering his/her decisions based on input of coworkers" and (2) "factors in the opinions of coworkers into his/her decision making process." The two items were averaged to create a measure of coworker-reported advice taking (α = .73). We then averaged the coworkers' ratings for each target individual. Before doing so, we checked whether there was sufficient agreement between the raters to justify averaging by computing $r_{wg(j)}$ values (a measure of inter-rater reliability for the j = 2 items), using a rectangular null distribution (James, Demaree, & Wolf, 1984). The median $r_{wg(2)}$ for the 196 sets of two or more coworkers was .88, which indicates sufficient inter-rater reliability for averaging.

Power and confidence were assessed through the survey completed by the focal participants. Power was assessed with a five-item scale (α = .91) that included items related to general perceived power and extent of resource control. Specifically, the focal respondents rated their own (1) discretion over salary or bonus allocation for staff, (2) authority over the hiring or firing of staff, (3) extent of power in their organization, (4) extent of power in their business unit, and (5) influence over decisions that affect others in the organization. Confidence was measured with a three-item scale (α = .82), where the target participants rated (1) their level of confidence in their own judgment when making decisions, (2) their level of confidence in the answers they propose before receiving the input of others, and (3) the extent to which they lead with confidence.

Control variables

We included three control variables in the analysis: gender of the focal individual (1 = *female*; 0 = *male*), average amount of time that the coworkers reported working with the focal individual (1 = *less than 1 month*; 2 = *1–3 months*; 3 = *4–12 months*; 5 = *1–3 years*; 6 = *greater than 3 years*), and coworkers' perceptions of the extent to which the focal individual "is a good leader." The latter was measured with a single item (median r_{wg} = .85). We included gender and time working together because these variables were correlated with advice taking. We controlled for perceptions of being a good leader in order to factor out any general positivity bias or halo effects. We did not include any of the other demographic or background variables (tenure, race, number of direct reports, functional area, organization size) since we did not have a theoretical reason to include them and they were not correlated with advice taking. We note that including them does not change the hypothesized results.

Results

Table 1 presents the descriptive statistics and correlations for the variables included in the analysis (scale reliabilities are listed in the main diagonal for variables comprised of more than one item). The hypotheses were tested using ordinary least squares regression, and the results are shown in Table 2. The results revealed that power was negatively related to advice taking

Table 1
Means, standard deviations, and correlations for field survey, Study 1 (N = 208).

	M	SD	1	2	3	4	5	6
Advice taking	4.98	0.49	.73					
Power	3.09	1.32	−.09	.91				
Confidence	4.62	0.85	−.06	.42*	.82			
Gender (female = 1)	0.36	0.48	.19*	−.12	−.15*	–		
Good leader	5.09	0.59	.57*	.08	.20*	.03	–	
Time working together	3.69	0.79	.16*	.12	.02	−.05	.16*	–

Note: Cronbach's alpha is in the diagonal for multiple-item measures.
* p < .05, Two-tailed.

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Table 2
Regression results for field survey, Study 1 ($N = 208$).

	Advice taking						Confidence		
	Model 1			Model 2			Model 3		
	B	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Constant	2.46	.26	–	2.66	.27	–	2.72	.50	–
Gender (female = 1)	0.16	.06	0.16**	0.15	.06	0.14*	−0.21	.11	−0.12†
Good leader	0.47	.05	0.56**	0.49	.05	0.59**	0.28	.09	0.19**
Time working together	0.06	.03	0.09†	0.05	.03	0.09	−0.07	.07	−0.06
Power	−0.05	.02	−0.12*	−0.03	.02	−0.07	0.26	.04	0.40**
Confidence				−0.07	.04	−0.12*			
R^2		.37			.36			.21	

* $p \leqslant .05$, Two-tailed.
** $p \leqslant .01$, Two-tailed.
† $p \leqslant .10$, Two-tailed.

($\beta = -.12$, $SE = .02$, $p = .03$), in support of Hypothesis 1. Power was also positively related to self-reported confidence ($\beta = .40$, $SE = .04$, $p < .001$), which supports Hypothesis 2. Results further showed that women reported lower levels of confidence in their judgment than men ($\beta = -.12$, $SE = .11$, $p = .06$) and were reported by their coworkers to take significantly more advice ($\beta = .16$, $SE = .06$, $p = .005$). In addition, focal individuals who were seen as good leaders by their coworkers tended to report being more confident ($\beta = .19$, $SE = .09$, $p = .003$) and were seen by their coworkers as taking more advice ($\beta = .56$, $SE = .05$, $p < .001$).

Hypothesis 3 predicted that confidence would mediate the relationship between power and advice taking. As noted above, power was related to both advice taking and confidence. When advice taking was regressed on power and confidence together, power no longer had a significant relationship with advice taking ($\beta = -.07$, $SE = .02$, $p = .25$), but confidence remained significant ($\beta = -.12$, $SE = .04$, $p = .047$). These results, as well as a Sobel test using raw coefficients ($z = 2.72$, $p = .006$), are consistent with mediation. We also used the more sensitive and robust bootstrap estimation of the 95% confidence interval around the indirect effect of power on advice taking via confidence (Preacher & Hayes, 2008). The confidence interval (−0.039, −0.002) excludes zero, which supports mediation. The mediation results are illustrated in Fig. 1 (Panel A).

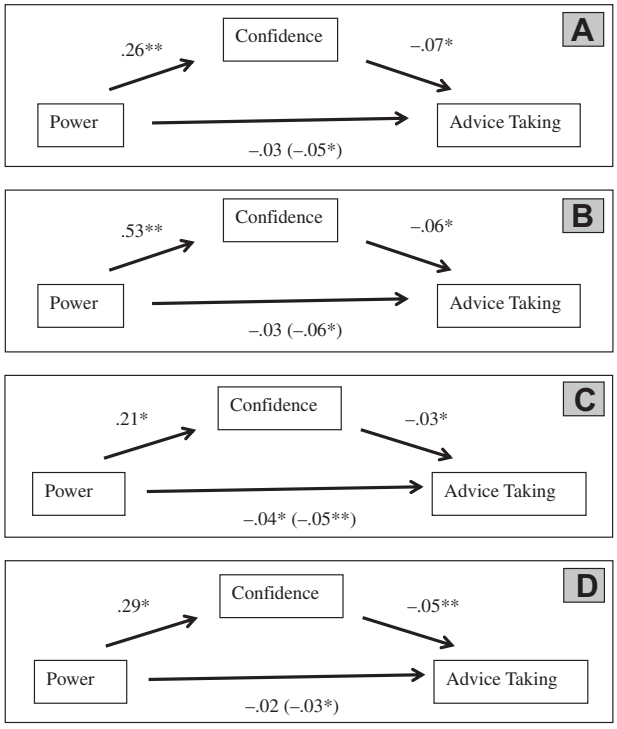

Fig. 1. The effect of power on advice taking mediated by confidence; all entries are raw (unstandardized) coefficients. The association between the mediator and the DV is represented by a coefficient from a model where the IV is also a predictor of the DV. Numbers in parentheses refer to the total effect of the independent variable on the dependent variable. Panel A: Study 1. Panel B: Study 2. Panel C: Study 3. Panel D: Study 4.

Discussion

The field survey results provide strong support for the hypotheses. Individuals who regarded themselves as having more power over resources and decisions in their organization were seen by their coworkers to engage in less advice taking. The results indicate that a reason for this was elevated confidence in one's judgment. An additional possibility is that occupying a high power role leads one to feel the need to express confidence and also the need to refrain from taking advice from others. In other words, the observed relationships could be due to internalized role expectations (i.e., the belief that powerful individuals are supposed to be confident and not seek advice and/or the belief that advice taking is a sign of weakness). It is interesting to note, however, that we found a strong positive relationship between reported advice taking and being seen as a good leader. Although individuals sometimes believe that taking advice, or other types of input from others (e.g., feedback or help), is inconsistent with effective leadership (Ashford, Blatt, & VandeWalle, 2003; Morrison & Rothman, 2008; Mueller, Lebel, & Rosette, 2011), this finding suggest that such beliefs may not always be shared by observers.

