

# Compared to men, women view professional advancement as equally attainable, but less desirable

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Women are underrepresented in most high-level positions in organizations. Though a great deal of research has provided evidence that bias and discrimination give rise to and perpetuate this gender disparity, in the current research we explore another explanation: men and women view professional advancement differently, and their views affect their decisions to climb the corporate ladder (or not). In studies 1 and 2, when asked to list their core goals in life, women listed more life goals overall than men, and a smaller proportion of their goals related to achieving power at work. In studies 3 and 4, compared to men, women viewed high-level positions as less desirable yet equally attainable. In studies 5–7, when faced with the possibility of receiving a promotion at their current place of employment or obtaining a high-power position after graduating from college, women and men anticipated similar levels of positive outcomes (e.g., prestige and money), but women anticipated more negative outcomes (e.g., conflict and tradeoffs). In these studies, women associated high-level positions with conflict, which explained the relationship between gender and the desirability of professional advancement. Finally, in studies 8 and 9, men and women alike rated power as one of the main consequences of professional advancement. Our findings reveal that men and women have different perceptions of what the experience of holding a high-level position will be like, with meaningful implications for the perpetuation of the gender disparity that exists at the top of organizational hierarchies.

gender | professional advancement | goals | power | achievement

Even in societies that stress the importance of gender equality, women are underrepresented in most senior-level positions (1). For instance, recent estimates indicate that women comprise less than 5% of Fortune 500 CEOs, less than 15% of executive officers, less than 20% of full professors in the natural sciences, and only 6% of partners in venture capital firms (2–4). Moreover, it seems that the small percentage of women who do attain executive positions are relegated to spheres within the organization that have less influence and fewer opportunities for professional advancement (5). These differences may not exist at the start of the employment relationship. In fact, recent evidence has found that female applicants were favored over male ones for positions as assistant professors in science (6).

Many reasons exist for the gender imbalance in high-level positions. These reasons can be grouped into two broad categories. The first category is what sociologists refer to as demand-side factors and psychologists call interpersonal effects. These factors encompass the institutional barriers that women face because of the divergent ways in which men and women are perceived and treated by others. For example, evidence suggests that compared to men, women are perceived as less competent and lacking leadership potential (7–9) and are more likely to encounter challenges, skepticism, and backlash about their ideas and abilities (10–15). Interestingly, gender-based biases and discrimination seem to be perpetuated by men and women alike (16, 17).

The second category is what sociologists refer to as supply-side factors and psychologists call intrapersonal effects. In contrast to demand-side factors, which are part of the environment the individual interacts with, supply-side factors are differences in the

perceptions held, decisions made, or behaviors enacted by men and women themselves that contribute to gendered outcomes. For example, men are more likely than women to engage in dominant or aggressive behaviors (18–22), to initiate negotiations (23), and to self-select into competitive environments (24–26)—behaviors likely to facilitate professional advancement.

In this paper, we examine a supply-side factor that has received little research attention: male vs. female preferences for achieving high-level positions in the workplace. Specifically, we focus on people's life goals and the positive and negative outcomes men and women associate with professional advancement.

The goals people set for themselves are a powerful motivator of their current behavior (27). In addition to being driven by their beliefs about what will make them happy in life, people's goals are determined by the way they imagine their future to be (e.g., having a certain job or a specific set of relationships). The images people hold about the future are affected by sociocultural factors (e.g., family values or attitudes toward work) as well as norms and expectations that define the context in which they live (28). In recent decades, women's roles have changed more dramatically than those of men, at least in Western societies and cultures (28). Although women are still interested in pursuing goals related to having strong relationships, marriage, and family, they are also increasingly interested in being professionally employed and having a career. As a result, we hypothesize that women are likely to have more life goals than men, reflecting a greater diversity of preferences for what they hope to accomplish in the future.

In addition to a difference in total number of goals, we also predict that, compared to men's life goals, a smaller proportion of women's life goals are related to achieving power at work. Previous

## Significance

We identify a profound and consistent gender gap in people's core life goals. Across nine studies using diverse sample populations (executives in high-power positions, recent graduates of a top MBA program, undergraduate students, and online panels of working adults) and over 4,000 participants, we find that, compared to men, women have a higher number of life goals, place less importance on power-related goals, associate more negative outcomes (e.g., time constraints and tradeoffs) with high-power positions, perceive power as less desirable, and are less likely to take advantage of opportunities for professional advancement. Women view high-level positions as equally attainable as men do, but less desirable. Our findings advance the science of gender, goals, organizational behavior, and decision making.

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research provides some evidence that men are more likely to strive for power in the workplace than are women. Men tend to pay more attention to power cues (29) and to be more motivated by power—the desire for the means to influence other people (30)—which has been shown to play a role in producing gender differences in leadership role occupancy (31). In contrast, women tend to be more motivated by affiliation—the desire for warm, close relationships with others (32). Reinforcing this point, in studies using samples of talented individuals, the life values and personal views of men and women have been found to differ (33), with men tending to assume a more agentic, career-focused perspective, whereas women generally favor a more communal, holistic perspective (34–36). These differing views seem to cause differences in how men and women allocate their time and attention (33).