A noteworthy strength of Study 1 is that the data were collected from professionals and their actual coworkers. This bolsters the external validity of the findings, and stands in contrast to most of the prior research on power, as well as research on advice taking, which has typically been conducted in laboratory settings. An additional strength is that the ratings of advice taking came from multiple sources, and we found a high degree of agreement across these sources. Yet an important limitation is that advice taking was reported rather than explicitly observed. Thus, in the following study, we presented participants with an advice taking task that allowed us to assess the effects of self-reported power on confidence in one's judgment and actual advice taking behavior. We also assessed positive and negative affect, allowing us to test affect as an alternative or additional mechanism underlying the relationship between power and advice taking. We regarded this as important to do given past research showing relationships between power and affect (Berdahl & Martorana, 2006) and between affect and advice taking (Gino & Schweitzer, 2008).

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Study 2: Advice taking task

Method

Sample

Participants were 63 undergraduate students at a large private northeastern university. The study was conducted in the behavioral lab, and took approximately 12 min to complete. Participants received $7 for a bundle of unrelated tasks that took 20–25 min to complete in total.

Design

For the advice taking task, we used the Judge Advisor System (JAS) paradigm that has been used in previous advice taking research (e.g., Gino & Moore, 2007; Sniezek & Buckley, 1995; Sniezek & Van Swol, 2001; Soll & Larrick, 2009; Yaniv, 2004). The basic structure of a JAS study is that participants provide answers to a set of questions and are then provided with the answers of an advisor and given the opportunity to revise their initial judgments before submitting final answers. We measured participants' self-perceived power and their confidence in their initial answers. We expected that greater power would be associated with greater confidence in one's initial (pre-advice) judgments and hence less willingness to revise those initial judgments in the direction of the advisor's input.

Procedure

The study was administered on the computer. The advice taking task involved quantity estimation. Participants read on the computer screen that they would be estimating tuitions for seven US universities as reported by a recent edition of the *US News and World Report*. All participants were asked about the same mix of seven public and private universities, which appeared on the computer screen one at a time in an order that was randomized for each participant within the computer program. Participants typed in their tuition estimate, in dollars, for each school before they could proceed to the next screen and school.

Participants then encountered three items measuring their confidence in the accuracy of their initial answers. Two of these items assessed their general confidence in their judgment: "Overall, how confident do you feel in your performance" (1 = *not at all confident*, 7 = *extremely confident*) and "How accurate do you think you were in estimating the tuitions" (1 = *not at all accurate*, 7 = *extremely accurate*). The third item asked participants to quantify their confidence in their accuracy: "Consider an estimate to be 'correct' if it is within $2000 of the actual tuition. Out of the 7 total tuitions, how many do you think you got correct?" The three items appeared in randomized order.

Participants read that they would review their tuition estimates and would have the opportunity to change them if they wished. They were also told that, for each school, they would be shown the estimate provided by another student at their own university who had recently participated in the same study (hereafter referred to as the "peer advisor"). The same peer advisor answers were provided to all participants, and reflected the correct answers (i.e., the actual tuitions) rounded to the nearest hundred dollars.

Each of the seven universities then appeared, one screen at a time, in randomized order. For each school, the participant's initial estimate as well as the answer of the peer advisor appeared on the screen, and participants typed in their final answer before proceeding to the next screen and school. After submitting their final answers, participants completed an affect scale, provided demographic information, and evaluated the peer advisor. As explained below, we included these as covariates. Participants were then debriefed on the final screen of the study.

Measures

Advice taking was operationalized as the extent to which participants revised their initial answers in the direction of the advisor's estimates. Following Harvey and Fischer (1997), we measured weight on advice (WOA) as the proportional shift away from one's initial answer toward the advice: weight on advice = (*final answer* − *initial answer*)/(*advisor's answer* − *initial answer*). Thus, the weight is a ratio where higher numbers reflect greater advice taking. Each participant had seven of these weights, which were averaged to create an overall weight on advice measure. In the few cases where the final estimate did not fall between the initial estimate and the advisor's estimate, such that WOA was less than 0 or greater than 1, we followed the common practice of truncating weights to the nearer of 0 or 1 before averaging (e.g., Gino & Moore, 2007; Soll & Larrick, 2009).

Power was measured using four positively-worded items from the personal sense of power scale used in past research (e.g., Anderson & Galinsky, 2006; Galinsky et al., 2006), which is intended to measure dispositional tendencies in self-perceived power. Participants were asked to think generally about their degree of power across their relationships with others and indicate their agreement with the following statements (1 = *Disagree strongly*, 7 = *Agree strongly*): "I think I have a great deal of power;" "I can get others to do what I want;" "I can get people to listen to what I say;" and "If I want to, I get to make the decisions." The four items formed a reliable scale (α = .87) and were averaged to create one measure of perceived power. The confidence measure was a scale constructed by averaging the three items, discussed above, that measured participants' confidence in their initial (pre-advice) answers (α = .89).

Covariates

Because this study was correlational and did not entail random assignment to any treatment, it was important to control for demographic factors that might relate to power, confidence, or advice taking thereby biasing our results. Thus, we included the following as covariates: gender (1 = female, 0 = male), age, whether the participant was a native English speaker (1 = non-native, 0 = native). We also controlled for participants' perceptions of the peer advisor, since prior research suggests that the level of perceived competence or expertise of the advisor can affect advice taking (e.g., Sniezek & Van Swol, 2001; Soll & Larrick, 2009). We measured these perceptions with two questions: "In terms of the other student whose answers were provided to you, how accurate do you think this other student was in estimating the tuitions" (1 = *not at all accurate*, 7 = *extremely accurate*); and "Out of the 7 total tuitions, how many do you think the other student got 'correct' (within $2000 of the actual tuition)." The two items formed a reliable scale and were averaged to create an overall measure of perceptions of the advisor (α = .70). A pre-advice accuracy measure was also computed for each participant and used as a covariate (Soll & Larrick, 2009). This measure reflected the mean absolute deviation (MAD) between the respondent's initial answers and the true answers, thus lower numbers correspond to greater accuracy.

Finally, we included positive and negative affect as covariates because one of our objectives for the study was to see if we could rule out affect as an alternative or additional mechanism for the relationship between power and advice taking. We used a 10-item scale adapted from Barsade (2002), which asked participants to indicate how much, at the present moment, they were feeling each of the following adjectives (1 = *not at all*, 9 = *extremely*): happy, pleased, optimistic, proud, sad, lethargic, depressed, anxious, frustrated, embarrassed. A positive affect measure was created by averaging the positively valenced items (α = .89), and a negative

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Table 3
Means, standard deviations, and correlations for advice taking task, Study 2 ($N = 63$).