Finally, we expect that women associate power-related goals (e.g., taking on a high-level position in an organization) with more negative outcomes than men do because pursuing a power-related goal is more likely to conflict with their other life goals. Compared to women, men perceive a longer time frame for achieving their main life goals (28). By perceiving a subjectively shorter time frame within which they must attain their goals and by having a greater diversity of goals, women are likely to experience more conflict among their goals. When one of their goals is salient and its attainability is close (e.g., they are offered a promotion at work), women are more likely than men to feel anxious due to the sacrifices or difficult tradeoffs they would have to make to give that one goal more attention than others. As a result, compared to men, we expect women to view a high-level position as less desirable, even if it seems equally attainable.

To shed light on these hypotheses, we conducted nine studies that use a variety of methods and sample populations. Across our studies, we seek to capture women's and men's preferences for professional advancement and power in the workplace, independent of the causes of those preferences.

## Results

**Studies 1 and 2: Gender and Life Goals.** Our first hypotheses are that (i) women have more life goals than men do overall and (ii) a smaller percentage of those goals are related to power. To test these predictions, in studies 1 and 2 we asked participants to list their core life goals.

In study 1, we asked a large online sample of working adults ( $n = 781$ ) to write a list of their core goals in life. We defined core goals for participants as “things that occupy your thoughts on a routine basis, things that you deeply care about, or things that motivate your behavior and decisions. Examples of such goals are: being in a committed relationship, keeping up with sports, being organized, or attaining power or status.” This description was based on previous research on personal strivings, defined as consciously accessible and personally meaningful objectives that people pursue in their daily lives (37–39). We asked participants to list anywhere from 1 to 25 goals (in the order in which they came to mind) within two minutes. Participants then categorized their goals by choosing among different goal categories with descriptions ([Supporting Information](#)), which were based on research on personal strivings (37–39).

As expected, women listed more goals than did men [ $\text{mean}_f = 9.46$ ,  $\text{SD}_f = 5.63$  vs.  $\text{mean}_m = 8.41$ ,  $\text{SD}_m = 5.28$ ,  $t(779) = 2.67$ ,  $P = 0.008$ ,  $d = 0.19$ ] and listed a smaller proportion of power-related goals out of their list of total goals [ $\text{mean}_f = 3\%$ ,  $\text{SD}_f = 9\%$  vs.  $\text{mean}_m = 7\%$ ,  $\text{SD}_m = 14\%$ ,  $t(779) = 4.18$ ,  $P < 0.001$ ,  $d = 0.34$ ]. There was also a main effect of gender on miscellaneous goals such that women reported a higher proportion of such goals than did men [ $\text{mean}_f = 12\%$ ,  $\text{SD}_f = 17\%$  vs.  $\text{mean}_m = 9\%$ ,  $\text{SD}_m = 16\%$ ,  $t(779) = 2.60$ ,  $P = 0.01$ ,  $d = 0.18$ ]. We found no gender differences among the other goal dimensions: achievement, affiliation, personal growth and health, generativity, spirituality, or avoidance.

In study 2, we provide a conceptual replication of study 1 and also address a potential confound: that women listed more goals than men because they cared more about pleasing the experimenter. We asked 437 adults from an online panel of employed individuals provided by ClearVoice to complete a short survey. Participants listed their core goals (this time, up to 20 of them) and then categorized them, using the same categories as in study 1. After listing their goals, to test the alternative explanation about level of effort in the study, we asked participants to list their favorite foods under the same two minute time limit. Finally, after answering demographic questions, participants indicated the extent to which, while completing the study, they tried to please the experimenter on a 7-point scale (1 = not at all, 7 = very much so).

Mirroring the results of study 1, compared to men, women listed more goals [ $\text{mean}_f = 9.47$ ,  $\text{SD}_f = 4.81$  vs.  $\text{mean}_m = 7.90$ ,  $\text{SD}_m = 4.63$ ,  $t(435) = 3.48$ ,  $P = 0.001$ ,  $d = 0.34$ ]. Importantly, female and male participants listed about the same number of favorite foods [ $\text{mean}_f = 13.54$ ,  $\text{SD}_f = 5.21$  vs.  $\text{mean}_m = 12.76$ ,  $\text{SD}_m = 5.70$ ,  $t(435) = 1.50$ ,  $P = 0.14$ ,  $d = 0.14$ ] and were similarly disinterested in pleasing the experimenter during the study [ $\text{mean}_f = 2.69$ ,  $\text{SD}_f = 2.06$  vs.  $\text{mean}_m = 2.68$ ,  $\text{SD}_m = 1.91$ ,  $t(435) < 1$ ,  $P = 0.96$ ,  $d = 0.005$ ]. Even when controlling for the number of favorite foods respondents reported, women still listed more life goals than men,  $F(1,434) = 10.23$ ,  $P = 0.001$ ,  $\eta_p^2 = 0.023$ .