	M	*SD*	1	2	3	4	5	6	7	8	9	10
Advice taking	0.45	0.23	–									
Gender (female = 1)	0.36	0.94	.34*	–								
Age	20.03	1.37	−.04	−.06	–							
Native speaker (no = 1)	0.33	0.48	.16	.05	−.22	–						
Pre-advice accuracy	9142	4479	.12	.31*	−.15	.36*	–					
Perceptions of advisor	4.65	0.85	.26*	−.02	−.00	.05	−.15	.70				
Positive affect	5.45	1.63	−.03	−.09	.02	.08	−.18	.01	.89			
Negative affect	2.44	1.24	−.13	.17	−.10	−.07	−.01	−.08	−.32*	.77		
Power	4.55	1.17	−.33*	−.19	.03	−.05	−.04	.19	−.03	.05	.87	
Confidence	3.88	1.36	−.45*	−.22	−.01	−.10	−.11	−.09	.16	−.19	.42*	.89

Note: Cronbach's alpha is in the diagonal for multiple-item measures.
* $p < .05$, Two-tailed.

affect measure was created by averaging the negatively valenced items ($\alpha = .77$).

Results

Table 3 lists the descriptive statistics for the variables included in the analysis. The hypotheses were tested using ordinary least squares regression with gender, age, native English speaker, pre-advice accuracy (MAD), perceptions of the advisor, and affect included as controls in all analyses (we note that the hypothesized effects remain supported whether or not any control variables are included in the analysis). As shown in Table 4, the control variables significantly related to advice taking were perceptions of the peer advisor ($\beta = .31$, $SE = .03$, $p = .035$) and gender. Consistent with Study 1, women took significantly more advice than men ($\beta = .29$, $SE = .03$, $p = .03$). Positive and negative affect were not significantly related to advice taking or confidence, and additional internal analyses also revealed that none of the individual affect items underlying the scales were significantly correlated with advice taking. In support of Hypothesis 1, power was negatively related to advice taking ($\beta = -.32$, $SE = .02$, $p = .009$). Power was also positively related to pre-advice confidence ($\beta = .46$, $SE = .14$, $p < .001$), which supports Hypothesis 2.

Hypothesis 3 predicted that confidence would mediate the relationship between power and advice taking. We have already established that power is related to both advice taking and confidence. When advice taking was regressed on power and confidence together, power no longer had a significant relationship with advice taking ($\beta = -.17$, $SE = .03$, $p = .19$), but confidence remained significant ($\beta = -.32$, $SE = .02$, $p = .014$). These results are consistent with mediation (see Panel B of Fig. 1). We also jointly estimated the effects of confidence and affect as potential mediators of the effects of power on advice taking using the bootstrap method of testing mediation (Preacher & Hayes, 2008), which allows for multiple mediators and covariates, neither of which can be accommodated by the Sobel test. The bootstrap estimation of the 95% confidence interval around the indirect effect of power on advice taking via confidence (−0.065, −0.011) supports mediation. Given that there was no significant relationship between affect and advice taking, it is not surprising that the confidence intervals around the indirect effects of positive affect (−0.009, 0.011) and negative affect (−0.027, 0.004) do not support mediation.

Discussion

Results of the advice taking task provide further support for the hypotheses using a different operationalization of power and a behavioral dependent variable. Even after controlling for initial accuracy and perceptions of the peer advisor, individuals who rated themselves as having more power in their relationships with others took less advice in a quantity estimation task. Results suggest that this effect occurred because greater power was associated with greater confidence in one's initial answers, which in turn reduced willingness to revise those initial judgments in the direction of an advisor's input. Positive and negative affect were not significantly related to advice taking and were not found to be significant mediators, allowing us to rule out affect as an alternative mechanism for the observed effects.

Although Study 2 adds behavioral evidence in support of our hypotheses, it does have limitations. Most notably, the study

Table 4
Regression results for advice taking task, Study 2 ($N = 63$).

	Advice taking						Confidence		
	Model 1			Model 2			Model 3		
	B	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Constant	0.42	.47	–	0.69	.46	–	4.77	2.82	–
Gender (female = 1)	0.07	.03	0.29*	0.07	.03	0.27*	−0.11	.18	−0.08
Age	0.00	.02	0.00	0.00	.02	−0.03	−0.07	.12	−0.07
Native speaker (no = 1)	0.05	.06	0.10	0.04	.06	0.07	−0.23	.36	0.08
Pre-advice accuracy	0.00	.00	0.02	0.00	.00	0.00	0.00	.00	−0.07
Perceptions of advisor	0.09	.03	0.31*	0.07	.03	0.25*	−0.32	.19	−0.20†
Positive affect	−0.01	.02	−0.07	0.00	.02	−0.03	0.09	.10	0.10
Negative affect	−0.03	.02	−0.15	−0.04	.02	−0.21†	−0.21	.13	−0.19
Power	−0.06	.02	−0.32**	−0.03	.03	−0.17	0.53	.14	0.46**
Confidence				−0.06	.02	−0.32*			
R^2		.32			.39			.30	

* $p \leqslant .05$, Two-tailed.
** $p \leqslant .01$, Two-tailed.
† $p \leqslant .10$, Two-tailed.

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measured rather than manipulated power, preventing us from drawing definitive conclusions about causality. We therefore conducted a third study where we used the same basic advice taking paradigm but experimentally manipulated power in order to assess its causal effects on both self-reported confidence and on actual advice taking behavior. In addition, we examined perspective taking as another potential mediating mechanism. Power has been found to reduce perspective taking in past research (Galinsky et al., 2006), and less consideration of others' perspectives might also reflect a tendency to ignore input from others. Thus, we regarded it as important to demonstrate that confidence operates as a mediator above and beyond any effects of perspective taking.

Study 3: Experiment

Method

Sample

Participants were 254 adults who were recruited through a national panel to participate in an online research study that took approximately 12 min to complete. Their ages ranged from 18 to 65, with an average age of 26.5, and 61% were female.

Design

The study used a between-participants design, where participants were randomly assigned to one of three conditions: high power ($N = 84$), low power ($N = 83$), or control ($N = 87$). The experiment combined an established approach to priming power with the same basic JAS study paradigm as was used in Study 2. Although the accuracy of participants' pre-advice judgments should not differ across conditions, we expected that high power participants would have higher confidence in their pre-advice judgments relative to low power participants, which would reduce their willingness to revise those judgments in the direction of the advisor's input.

Procedure

The entire study was administered via computer. The overall structure of the study closely mirrored Study 2, but with a different quantity estimation stimulus and the addition of a power manipulation. The quantity estimation task involved viewing photos of three different jars filled with coins (a mixture of pennies, nickels, dimes, and quarters) and estimating the monetary value contained in each of the three jars. Participants viewed each photo, one at a time, and typed in their estimate.

After completing the initial estimates, power was manipulated using a writing induction prime adapted from Galinsky et al. (2003). Participants read that this portion of the study was about memory and recall of different types of events they had experienced. Those in the high power condition read instructions to recall and describe in detail (by typing at least 4–5 sentences on the computer) an experience in which they had power, which was further explained as having influence over others or a situation, being in a position to evaluate others, or having control over a valued or desired resource. Participants in the low power condition were asked to recall and describe in detail (by typing at least 4–5 sentences on the computer) an experience in which they did not have power, which was explained as lacking influence over others or a situation, being a position where they were being evaluated by others, or lacking control over a valued or desired resource. Participants in the control condition were asked to recall and describe in detail all of their meals in the past 72 h. All participants were told that the computer would prompt them when it was time to stop recalling and writing about their experience. The computer program was timed to prompt them to finish after 2 min, and the total time (in seconds) that participants spent working on the essay was recorded for use as a control variable.

After the power manipulation, participants rated their level of confidence in their initial answers, via two items: "Overall, how confident do you feel in your performance?" (1 = *not at all confident*, 7 = *extremely confident*) and "How accurately do you think you estimated the dollar values of the coins in the containers?" (1 = *not at all accurate*, 7 = *extremely accurate*). As in Study 2, participants were then given an opportunity to revise their answers. As they went through each of their initial monetary estimates, one at a time, they were also shown the answer provided by a peer advisor and asked to submit their final answer. The same set of peer advisor answers was provided to all participants and was comprised of the correct answers rounded to the nearest dollar. After submitting their final answers, participants completed a power manipulation check, a perspective-taking scale, an assessment of the peer advisor, and a set of demographic questions.