Female participants again listed a smaller proportion of power-related goals out of their list of total goals than did men [ $\text{mean}_f = 5\%$ ,  $\text{SD}_f = 11\%$  vs.  $\text{mean}_m = 10\%$ ,  $\text{SD}_m = 13\%$ ,  $t(435) = 4.51$ ,  $P < 0.001$ ,  $d = 0.42$ ]. There was also a main effect of gender on avoidance goals such that women reported a higher proportion of avoidance goals than did men [ $\text{mean}_f = 2\%$ ,  $\text{SD}_f = 7\%$  vs.  $\text{mean}_m = 1\%$ ,  $\text{SD}_m = 4\%$ ,  $t(435) = 2.15$ ,  $P = 0.032$ ,  $d = 0.18$ ]. We found no gender differences among the other goal dimensions.

### Studies 3 and 4: Desirability vs. Attainability of Professional Advancement.

We predicted that having more goals overall and a small percentage of them related to power would lead women to see opportunities for professional advancement as less desirable than men do, but equally attainable. We test these predictions in studies 3 and 4.

In study 3, we contacted 1,762 MBA students who had graduated from a top MBA program in the last two years (i.e., 2013 and 2014) via email and asked them to fill out a short survey. Six hundred thirty-five of them replied. Participants were shown a ladder with rungs numbered from 1 to 10 and told to imagine it represented the hierarchy of professional advancement in their current professional industry. We asked them to think about their career and to indicate three different positions (i.e., rungs) on the ladder: (i) their current position in their industry, (ii) their ideal position, and (iii) the highest position they could realistically attain.

There were no significant differences between men and women in the current position that they reported [ $\text{mean}_f = 5.39$ ,  $\text{SD}_f = 1.85$  vs.  $\text{mean}_m = 5.63$ ,  $\text{SD}_m = 2.11$ ,  $t(633) = -1.46$ ,  $P = 0.145$ ,  $d = 0.12$ ]. Controlling for their current position, compared to male participants, female participants reported a lower ideal position [ $\text{mean}_f = 9.04$ ,  $\text{SD}_f = 1.14$  vs.  $\text{mean}_m = 9.59$ ,  $\text{SD}_m = 0.92$ ,  $F(1,632) = 41.99$ ,  $P < 0.001$ ,  $\eta_p^2 = 0.062$ ]. However, the highest attainable positions reported by men and women were equally high [ $\text{mean}_f = 9.29$ ,  $\text{SD}_f = 0.88$  vs.  $\text{mean}_m = 9.41$ ,  $\text{SD}_m = 0.98$ ,  $F(1,632) = 1.58$ ,  $P = 0.21$ ,  $\eta_p^2 = 0.002$ ].

In study 4, we conceptually replicated the findings from study 3 by investigating people's perceived desirability and attainability of professional advancement. We asked an online panel of 247 adults to “think about the things you'd like to accomplish in your life and the goals you have for yourself.” We specifically asked participants to think about two statements that focused on goals related to professional advancement: (i) “As one of my core goals in life, I would like to have a powerful position in an organization,” and (ii) “As one of my core goals in life, I would like to have power over others.” Participants rated the desirability

and attainability of these two goals on 7-point scales (1 = not at all, 7 = very much so).

Compared to male participants, female participants rated these goals as less desirable [ $\text{mean}_f = 3.73$ ,  $\text{SD}_f = 1.67$  vs.  $\text{mean}_m = 4.19$ ,  $\text{SD}_m = 1.52$ ,  $t(245) = 2.24$ ,  $P = 0.026$ ,  $d = 0.29$ ], but equally attainable [ $\text{mean}_f = 4.25$ ,  $\text{SD}_f = 1.67$  vs.  $\text{mean}_m = 4.35$ ,  $\text{SD}_m = 1.56$ ,  $t(245) = 0.49$ ,  $P = 0.63$ ,  $d = 0.06$ ].

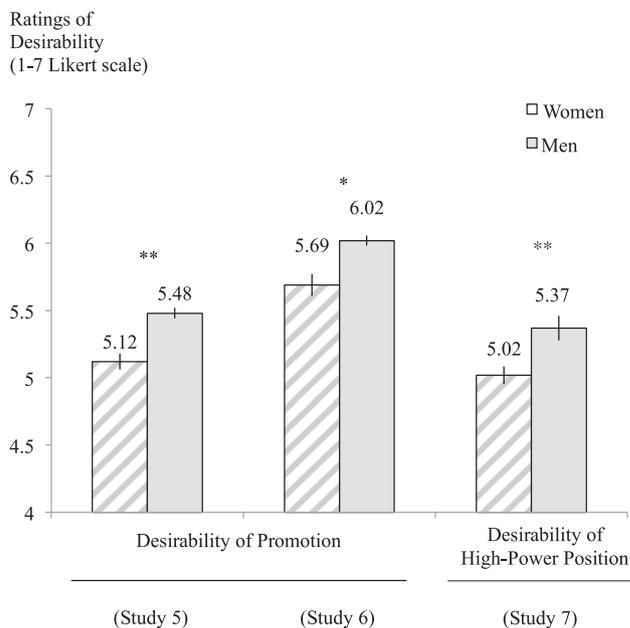
**Studies 5–7: Positive and Negative Outcomes Associated with Professional Advancement.** In studies 5–7, we explore why women see professional advancement as less desirable by asking people to rate the likelihood of experiencing positive outcomes (e.g., opportunity, satisfaction) and negative outcomes (e.g., goal conflict, time constraints) upon receiving a promotion at work.