Measures

Advice taking was operationalized in the same way as in Study 2, where an overall weight on advice (WOA) measure was computed for each participant. Confidence was measured by averaging the two items measuring participants' sense of their own accuracy and confidence in their initial answers ($\alpha = .89$).

The power manipulation was checked with a measure similar to ones used in past research (e.g., Lammers, Galinsky, Gordijn, & Otten, 2008). Participants in the power conditions were asked to think back to the essay they had written earlier and rate (using a 9-point scale) the extent to which the situation had made them feel each the following: in-control, powerful, independent, weak, dominant, in-charge, dependent, and powerless.

Covariates

In order to be consistent with Study 2, we controlled for gender (1 = *female*, 0 = *male*), age, whether English was one's native language (1 = *non-native*, 0 = *native*), pre-advice accuracy (MAD), and perceptions of the peer advisor. Perceptions of the peer advisor were assessed with a single item: "In terms of the other student whose answers were provided to you, how accurate do you think their dollar estimates were?" (1 = *not at all accurate*, 7 = *extremely accurate*). Since we were running the study online and the power manipulation was completely self-administered, we also controlled for time (in logged seconds) spent on the essay to capture variation in the amount of time participants spent thinking and writing about power. Perspective taking was measured with a six-item scale adapted from Davis (1983), which is a widely used method for assessing whether one takes the psychological viewpoint of others. Participants indicated the extent to which the six questions accurately described how they felt on a 7-point scale, such as whether they found it "difficult to see things from the 'other person's' point of view" (reverse-coded). Higher ratings on this scale reflect greater perspective taking. As explained earlier, we wanted to see whether perspective taking could be ruled out as an alternative mechanism.

Results

Manipulation check

To assess whether the power manipulation was successful, a scale was created using the ratings participants gave on the eight adjectives describing how their essay made them feel. Three of the items (weak, dependent, and powerless) were reverse-coded, and then the responses were averaged to create a scale where higher ratings indicated greater sense of power ($\alpha = .90$). As expected, participants in the high power condition rated significantly higher on this scale ($M = 6.9$) than those in the low power

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Table 5
Mean confidence and advice taking, Study 3 ($N = 254$).

	Advice taking (WOA)	Pre-advice confidence ($\alpha = .89$)
Low power	$.277_a$	3.90_a
Control	$.264_a$	3.96_a
High power	$.188_b$	4.32_b

Note: Table entries are means adjusted for covariates. Means within a column not sharing the same subscript are significantly different from one another ($p < .05$).

condition ($M = 3.5$), $t(165) = 14.7$, $p < .001$, $\eta^2 = .49$. No significant differences were found between the power conditions for the time participants spent on the essay ($p = .98$), perceptions of the peer advisor ($p = .38$), or the accuracy (MAD) of the participants' pre-advice judgments ($p = .45$).

Analysis

We coded the power factor as −1 for the low power condition, 1 for the high power condition, and 0 for the control condition and used linear regression to test our hypotheses.[1] We regressed advice taking and confidence on power with the covariates noted above (age, gender, whether the participant was a native English speaker, pre-advice accuracy, perceptions of the peer advisor, time spent on the power essay, and perspective-taking).[2] Perceptions of the peer advisor was the only control variable that significantly affected advice taking ($\beta = .41$, $SE = .01$, $p < .001$). Perspective taking was not significantly related to advice taking ($\beta = .07$, $SE = .01$, $p = .242$) or confidence ($\beta = .06$, $SE = .08$, $p = .344$).

In support of Hypothesis 1, there was a significant main effect of power on advice taking ($\beta = -.16$, $SE = .02$, $p = .005$). Table 5 displays the mean levels of power and confidence for each condition, adjusted for the same covariates used in the regressions. Participants in the higher power condition place significantly less weight on advice ($M = .19$) than those in the low power condition ($M = .28$), $F(1, 158) = 8.0$, $p = .005$, $\eta_p^2 = .05$. The control group was in the middle of the other groups in terms of weight on advice ($M = .26$) but only differed statistically from the high power group, $F(1, 162) = 6.4$, $p = .012$, $\eta_p^2 = .04$. In support of Hypothesis 2, there was a significant and positive main effect of power on pre-advice confidence ($\beta = .14$, $SE = .09$, $p = .021$). Participants in the high power condition reported significantly higher confidence in their initial judgment ($M = 4.32$) than those in the low power condition ($M = 3.90$), $F(1, 158) = 5.5$, $p = .020$, $\eta_p^2 = .03$, even though, as noted above, there were no actual objective differences in pre-advice accuracy ($p = .45$). The control group gave confidence ratings that were in the middle of the other two groups ($M = 3.96$), but here too they differed statistically only from the high power condition, $F(1, 162) = 3.98$, $p = .048$, $\eta_p^2 = .02$).

Hypothesis 3 stated that confidence would mediate the relationship between power and advice taking. We established above that power significantly increased confidence and significantly decreased advice taking. When advice taking was regressed on power and confidence together, confidence was a significant predictor ($\beta = -.18$, $SE = .01$, $p = .003$), and the effect of power was diminished ($\beta = -.14$, $SE = .02$, $p = .018$). Panel C of Fig. 1 displays this mediation pattern using raw (unstandardized) coefficients. The bootstrap estimation of the 95% confidence interval around the indirect effect of power on advice taking via confidence supports mediation (−0.017, −0.001; Preacher & Hayes, 2008). Although there was no significant relationship between perspective taking and advice taking, as a conservative test we also estimated perspective taking as a second mediator in our model, but the confidence interval (−0.006, 0.002) did not support mediation.

Discussion

The findings from this experiment provide causal evidence that power elevates confidence in the accuracy of one's judgment, which in turn reduces advice taking. This pattern was found despite controlling for actual pre-advice accuracy, as well as perceptions of the peer advisor's accuracy. We also found that the effect of power on advice taking was not explained by perspective taking, allowing us to rule out another alternative mediating mechanism. It is also worth noting that the means for the three power conditions suggested that the effects in this study were primarily driven by the high power participants having inflated confidence and taking too little advice, rather than the low power participants having reduced confidence and taking more advice. The high power condition reported significantly greater mean levels of confidence and advice taking relative to both the low power condition and the control group, whereas the means did not differ significantly between the latter two conditions.

Given the consistent effects of power on confidence and advice taking in the three studies presented thus far, an open question is what the ultimate impact might be on performance. By using an advisor who was always accurate in Studies 2 and 3, we are unable to assess the effects of power on ultimate judgmental accuracy, since taking more advice in both studies would, by design, result in greater accuracy. Thus, in the final study we use real advice taken from randomly selected prior participants who naturally varied in accuracy. This allowed us to examine whether, after having the opportunity to take advice, high and low power individuals differed in terms of the final accuracy of their judgments.

Study 4: Experiment with analysis of judgmental accuracy

Method

Sample

Participants were 126 undergraduate students enrolled in an introductory management course at a large private northeastern university. The experiment was conducted in the behavioral lab and took approximately 12 min to complete. Participants received course credit for a bundle of unrelated tasks that took a total of 1 h to complete.

Design

The study used a between-participants design, where participants were randomly assigned to one of two conditions: high power ($N = 58$) or low power ($N = 68$).[3] The experiment followed the same basic structure as Study 3 with a few exceptions that are noted below.

[1] Coding the power factor as −1, 0, 1 (low, control, and high, respectively) in a regression assumes that the variable falls along the power dimension in a linear fashion. As a direct test of linearity, a second orthogonal nonlinear term coded −1, 2, −1 (low, control, and high, respectively) was added to the different regression models to test whether it accounted for additional variance beyond the original linear factor. The nonlinear contrast had no significant effect when included at any step of the analysis (*ps* > .25), did not result in any additional explained variance, and did not change the hypothesized pattern of results. Thus, the linearity assumption appears supported.

[2] We also ran a simpler model, which only included the following controls: Perceptions of the peer advisor and the perspective taking alternative mediator. The hypothesized pattern of results was essentially the same.

[3] In addition, a random subset of participants ($n = 66$) encountered a screen at the beginning of the study that offered entry into a drawing for a $50 gift card for the top ten most accurate respondents. We did this so that we could control for the presence of an incentive, which has been shown to affect performance in some experimental research (for a review, see Camerer & Hogarth, 1999). We tried controlling for the incentive in all of the analyses, but it had no significant direct or interactive effects and did not materially change any of the other results. Thus, we excluded it from the analyses reported here.

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Procedure

The experiment was administered on the computer, with the exception of the power manipulation. The power manipulation involved the same basic writing induction used in Study 3, but the manipulation was administered using paper and pencil instead of having participants type their essays on the computer. Participants were instructed to keep recalling and writing on their paper until the computer prompted them to stop by beeping. The computer program was timed to prompt them to stop after 5 min, and once the participant clicked on the screen to indicate that they were done writing and ready to move on, the total time (in seconds) that participants spent writing the essay was recorded within the program.

The advice taking task involved the same stimuli and procedure as in Study 2, where participants estimated tuitions for seven US universities. The three confidence items and two items assessing perceptions of the peer advisor were identical to those used in Study 2. As participants submitted their final answers, they were shown both their initial answer and the answer provided by the peer advisor, as with the prior studies. However, an important change in the present study is that the answers from the peer advisor were randomly selected from an external file comprised of answers from pre-test participants (students at the same university). Thus, the advice was naturalistic and varied in quality (unlike in the prior two studies, where it was always the correct answer).

After submitting their final answers, participants again answered the same three confidence items, this time focused on their confidence in their final (post-advice) answers. Participants then completed the same power manipulation check that was used in Study 3, two items assessing their perceptions of the peer advisor, and a set of demographic questions.

Measures

Advice taking was operationalized in the same way as in Studies 2 and 3, where an overall weight on advice (WOA) was computed for each participant. The focal confidence measure (i.e., pre-advice confidence) was constructed by averaging the three items measuring participants' confidence in their initial answers ($\alpha = .89$). A second confidence measure was constructed by averaging the three items measuring participants' confidence in their final (i.e., after advice and revision) answers ($\alpha = .90$). In addition, two objective accuracy measures were computed. As with Studies 2 and 3, pre-advice accuracy was assessed for use as a covariate. This measure reflected the mean absolute deviation (MAD) between the respondent's initial answers and the true answers. An overall final accuracy measure was also computed for each participant as the mean absolute deviation (MAD) between their final answers and the true answers. For both accuracy measures, lower numbers correspond to greater accuracy.

Covariates

As with Study 3, we include as covariates gender, age, whether English was one's native language, pre-advice accuracy, perceptions of the peer advisor, and essay time coding. Perceptions of the advisor were assessed with the two-item measure used in Study 2 ($\alpha = .75$). In addition, because we used real advice in this study, we followed past practice (Yaniv, 2004) and controlled for the average distance between the advisor's answers and the participant's initial answers.

Results

Manipulation check

The eight-item scale asking participants to describe how their essay made them feel formed a reliable scale ($\alpha = .93$), where higher ratings indicated a greater sense of power. As expected, participants in the high power condition rated significantly higher on this scale ($M = 7.21$) than those in the low power condition ($M = 2.88$), $F(1, 124) = 527.1$, $p < .001$, $\eta^2 = .81$. No significant differences were found between the power conditions for the time participants spent on the essay ($p = .43$), perceptions of the peer advisor ($p = .82$), the accuracy (MAD) of the participants' initial (pre-advice) judgments ($p = .49$), or the accuracy (MAD) of the randomly assigned peer advisor ($p = .60$).

Table 6
Mean confidence and advice taking, Study 4 ($N = 126$).

	Advice taking (WOA)	Pre-advice confidence ($\alpha = .89$)
Low power	$.247_a$	3.18_a
High power	$.187_b$	3.78_b

Note: Table entries are means adjusted for covariates. Means within a column not sharing the same subscript are significantly different from one another ($p < .05$).

Analysis

We coded the power factor as −1 for the low power condition and 1 for the high power condition and used linear regression to test our hypotheses. We regressed advice taking and confidence on power using the covariates indicated above.[4] Similar to the prior two studies, perception of the peer advisor was the only control variable that significantly affected advice taking ($\beta = .24$, $SE = .01$, $p = .019$).

In support of Hypothesis 1, there was a significant and negative main effect of power on advice taking ($\beta = -.21$, $SE = .01$, $p = .037$). Table 6 displays the mean levels of power and confidence for each condition adjusted for the covariates used in the regression. Participants in the higher power condition placed significantly less weight on advice ($M = .19$) than those in the low power condition ($M = .25$). In addition, there was a significant and positive main effect of power on pre-advice confidence ($\beta = .24$, $SE = .12$, $p = .013$), which supports Hypothesis 2. Participants in the high power condition reported significantly higher confidence in their initial judgment ($M = 3.78$) than those in the low power condition ($M = 3.18$), even though, as noted above, there were no actual objective differences in pre-advice accuracy ($p = .49$).

Hypothesis 3 stated that confidence would mediate the relationship between power and advice taking. We already established above that power significantly increased confidence and significantly decreased advice taking. When advice taking was regressed on power and confidence together, power was no longer a significant predictor of advice taking ($\beta = -.11$, $SE = .01$, $p = .238$), but confidence remained significant ($\beta = -.41$, $SE = .01$, $p < .001$). This pattern, as well as the Sobel test statistic ($z = 2.15$, $p = .031$), is consistent with mediation (also see Panel D of Fig. 1). More importantly, the bootstrap estimation of the 95% confidence interval around the indirect effect of power on advice taking via confidence supports mediation (−0.029, −0.004; Preacher & Hayes, 2008).

Supplemental analysis of judgmental accuracy and post-revision confidence

An open question is whether the effects of power on confidence and advice taking have implications for the accuracy of participants' final judgments or their confidence in those final judgments. As noted earlier, pre-advice MAD scores (mean absolute deviation from true answers) did not differ significantly between power conditions. However, after the opportunity to take advice, the higher power

[4] We also ran a simpler model, which only included the following controls: native English speaker, perception of the peer advisor, essay time coding, and the average distance between the advisor and participant responses (based on past research using real advice, e.g., Yaniv, 2004). The hypothesized pattern of results was essentially the same.

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participants had higher MAD scores (M = \$10,015) than the lower power participants (M = \$8748), $F(1, 124) = 2.99$, $p = .086$, $\eta^2 = .02$, which indicated lower final accuracy for the high power participants. To evaluate how well participants used advice, we computed the difference between the MAD score they actually achieved with their final estimates and the MAD score they would have achieved if they had always averaged their estimate with the advisor's (i.e., WOA of .5), which is a common benchmark for defining the potential gains from combining opinions (Gigone & Hastie, 1997; Soll & Larrick, 2009). The final MAD scores of lower power participants came significantly closer to what they would have achieved through averaging ($M_{lowpower} - M_{averaging}$ = \$8748 − \$8250 = \$498) than did the scores of higher power participants ($M_{highpower} - M_{averaging}$ = \$10,015 − \$8473 = \$1542), $F(1, 124) = 6.35$, $p = .013$, $\eta^2 = 0.45$. In other words, higher power participants took less advice, were less accurate in the end, and did not come as close to achieving the benefits of averaging as did the low power participants.