In study 5, we asked 465 working adults from an online database to imagine being promoted to a higher-level position in their current organization. Participants were told that as a result of this promotion, their level of power over others would increase substantially. Participants predicted the extent to which they would experience nine different outcomes if they received the promotion (on a 10-point scale). Some outcomes were positive (satisfaction or happiness, opportunity, money, status, or influence) whereas others were negative (stress or anxiety, difficult tradeoffs or sacrifice, time constraints, burden of responsibility, or conflict with other life goals). Participants also indicated how desirable the promotion would be to them and their likelihood of pursuing the promotion (on 7-point scales).

Participants' ratings on the nine outcomes loaded onto two separate factors: positive outcomes ( $\alpha = 0.77$ ) and negative outcomes ( $\alpha = 0.84$ ). Compared to male participants, female participants expected stronger negative outcomes to occur with the promotion [ $\text{mean}_f = 6.73$  out of 10,  $\text{SD}_f = 1.56$  vs.  $\text{mean}_m = 6.23$ ,  $\text{SD}_m = 1.39$ ,  $t(442) = 3.43$ ,  $P = 0.001$ ,  $d = 0.34$ ]. However, men and women expected a statistically equivalent level of positive outcomes to occur with the promotion [ $\text{mean}_f = 7.13$ ,  $\text{SD}_f = 1.44$  vs.  $\text{mean}_m = 7.23$ ,  $\text{SD}_m = 1.28$ ,  $t(442) = 0.79$ ,  $P = 0.43$ ,  $d = 0.07$ ]. Female participants also viewed the potential promotion as less desirable than men did [ $\text{mean}_f = 5.12$ ,  $\text{SD}_f = 1.46$  vs.  $\text{mean}_m = 5.48$ ,  $\text{SD}_m = 1.32$ ,  $t(442) = 2.6$ ,  $P = 0.01$ ,  $d = 0.26$ ] and indicated that they would be less likely to go after the promotion [ $\text{mean}_f = 4.77$ ,  $\text{SD}_f = 1.41$  vs.  $\text{mean}_m = 5.25$ ,  $\text{SD}_m = 1.43$ ,  $t(442) = 3.35$ ,  $P = 0.001$ ,  $d = 0.34$ ]; see Fig. 1.

We also found that the negative outcomes expected by women explained (i) women's perception of the promotion as less desirable and (ii) their reduced likelihood of pursuing the promotion. When including expected negative outcomes as a mediator and expected positive outcomes as a control variable, the effect of gender on desirability of the promotion weakened (from  $\beta = 0.10$ ,  $P = 0.008$  to  $\beta = 0.046$ ,  $P = 0.19$ ), and expected negative outcomes predicted lower desirability of the promotion ( $\beta = -0.33$ ,  $P < 0.001$ ; 95% bias-corrected confidence interval (CI) = [0.07, 0.26]). Similar regression analyses using likelihood of pursuing the promotion as the dependent measure revealed a weakened effect of gender (from  $\beta = 0.14$ ,  $P = 0.001$  to  $\beta = 0.098$ ,  $P = 0.011$ ) and a negative effect of negative outcomes associated with the potential promotion ( $\beta = -0.24$ ,  $P < 0.001$ ; 95% bias-corrected CI for the size of the indirect effect = [0.05, 0.21]). We found similar results (Supporting Information) when conducting mediation analyses focused on the single item "conflict with other life goals" or an aggregate of the two items "conflict with other life goals" and "difficult tradeoffs."

In study 6, we tested the same relationships in a sample of executives who were likely to already occupy positions of power and had displayed an interest in furthering their careers by enrolling in executive education courses focused on leadership, decision making, and negotiation at a top US business school. Two hundred and four executives completed the same scenario and measures as in study 5 as part of their required coursework.



Mirroring the results of study 5, compared to male participants, female participants associated more negative outcomes with the hypothetical promotion [ $\text{mean}_f = 7.09$  out of 10,  $\text{SD}_f = 1.71$  vs.  $\text{mean}_m = 6.17$ ,  $\text{SD}_m = 2.33$ ,  $t(202) = 2.61$ ,  $P = 0.01$ ,  $d = 0.45$ ], although men and women anticipated statistically equivalent levels of positive outcomes being associated with the promotion [ $\text{mean}_f = 7.39$ ,  $\text{SD}_f = 1.38$  vs.  $\text{mean}_m = 7.11$ ,  $\text{SD}_m = 1.43$ ,  $t(202) = 1.22$ ,  $P = 0.22$ ,  $d = 0.20$ ]. Female participants also reported viewing the potential promotion as less desirable [ $\text{mean}_f = 5.69$ ,  $\text{SD}_f = 1.15$  vs.  $\text{mean}_m = 6.02$ ,  $\text{SD}_m = 0.91$ ,  $t(202) = 2.09$ ,  $P = 0.038$ ,  $d = 0.32$ ] and indicated that they would be less likely to pursue the promotion compared to male participants [ $\text{mean}_f = 5.71$ ,  $\text{SD}_f = 1.33$  vs.  $\text{mean}_m = 6.07$ ,  $\text{SD}_m = 1.15$ ,  $t(202) = 1.84$ ,  $P = 0.067$ ,  $d = 0.29$ ], as depicted in Fig. 1.