To investigate the effects on confidence as a function of having the opportunity to see advice and revise one's initial answers, we ran a 2 (high vs. low power) × 2 (before vs. after advice) repeated measures ANOVA with power as a between-participants factor and timing (before or after advice) as the within-subjects factor. The dependent variable was the three-item confidence measure discussed earlier. There was a main effect of the power manipulation, as well as a main effect of timing, but no significant interaction. Regardless of the time when confidence was assessed, participants in the high power condition had greater confidence in their judgment (M = 3.93) than those in the low power condition (M = 3.42), $F(1, 122) = 4.71$, $p = .032$, $\eta_p^2 = .04$. Earlier we reported initial (pre-revision) confidence differences as part of our focal analysis. Final (post-revision) mean level of confidence was 4.12 for high power participants and 3.64 for low power participants, $F(1, 122) = 3.80$, $p = .054$, $\eta_p^2 = .03$. In addition, all participants (collapsed across power conditions) had greater confidence in their judgment after the opportunity to view and take advice (M = 3.88) relative to before advice (M = 3.47), $F(1, 122) = 31.23$, $p < .001$, $\eta_p^2 = .21$.

We also assessed overestimation, which was a variable constructed by taking the actual number of final answers out of seven that participants got correct (within \$2000) subtracted from the number that they estimated they got correct. There was a main effect of the power manipulation on overestimation and no significant interaction with timing (before vs. after advice). Regardless of when their estimations were made, high power participants (M = 2.84) overestimated the number they got correct more so than low power participants did (M = 2.14), $F(1, 122) = 5.18$, $p = .025$, $\eta_p^2 = .04$. Overestimation for initial answers was 2.63 for high power participants and 1.80 for low power participants, $F(1, 122) = 6.36$, $p = .013$, $\eta_p^2 = .05$. In terms of the final answers, overestimation was 3.06 for high power participants and 2.48 for low power participants, $F(1, 122) = 2.97$, $p = .087$, $\eta_p^2 = .02$.

Discussion

The findings from this experiment provide additional causal evidence that greater power reduces advice taking, and that this effect is mediated by elevated confidence in the accuracy of one's judgment. Results also demonstrate that, although higher power participants had greater confidence in their final judgments, they had lower final overall accuracy relative to lower power participants.

General discussion

We investigated the effects of power on confidence in judgmental accuracy and willingness to take advice. In a field survey (Study 1), individuals who rated themselves as having more power over resources and decisions in their organization were seen by their coworkers as engaging in less advice taking, and the mediating mechanism for this relationship appeared to be elevated confidence. In an advice taking behavioral task (Study 2), participants with greater self-perceived power also had greater confidence in their judgment and in turn exhibited less willingness to revise their answers in the direction of an advisor. An experiment using the same advice taking paradigm (Study 3) provided causal evidence that priming a high power mindset increased confidence in one's initial answers, which resulted in less subsequent advice taking. The results suggest that this effect was driven by elevated power, since participants in the control and low power conditions were similar in their confidence and advice taking behavior. Study 4 provided additional causal evidence of our hypothesized effects, and also revealed that, despite having higher confidence, higher power participants had significantly less accurate final judgments than lower power participants. We also found that the effect of power on advice taking was not explained by affect (Study 2) or perspective taking (Study 3).

The findings from these four studies contribute to several research literatures. Most importantly, our results speak to researchers interested in factors that can influence advice taking. We demonstrate that the psychological experience of power elevates confidence and exacerbates the already strong tendency for individuals to overweight their own initial judgments and insufficiently incorporate input of others. Research on the factors that shape advice taking has tended to focus on features of the specific decision making task at hand, and has only recently begun to explore the potential effects of psychological states or mindsets (e.g., Gino & Schweitzer, 2008). Thus, our findings help to advance recent attempts to look more thoroughly at the relationship between advice taking and psychological states triggered by the social environment.

Our findings also contribute to the literature on the psychology of power. Past work has shown both positive effects of power, such as greater creativity, less attitude conformity, and greater cognitive focus (e.g., Galinsky et al., 2008; Guinote, 2007a, 2007b; Smith et al., 2008), and negative effects of power, such as increased stereotyping, reduced perspective taking, and increased risk-taking (e.g., Anderson & Galinsky, 2006; Galinsky et al., 2006; Goodwin et al., 2000). Our findings add to the latter body of work, by highlighting that power can lead people to be less open to factual advice, even when that advice can help achieve accuracy objectives and improve performance.

Our investigation is also relevant to researchers interested in the antecedents of judgmental confidence and accuracy. Study 4 specifically demonstrated that power can have negative consequences for accuracy. Yet despite this evidence of inferior performance for those primed with high power, the high power participants were the ones who were more confident in all four studies. Past research has shown that some factors, such as amount of information, affect confidence more than they affect accuracy (Oskamp, 1965; Tsai, Klayman, & Hastie, 2010), whereas other factors, such as question difficulty, affect accuracy more than confidence (Brenner, 2003; Larrick et al., 2007; Lichtenstein & Fischhoff, 1977). There is also research suggesting that certain factors can simultaneously increase confidence yet reduce accuracy (e.g., Yaniv, Choshen-Hillel, & Milyavsky, 2009). Our findings indicate that power is one such factor. That is, even when there are no objective differences in initial accuracy for high and low power participants, having high power leads people to be more confident in their accuracy, and to thus take less advice. As a result, when presented with input from others, those with greater power are likely to improve less (in terms of ultimate accuracy) than those lacking power.

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Another finding from Study 4 that could be of interest to researchers studying confidence or advice taking is the significant increase in confidence *after* people had the opportunity to see advice and revise their initial answers. Not a great deal of research has examined post-revision confidence (for an exception, see Yaniv et al., 2009). Although we cannot fully tease apart the reasons why all participants reported higher confidence after the opportunity to take advice, we speculate that the reasons may be different for the high and low power groups. Low power individuals, who had lower pre-advice confidence and hence took more advice, might have felt more confident in the end as a result of having taken advice. High power individuals, on the other hand, had higher pre-advice confidence and took less advice, and thus their increase in overall confidence might stem from having stood firm in their initial judgments (e.g., Heath & Gonzalez, 1995).

A noteworthy strength of our work is that it combines experimental and field data. Most work on advice taking, as well as much of the social psychological research on the effects of power, has been conducted in laboratory settings. Although laboratory settings allow for strong experimental control and internal validity, they raise questions about external validity and generalizability. Consistent with the existing literature, we conducted controlled experiments, which enabled us to demonstrate clear causal relationships. Yet we also conducted a field survey using peer-reports of actual workplace behaviors. We found very consistent effects across methodologies and measures, which suggests that our results are generalizable to organizational contexts where people are making judgments of consequence. In addition, the fact that we had data from not just the focal participants, but also from a set of their coworkers, helped us avoid the limitations of relying solely on self-reports.

Our work has relevance not only for theory, but also for practice. Because the decisions made by powerful individuals usually affect others and can therefore have far-reaching consequences, our findings could have troubling organizational and societal implications. It is possible as well that power could negatively influence a variety of behaviors that are similar to advice taking, such as help seeking (Lee, 1997) or feedback seeking (Ashford et al., 2003), and could have a range of detrimental effects on learning and performance. Yet by the same token, the influence of power on confidence suggests a route by which the detrimental effects of power may be attenuated. More specifically, by directly addressing the inflated confidence levels of powerful individuals, organizations may be able to help people with power take (and/or seek) advice when it is valuable to do so. Further research could fruitfully examine how power relates to different manifestations of confidence or overconfidence, as well as the conditions under which the relationship might be moderated (Fast et al., 2011).

There are a number of new questions that arise based on the findings of the present investigation, and thus various ways in which our work could be extended by future research. For instance, it would be interesting to examine how the relationships between power, confidence, and advice taking play out for categorical (i.e., yes or no) answers, or other discrete choices, rather than quantity estimation. It might also be interesting to examine what happens when the judge and advisor differ in status or power. In addition, although we found consistent evidence of confidence as a mediator in all four studies, in Study 3 the relationship between power and advice taking was still significant when confidence was included as a mediator. This raises the possibility for additional mediators to be considered in future research. We tested two additional mechanisms in this paper, perspective taking and affect, yet neither was shown to play a mediating role. There might, however, be other factors that could contribute to high power people taking less advice, and we would encourage researchers to try to identify some of these empirically. It might be interesting as well for future research to consider whether certain types of specific emotions might affect advice taking through confidence.

Future work should also address conditions that might moderate the negative effect of power on advice taking. For example, whether the advice comes before or after the judge forms an initial judgment could make a difference (Sniezek & Buckley, 1995). If the advice comes first, participants will not have had a chance to develop their own judgments and feel confident about them, thus high and low power individuals might make decisions that are similarly close to the advice. Moreover, dispositional variables could moderate the relationship between power and advice taking. Indeed, whether power leads to socially sensitive or insensitive behavior has been shown to depend on many factors (Chen, Lee-Chai, & Bargh, 2001; Howard, Gardner, & Thompson, 2007; Mast, Jonas, & Hall, 2009; Overbeck & Park, 2001). For instance, Howard et al. (2007) found that interdependent self-construal moderated the effects of power on dispute resolution. At least in the case of dyadic conflict, these authors found that powerful individuals holding an interdependent self-construal were more generous in resolving disputes with opponents. Perhaps interdependent self-construal, or other individual differences related to social consideration, could also lead high power individuals to be more sensitive to social cues and thus weight the advice of others more heavily when formulating judgments. Of course, there could also be moderators that inflate, rather than lessen, the negative effect of power on advice discounting, such as when attention is explicitly drawn to the relative expertise of the advisor and thus elicits feelings of competitiveness from the judge (e.g., see Tost, Gino, & Larrick, 2011), or when the judge has committed publically to his or her initial answer.

In closing, we found strong and consistent evidence across four studies that power is associated with increased confidence and reduced advice taking. These results resonate at an intuitive level with real-world examples of leaders and other powerful individuals whose overconfidence precluded them from taking valuable advice. We therefore encourage future investigations to build from our work and investigate the conditions under which these potentially detrimental effects of power might be mitigated.

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References

Anderson, C., & Galinsky, A. D. (2006). Power, optimism, and risk-taking. *European Journal of Social Psychology, 36*, 511–536.

Ashford, S. J., Blatt, R., & VandeWalle, D. (2003). Reflections on the looking glass: A review of research on feedback-seeking behavior in organizations. *Journal of Management, 29*, 773–799.

Barsade, Sigal. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly, 47*, 644–675.

Berdahl, J. L., & Martorana, P. (2006). Effects of power on emotion and expression during a controversial group discussion. *European Journal of Social Psychology, 36*, 497–510.

Bonaccio, S., & Dalal, R. S. (2006). Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences. *Organizational Behavior and Human Decision Processes, 101*, 127–151.

Brenner, L. (2003). A random support model of the calibration of subjective probabilities. *Organizational Behavior and Human Decision Processes, 90*, 87–110.

Brinol, P., Petty, R. E., Valle, C., Rucker, D. D., & Beccera, A. (2007). The effects of message recipients' power before and after persuasion: A self-validation analysis. *Journal of Personality and Social Psychology, 93*, 1040–1053.

Camerer, C. F., & Hogarth, R. M. (1999). The effects of financial incentives in experiments: A review and capital-labor-production framework. *Journal of Risk and Uncertainty, 19*, 7–42.

Cansler, D. C., & Stiles, W. B. (1981). Relative status and interpersonal presumptuousness. *Journal of Experimental Social Psychology, 17*, 459–471.

Chambers, J., & Windschitl, P. D. (2004). Biases in social comparative judgments: The role of nonmotivated factors in above-average and comparative-optimism effects. *Psychological Bulletin, 130*, 813–838.

Chen, S., Lee-Chai, A. Y., & Bargh, J. A. (2001). Relationship orientation as a moderator of social power. *Journal of Personality and Social Psychology, 80*, 173–187.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*, 113–126.

Dawes, R. M., & Mulford, M. (1996). The false consensus effect and overconfidence: Flaws in judgment, or flaws in how we study judgment? *Organizational Behavior and Human Decision Processes, 65*, 201–211.

De Paulo, B. M., & Friedman, H. S. (1998). Nonverbal communication. In S. T. Fiske, D. Gilbert, & G. Lindzey (Eds.), *The handbook of social psychology (3rd ed., Vol. 2)* (pp. 3–40). Boston: McGraw-Hill.

Dittes, J. E., & Kelley, H. H. (1956). Effects of different conditions of acceptance upon conformity to group norms. *Journal of Abnormal and Social Psychology, 53*, 100–107.

Emerson, R. M. (1962). Power dependence relations. *American Sociological Review, 27*, 31–41.

Erev, I., Wallsten, T. S., & Budescu, D. V. (1994). Simultaneous overconfidence and underconfidence: The role of error in judgment processes. *Psychological Review, 101*(3), 519–527.

Fast, N. J., Gruenfeld, D. H., Sivanathan, N., & Galinsky, A. D. (2009). Illusory control: A generative force behind power's far-reaching effects. *Psychological Science, 20*, 502–508.

Fast, N. J., Sivanathan, N., Mayer, N. D., & Galinsky, A. D. (2011). *Power and overconfident decision making: The role of sense of power.* University of Southern California, Working paper.

Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist, 48*, 621–628.

Fiske, S. T. (2010). Interpersonal stratification: Status, power, and subordination. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., pp. 941–982). New York: Wiley.

Fragale, A. R. (2006). The power of powerless speech: The effects of speech style and task interdependence on status conferral. *Organizational Behavior and Human Decision Processes, 101*, 243–261.

French, J., & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power* (pp. 150–167). Ann Arbor, MI: Institute for Social Research.

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., Magee, J. C., Gruenfeld, D. H., Whitson, J. A., & Liljenquist, K. A. (2008). Power reduces the press of the situation: Implications for creativity, conformity and dissonance. *Journal of Personality and Social Psychology, 95*, 1450–1466.

Galinsky, A. D., Magee, J. C., Inesi, M. E., & Gruenfeld, D. H. (2006). Power and perspectives not taken. *Psychological Science, 17*, 1068–1074.

Georgesen, J. C., & Harris, M. J. (1998). Why's my boss always holding me down? A meta-analysis of power effects on performance evaluations. *Personality and Social Psychology Review, 2*, 184–195.

Georgesen, J. C., & Harris, M. J. (2000). The balance of power: Interpersonal consequences of differential power and expectations. *Personality and Social Psychology Bulletin, 26*, 1239–1257.

Gigone, D., & Hastie, R. (1997). Proper analysis of the accuracy of group judgments. *Psychological Bulletin, 121*(1), 149–167.

Gino, F. (2008). Do we listen to advice just because we paid for it? The impact of advice cost on its use. *Organizational Behavior and Human Decision Processes, 107*, 234–245.

Gino, F., & Moore, D. A. (2007). Effects of task difficulty on use of advice. *Journal of Behavioral Decision Making, 20*, 21–35.