Also, as in study 5, we found that the negative outcomes women believed they would experience after achieving a higher-level position explained their perception of the promotion as less desirable and their reduced likelihood of pursuing the promotion. Controlling for expected positive outcomes, the effect of gender on desirability of the promotion weakened (from  $\beta = 0.17$ ,  $P = 0.01$  to  $\beta = 0.13$ ,  $P = 0.044$ ), and negative outcomes associated with the promotion predicted lower desirability of the promotion ( $\beta = -0.28$ ,  $P < 0.001$ ; 95% bias-corrected CI = [0.01, 0.26]). Similar regression analyses using likelihood of pursuing the promotion as the dependent measure revealed a weakened effect of gender (from  $\beta = 0.15$ ,  $P = 0.029$  to  $\beta = 0.109$ ,  $P = 0.104$ ) and a negative effect of negative outcomes associated with the potential promotion ( $\beta = -0.27$ ,  $P < 0.001$ ; 95% bias-corrected CI = [0.01, 0.31]). We also find similar results (Supporting Information) when conducting mediation analyses focused on the single item "conflict with other life goals" or an aggregate of the two items "conflict with other life goals" and "difficult tradeoffs."

In study 7, we slightly modified the design of study 6 to examine whether the results held in a sample of undergraduates at a top US university. Similar to the executive sample, these individuals were likely to be interested in professional advancement based on the prestigious academic environment they had elected to be a part of; however, in contrast to the executive sample, these participants had not yet entered the professional workforce.

We asked 516 undergraduate students to imagine that upon graduation they were presented with a high-power job opportunity. We asked them to describe the high-power job they were imagining and then list the outcomes or feelings they would associate with occupying such a position. Participants could list anywhere from 1 to 15 items. Participants also indicated how desirable the position would be to them, their likelihood of pursuing the position if it required extra effort, and their likelihood of pursuing the position if it did not require any extra effort (on 7-point scales). Next, we presented participants with the outcomes they anticipated experiencing with the high-power job and asked them to categorize these outcomes as positive, neutral, or negative.

Compared to male participants, female participants spontaneously listed a lower proportion of positive outcomes [ $\text{mean}_f = 50.1\%$ ,  $\text{SD}_f = 38.9\%$  vs.  $\text{mean}_m = 56.6\%$ ,  $\text{SD}_m = 32.9\%$ ,  $t(514) = 2.05$ ,  $P = 0.041$ ,  $d = 0.18$ ] and a higher proportion of negative outcomes [ $\text{mean}_f = 30\%$ ,  $\text{SD}_f = 37\%$  vs.  $\text{mean}_m = 22.5\%$ ,  $\text{SD}_m = 25.8\%$ ,  $t(514) = 2.65$ ,  $P = 0.008$ ,  $d = 0.24$ ]. The proportion of neutral outcomes listed was the same for men and women [ $\text{mean}_f = 19.9\%$ ,  $\text{SD}_f = 29.9\%$  vs.  $\text{mean}_m = 20.9\%$ ,  $\text{SD}_m = 24.2\%$ ,  $t(514) = 0.39$ ,  $P = 0.70$ ,  $d = 0.03$ ].

As depicted in Fig. 1, female participants reported viewing the high-power position as less desirable than male participants [ $\text{mean}_f = 5.02$ ,  $\text{SD}_f = 1.09$  vs.  $\text{mean}_m = 5.37$ ,  $\text{SD}_m = 1.43$ ,  $t(514) = 3.16$ ,  $P = 0.002$ ,  $d = 0.28$ ]. Compared to men, women were also less likely to pursue the position, regardless of whether it necessitated extra effort on their part [ $\text{mean}_f = 5.07$ ,  $\text{SD}_f = 1.14$  vs.  $\text{mean}_m = 5.41$ ,  $\text{SD}_m = 1.41$ ,  $t(514) = 3.09$ ,  $P = 0.002$ ,  $d = 0.27$ ] or not [ $\text{mean}_f = 5.54$ ,  $\text{SD}_f = 1.09$  vs.  $\text{mean}_m = 5.97$ ,  $\text{SD}_m = 1.15$ ,  $t(514) = 4.29$ ,  $P < 0.001$ ,  $d = 0.38$ ].

**Studies 8 and 9: Professional Advancement and Power.** In studies 5–7, the potential promotion or high-level position was described as being high in power. In studies 8 and 9, we manipulated the description of the high-level position to examine whether the effects in our previous studies hinged upon the emphasis placed on power.

In study 8, 484 online participants were asked to imagine the possibility of being promoted to a higher-level position in their current organization, similar to studies 5 and 6. Unlike in previous studies, participants were randomly assigned to one of two promotion description conditions: (i) promotion with power or (ii) promotion with power defined. In the promotion with power condition, participants were told, “As a result of this promotion, your level of power would increase substantially” (as participants were told in studies 5 and 6). Participants in the promotion with power defined condition were additionally told, “By power, we mean your relative ability to control other people’s outcomes, experiences, or behaviors.”

We then asked participants to indicate the extent to which they thought such a promotion would conflict with their other life goals and to what extent it would require them to make tradeoffs and sacrifices (on 7-point scales). We aggregated across these two items to create a measure of expected conflict ( $\alpha = 0.85$ ). Participants then rated the desirability of the promotion (on a 7-point scale) and answered the question “How do you view having power in a job?” by selecting one of two possible answers: (i) “This is a goal that I am not that interested in pursuing” or (ii) “This is a goal I definitely want to pursue.” Finally, we asked participants to list two or three words they associated with having power at work.

The promotion description manipulation (promotion with power vs. promotion with power defined) did not have a significant effect on expected conflict [ $F(1,480) = 1.44$ ,  $P = 0.23$ ,  $\eta_p^2 = 0.003$ ] and had only a marginally significant effect on desirability of the promotion [ $F(1,480) = 3.13$ ,  $P = 0.08$ ,  $\eta_p^2 = 0.005$ ]. The interactions between the promotion description manipulation and gender were insignificant

for both expected conflict [ $F(1,480) = 1.15$ ,  $P = 0.28$ ,  $\eta_p^2 = 0.002$ ] and promotion desirability [ $F(1,480) < 1$ ,  $P = 0.98$ ,  $\eta_p^2 = 0.000$ ].

Compared to male participants, female participants rated the promotion as less desirable [ $\text{mean}_f = 5.18$ ,  $\text{SD}_f = 1.50$  vs.  $\text{mean}_m = 5.45$ ,  $\text{SD}_m = 1.32$ ,  $F(1,480) = 4.36$ ,  $P = 0.037$ ] and anticipated experiencing more conflict with other life goals [ $\text{mean}_f = 3.81$ ,  $\text{SD}_f = 1.58$  vs.  $\text{mean}_m = 3.41$ ,  $\text{SD}_m = 1.37$ ,  $F(1,480) = 8.26$ ,  $P = 0.004$ ]. Additionally, more female than male participants [41.0% (75/183) vs. 30.9% (93/301)] indicated that they were not interested in pursuing power as a goal [ $\chi^2(1, N = 484) = 5.11$ ,  $P = 0.024$ , Cramér’s  $V = 0.10$ ].

We predicted that the conflict women expect to experience in a position of high power explains their lower ratings of promotion desirability. Thus, we conducted regression analyses with desirability of the promotion as the dependent measure, expected conflict with other goals as the potential mediator, and the promotion description manipulation as the control variable. The effect of gender weakened (from  $\beta = 0.095$ ,  $P = 0.037$  to  $\beta = 0.031$ ,  $P = 0.44$ ) and expected conflict with other goals predicted lower ratings of promotion desirability ( $\beta = -0.49$ ,  $P < 0.001$ ; 95% bias-corrected CI = [0.06, 0.32]).

The words participants associated with having power at work were coded by four gender-blind coders, two female and two male. Each word was assigned a code of positive, negative, or neutral, and we averaged across the codes provided by all four coders for our analyses (all  $\alpha > 0.70$ , average  $\alpha = 0.83$ ). Mirroring the pattern of results found in our other studies, we found no gender differences in the number of positive words [ $\text{mean}_f = 1.49$ ,  $\text{SD}_f = 0.90$  vs.  $\text{mean}_m = 1.52$ ,  $\text{SD}_m = 0.79$ ,  $F(1,483) = 0.24$ ,  $P = 0.627$ ,  $\eta_p^2 = 0.000$ ] or neutral words [ $\text{mean}_f = 0.79$ ,  $\text{SD}_f = 0.57$  vs.  $\text{mean}_m = 0.83$ ,  $\text{SD}_m = 0.57$ ,  $F(1,483) = 0.68$ ,  $P = 0.41$ ,  $\eta_p^2 = 0.001$ ] listed by participants, but female participants listed significantly more negative words associated with having power at work than men did [ $\text{mean}_f = 0.50$ ,  $\text{SD}_f = 0.73$  vs.  $\text{mean}_m = 0.37$ ,  $\text{SD}_m = 0.65$ ,  $F(1,483) = 4.56$ ,  $P = 0.033$ ,  $\eta_p^2 = 0.009$ ].

In study 9, we sought to replicate the results of study 8 in a sample of executives, and we added an experimental condition that completely removed all explicit emphasis on power as a necessary outcome of professional advancement. We collected data from 265 executives enrolled in executive education courses focused on influence, decision making, and negotiation at a top US business school. We assigned participants to one of three promotion description conditions: (i) promotion with power, (ii) promotion with power defined, or (iii) basic promotion. The prompts for the first two conditions were the same as in study 8. In the basic promotion condition, an increase in power was not mentioned as a result of the promotion.