Gino, F., & Schweitzer, M. E. (2008). Blinded by anger or feeling the love: How emotions influence advice taking. *Journal of Applied Psychology, 93*, 1165–1173.

Gino, F., Shang, J., & Croson, R. T. (2009). The impact of information from similar or different advisors on judgment. *Organizational Behavioral and Human Decision Processes, 108*, 287–302.

Goethals, G. R., & Nelson, R. E. (1973). Similarity in the influence process: The belief-value distinction. *Journal of Personality and Social Psychology, 25*, 117–122.

Goodwin, S. A., Gubin, A., Fiske, S. T., & Yzerbyt, V. Y. (2000). Power can bias impression processes: Stereotyping subordinates by default and by design. *Group Processes & Intergroup Relations, 3*, 227–256.

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.

Guinote, A. (2008). Power and affordances: When the situation has more power over powerful than over powerless individuals. *Journal of Personality and Social Psychology, 95*, 237–252.

Hall, J. A., Coats, E. J., & Smith LeBeau, L. (2005). Nonverbal behavior and the vertical dimension of social relations: A meta-analysis. *Psychological Bulletin, 131*, 898–924.

Harvey, N., & Fischer, I. (1997). Taking advice: Accepting help, improving judgment, and sharing responsibility. *Organizational Behavior and Human Decision Processes, 70*(2), 117–133.

Heath, C., & Gonzalez, R. (1995). Interaction with others increases decision confidence but not decision quality: Evidence against information collection views of interactive decision making. *Organizational Behavior and Human Decision Processes, 61*, 305–326.

Howard, E. S., Gardner, W. L., & Thompson, L. (2007). The role of the self-concept and the social context in determining the behavior of power holders: Self-construal in intergroup versus dyadic dispute resolution negotiations. *Journal of Personality and Social Psychology, 93*, 614–631.

James, L. R., Demaree, R. G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology, 69*, 85–98.

Juslin, P., Olsson, H., & Bjorkman, M. (1997). Brunswikian and Thurstonian origins of bias in probability assessment: On the interpretation of stochastic components of judgment. *Journal of Behavioral Decision Making, 10*, 189–209.

Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*, 265–284.

Keltner, D., & Robinson, R. J. (1997). Defending the status quo: Power and bias in social conflict. *Personality and Social Psychology Bulletin, 23*, 1066–1077.

Klayman, J., Soll, J. B., González-Vallejo, C., & Barlas, S. (1999). Overconfidence: It depends on how, what, and whom you ask. *Organizational Behavior and Human Decision Processes, 79*(3), 216–247.

Krueger, J., & Mueller, R. A. (2002). Unskilled, unaware, or both? The better-than-average heuristic and statistical regression predict errors in estimates of own performance. *Journal of Personality and Social Psychology, 82*, 180–188.

Lammers, J., Galinsky, A. D., Gordijn, E. H., & Otten, S. (2008). Legitimacy moderates the effect of power on approach. *Psychological Science, 19*, 558–564.

Larrick, R. P., Burson, K. A., & Soll, J. B. (2007). Social comparison and confidence: When thinking you're better than the average predicts overconfidence (and when it does not). *Organizational Behavior and Human Decision Processes, 102*(1), 76–94.

Larrick, R. P., & Soll, J. B. (2006). Intuitions about combining opinions: Misappreciation of the averaging principle. *Management Science, 52*(1), 111–127.

Lee, F. (1997). When the going gets tough, do the tough ask for help? Help seeking and power motivation in organizations. *Organizational Behavior and Human Decision Processes, 72*, 336–363.

Lichtenstein, S., & Fischhoff, B. (1977). Do those who know more also know more about how much they know? *Organizational Behavior & Human Performance, 20*(2), 159–183.

Magee, J. C., Milliken, F. J., & Lurie, A. R. (2010). Power differences in the construal of a crisis: The immediate aftermath of September 11, 2001. *Personality and Social Psychology Bulletin, 36*, 354–370.

Mannes, A. E. (2009). Are we wise about the wisdom of crowds? The use of group judgments in belief revision. *Management Science, 55*, 1267–1279.

Mast, M. S., Jonas, K., & Hall, J. A. (2009). Give a person power and he or she will show interpersonal sensitivity: The phenomenon and its why and when. *Journal of Personality and Social Psychology, 97*, 835–850.

Moore, D. A., & Healy, P. J. (2008). The trouble with overconfidence. *Psychological Review, 115*, 502–517.

Moore, D. A., & Small, D. A. (2007). Error and bias in comparative social judgment: On being both better and worse than we think we are. *Journal of Personality and Social Psychology, 92*, 972–989.

Morrison, E. W., & Rothman, N. B. (2008). Silence and the dynamics of power. In J. Greenberg & M. S. Edwards (Eds.), *Voice and silence in organizations*. Bingley UK: Emerald Publishing.

Mueller, J. S., Lebel, R. D., & Rosette, A. S. (2011). *Why men don't ask for directions: Help seeking and perceptions of leadership outcomes.* University of Pennsylvania, Working paper.

Nisbett, R., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice-Hall.

Oskamp, S. (1965). Overconfidence in case-study judgments. *Journal of Consulting Psychology, 29*, 261–265.

Overbeck, J. R., & Park, B. (2001). When power does not corrupt: Superior individuation processes among powerful perceivers. *Journal of Personality and Social Psychology, 81*, 549–565.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891.

See, K. E., & Clemen, R. T. (2011). *Power in context: Perceptions of structure and threat to power influence managerial decision making approaches*. New York University. Working paper.

Smith, P. K., Jostmann, N. B., Galinsky, A. D., & van Dijk, W. (2008). Lacking power impairs executive functions. *Psychological Science, 19*, 441–447.

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Smith, P. K., & Trope, Y. (2006). You focus on the forest when you're in charge of the trees: Power priming and abstract information processing. *Journal of Personality and Social Psychology, 90*, 578–596.

Sniezek, J. A., & Buckley, T. (1995). Cueing and cognitive conflict in judge-advisor decision making. *Organizational Behavior and Human Decision Processes, 62*(2), 159–174.

Sniezek, J. A., & Van Swol, L. M. (2001). Trust and expertise in a judge advisor system. *Organizational Behavior and Human Decision Processes, 84*, 288–307.

Soll, J. B., & Larrick, R. P. (2009). Strategies for revising judgment: How (and how well) people use other's opinions. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 35*, 780–805.

Tost, L. P., Gino, F., & Larrick, R. P. (2011). *Competitiveness and advisor expertise: Why the powerful don't listen*. Conditionally accepted, *Organizational Behavior and Human Decision Processes*. Duke University. Working paper.

Tsai, C. I., Klayman, J., & Hastie, R. (2010). Effects of amount of information on judgment accuracy and confidence. *Organizational Behavior and Human Decision Processes, 107*, 97–105.

Yaniv, I. (2004). Receiving other people's advice: Influence and benefit. *Organizational Behavior and Human Decision Processes, 93*, 1–13.

Yaniv, I., Choshen-Hillel, S., & Milyavsky, M. (2009). Spurious consensus and opinion revision: Why might people be more confident in their less accurate judgments? *Journal of Experimental Psychology: Learning, Memory and Cognition, 35*, 558–563.

Yaniv, I., & Kleinberger, E. (2000). Advice taking in decision making: Egocentric discounting and reputation formation. *Organizational Behavior and Human Decision Processes, 83*(2), 260–281.

Please cite this article in press as: See, K. E., et al. The detrimental effects of power on confidence, advice taking, and accuracy. *Organizational Behavior and Human Decision Processes* (2011), doi:10.1016/j.obhdp.2011.07.006