Participants were then presented with the same nine outcomes as in studies 5–7 and asked to report how much they expected to experience each of them if they received the promotion. They also indicated the desirability of the promotion and their likelihood of pursuing it.

Similar to the findings of the previous study, the promotion description did not affect the results. The results of 2 (men vs. women)  $\times$  3 (promotion with power vs. promotion with power defined vs. basic promotion) ANOVAs conducted on dependent measures revealed no main effects for the promotion description manipulation or significant interactions (all  $P > 0.11$ ). Across our analyses, the only significant effects were main effects of gender on our dependent measures. Table 1 reports the means and SDs of the main variables we measured by gender across conditions.

Compared to male participants, female participants associated more negative outcomes with the promotion [ $\text{mean}_f = 5.68$ ,  $\text{SD}_f = 1.13$  vs.  $\text{mean}_m = 5.02$ ,  $\text{SD}_m = 1.46$ ;  $F(1,259) = 15.89$ ,  $P < 0.001$ ,  $\eta_p^2 = 0.06$ ] but about the same level of positive outcomes [ $\text{mean}_f = 6.15$ ,  $\text{SD}_f = 0.88$  vs.  $\text{mean}_m = 6.26$ ,  $\text{SD}_m = 0.82$ ;  $F(1,259) = 1.36$ ,  $P = 0.25$ ,  $\eta_p^2 = 0.005$ ]. Women also reported viewing the potential promotion as less desirable than did men [ $\text{mean}_f = 5.35$ ,  $\text{SD}_f = 1.38$

**Table 1. Means (and SDs) of the main variables measured in study 9 by gender across conditions**

| Variable                           | Promotion with power |             | Promotion with power defined |             | Basic promotion |             |
|------------------------------------|----------------------|-------------|------------------------------|-------------|-----------------|-------------|
|                                    | Male                 | Female      | Male                         | Female      | Male            | Female      |
| Negative outcomes                  | 5.19 (1.35)          | 5.87 (0.96) | 5.06 (1.33)                  | 5.72 (1.12) | 4.80 (1.69)     | 5.43 (1.27) |
| Positive outcomes                  | 6.15 (0.63)          | 6.01 (0.59) | 6.38 (0.68)                  | 6.29 (0.94) | 6.25 (1.08)     | 6.11 (1.03) |
| Desirability of the promotion      | 6.13 (1.09)          | 5.23 (1.50) | 6.08 (1.11)                  | 5.42 (1.44) | 5.94 (1.18)     | 5.37(1.22)  |
| Likelihood of pursuing a promotion | 6.19 (1.23)          | 4.94 (1.71) | 5.65 (1.30)                  | 5.07 (1.56) | 5.63 (1.50)     | 4.91 (1.25) |

vs.  $\text{mean}_m = 6.05$ ,  $\text{SD}_m = 1.12$ ;  $F(1,259) = 20.90$ ,  $P < 0.00$ ,  $\eta_p^2 = 0.075$ ] and indicated that they would be less likely to pursue it [ $\text{mean}_f = 4.98$ ,  $\text{SD}_f = 1.51$  vs.  $\text{mean}_m = 5.83$ ,  $\text{SD}_m = 1.36$ ;  $F(1,259) = 22.93$ ,  $P < 0.001$ ,  $\eta_p^2 = 0.81$ ].

Taken together, the results of studies 8 and 9 replicate the results of studies 5–7 and suggest that our findings are not contingent on the emphasis placed on power as a corollary of professional advancement. In light of previous research showing differences in power orientation between men and women, it is unlikely that these results mean that power does not play an important role in the gender differences we observe. Rather, we suspect that people automatically associate professional advancement with an increase in power, and reinforcing this association is merely redundant, yielding no additional effect.

## Discussion

Across nine studies using diverse sample populations (executives in high-power positions, graduates of a top MBA program, undergraduate students, and online panels of working adults) and over 4,000 participants, we find that, compared to men, women have a higher number of life goals, place less importance on power-related goals, associate more negative outcomes (e.g., goal conflict and tradeoffs) with high-power positions, perceive power as less desirable though equally attainable, and are less likely to take advantage of opportunities for professional advancement. In our research, we used a definition of power (i.e., the desire for the means to influence other people) that has been commonly used in extant literature. Definitions that encompass other types of power (e.g., helping the organization achieve its objectives or run more effectively) may lead to different results, and thus exploring their potentially unique impact may be a fruitful avenue for future work.

Identifying the origin of the differences between men's and women's professional aspirations is beyond the scope of the current research. Our findings may be the result of biological gender differences, learned preferences that have developed in response to cultural norms and gender-based discrimination, or both. In addition, supply-side factors (e.g., personal goals) and demand-side factors (e.g., gender-based backlash and discrimination) are inextricably linked. People learn how to think and behave based on their experiences, observations, and interactions in the world. For example, work on gender and volubility has shown that women speak up less often than do men owing to an acute awareness of the backlash that women frequently receive for voicing their opinions (40). Similarly, a woman may innately desire power, but she may see how women in high-level positions act and are treated and decide that power is an undesirable goal for her.

It is also important to note that our findings are descriptive, not prescriptive. Based on these data, we cannot make value judgments about whether men's and women's differing views of professional advancement are good or bad, rational or irrational, at any level of analysis (e.g., for individuals, for organizations, or for societies). It is possible that men and women are correctly predicting the unique experiences that they are poised to encounter upon professional advancement and are making sound decisions accordingly (41–43).

For instance, if women who hold the same positions as men at work are required to complete more tasks outside of work for themselves and/or their families, then the differences we observe may be optimal (44). However, it is also possible that women are overestimating the negative consequences associated with power, that men are underestimating them, or both. Future work could explore the congruence between the predicted and actual experience of achieving high-power positions for men and women.

Scholars have considered the possibility that supply-side impediments prevent women from achieving power and status at work, whereas other research has found evidence that women face demand-side barriers in the workplace. Our findings break new ground by documenting a previously unstudied supply-side phenomenon: compared to men, women have more life goals that make achieving high-power positions at work seem less desirable (but equally attainable). Therefore, women may not assume high-level positions in organizations—at least in part—because they desire other things as well.

## Materials and Methods

Here we describe the sample populations we recruited in our nine studies. For additional methodological detail, full results, and tables, refer to [Supporting Information](#). We obtained informed consent from all participants, and the Institutional Review Board of Harvard University reviewed and approved all materials and procedures in our experiments.

**Study 1.** We recruited 800 adult participants on Amazon Mechanical Turk to participate in a study for \$1. Only participants located in the United States were allowed to complete the study.

We calculated our sample size based on an estimated effect size  $d = 0.2$ , requiring a sample size of ~790 participants for a study powered at 80%. Nineteen participants did not complete the survey; our final sample size was 781 participants ( $\text{mean}_{\text{age}} = 31.88$ ,  $\text{SD} = 8.40$ , 58% female).

**Study 2.** We recruited 437 adults ( $\text{mean}_{\text{age}} = 48.41$ ,  $\text{SD} = 11.50$ , 50% female) from ClearVoice, an online panel of employed individuals provided by an organization working with academic institutions, to complete a short survey in exchange for \$1. When we contacted ClearVoice, we asked for 500 respondents, 50% male and 50% female, all employed, knowing that we might not be able to obtain the full sample by the study deadline. We only obtained complete data from 437 respondents before the study deadline. We calculated our sample size based on an estimated effect size  $d = 0.3$ , requiring a sample size of ~470 participants for a study powered at 90%.

**Study 3.** We contacted 1,762 MBA students who had graduated from a top MBA program in the United States in the last two years (i.e., 2013 and 2014) via email and asked them to fill out a short survey by a given deadline. Six hundred thirty-five ( $\text{mean}_{\text{age}} = 29.93$ ,  $\text{SD} = 2.14$ , 39% female) replied by the deadline, corresponding to a 36% response rate. Respondents were not paid for their participation.

We calculated our sample size based on an estimated effect size  $d = 0.3$ , requiring a sample size of ~580 participants for a study powered at 95%. We expected a response rate of about 30%, when in fact it was higher.

**Study 4.** We recruited an online panel of 247 adults from Amazon Mechanical Turk ( $\text{mean}_{\text{age}} = 29.70$ ,  $\text{SD} = 9.51$ , 44.9% female) to participate in a study in exchange for \$1. Only participants located in the United States were allowed to complete the study. We recruited 250 participants; three of them did not complete the survey, so our final sample size was 247 participants.

**Study 5.** Four hundred sixty-five working adults (mean<sub>age</sub> = 29.46, SD = 7.83, 35% female) from Amazon Mechanical Turk participated in the study in exchange for \$0.50. We calculated our sample size based on an estimated effect size  $d = 0.3$ , requiring a sample size of ~470 participants for a study powered at 90%.

**Study 6.** Participants for this study were enrolled in executive education courses that focused on leadership, decision making, and negotiation at a top US business school. They were all mid- to senior-level managers from a broad cross-section of industries, and they were not compensated for their participation. Two hundred four people (mean<sub>age</sub> = 37.94, SD = 6.30, 52 female, 152 male) completed the study as part of their classwork.

**Study 7.** Five hundred thirty undergraduates at a top university in the United States participated in exchange for a \$10 Amazon gift card (mean<sub>age</sub> = 22.14, SD = 3.15, 46.9% male).

We calculated our sample size based on an estimated effect size  $d = 0.3$ , requiring a sample size of ~580 participants for a study powered at 95%.

However, we obtained only 530 responses by the deadline we imposed before running the study.

**Study 8.** Four-hundred eighty-four people (mean<sub>age</sub> = 32.56, SD = 9.54, 60.2% male) from Amazon Mechanical Turk participated in the study for \$0.50. We calculated our sample size based on an estimated effect size  $f = 0.15$ , requiring a sample size of ~490 participants for a study powered at 80%.

**Study 9.** We collected data from 265 executives enrolled in executive education courses focusing on influence, decision making, and negotiation at a top US business school. Study participation was completed as part of their required coursework.

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