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Women's Bragging Rights: Overcoming Modesty Norms to Facilitate Women's Self-Promotion

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Abstract

Within American gender norms is the expectation that women should be modest. We argue that violating this "modesty norm" by boasting about one's accomplishments causes women to experience uncomfortable situational arousal that leads to lower motivation for and performance on a self-promotion task. We hypothesized that such negative effects could be offset when an external source for their situational arousal was made available. To test hypotheses, 78 women students from a U.S. Northwestern university wrote a scholarship application essay to promote the merits of either the self (modesty norm violated) or another person as a letter of reference (modesty norm not violated). Half were randomly assigned to hear information about a (fake) subliminal noise generator in the room that might cause "discomfort" (misattribution available) and half were told nothing about the generator (normal condition: misattribution not available). Participants rated the task and 44 new naive participants judged how much scholarship money to award each essay. Results confirmed predictions: under normal conditions, violating the modesty norm led to decreased motivation and performance. However, those who violated the modesty norm with a misattribution source reported increased interest, adopted fewer performance-avoidance goals, perceived their own work to be of higher quality, and produced higher quality work. Results suggest that when a situation helps women to escape the discomfort of defying the modesty norm, self-promotion motivation and performance improve. Further implications for enhancing women's academic and workplace experiences are discussed.

Keywords

social norms, motivation, attribution, performance, modesty, impression management

Several years ago, we were putting together a magazine featuring the achievements of women faculty on campus. We put out a call for women to share their successes and accomplishments in teaching or research or family life. We received no replies. We did, however, receive many replies from people telling us about *other* women we should feature and the good work that these other women on campus were doing. Examples such as ours illustrate that many women are fine with referencing the good works of others but are reticent to promote themselves. Such possible discomfort likely stems, at least in part, from a lifelong process of learning gender norms (Blakemore, 2003), whereby girls are typically told to "act like a lady" and be polite and quiet, take up little space, and be modest (Allen, Gervais, & Smith, 2013; Blakemore, 2003). Girls are thus socialized to be modest (Bronstein, 2006; Leaper, Breed, Hoffman, & Perlman, 2002), and research shows this modesty norm influences women's adult professional careers (Budworth & Mann, 2010; Rudman, 1998; Rudman & Glick, 1999). Professional careers and academic purists in the United States often require that people self-promote in order to achieve success. Therefore, conforming to modesty norms may prevent women from advancing or succeeding

(e.g., negotiating a high starting salary; Small, self-promote in order to achieve success. Therefore, conforming to modesty norms may prevent women from advancing or succeeding (e.g., negotiating a high starting salary; Small, Gelfand, Babcock, & Gettman, 2007; Wade, 2001). Thus, it is critical to understand ways to enhance women's self-promotion without incurring norm-breaking backlash. The aim of the current study was to empirically test whether women's self-promotion performance and motivation could be protected against such norm-breaking discomfort using a misattribution intervention.

We argue that breaking the gender modesty norm causes women to experience discomfort (manifested as situational arousal, anxiety, or fear). Certainly, one way to escape such discomfort is to downplay or opt out of self-promoting all together, thereby conforming to the modesty norm. Indeed, women often want to publicly appear modest (Gould & Slone, 1982). To be modest means having a moderate opinion of one's self and lacking pretentiousness, as well as denying responsibility for successes and accepting responsibility for

failures (Gould & Slone, 1982; Moss-Racusin, Phelan, & Rudman, 2010). For example, women lower their claims of success in a public (vs. private) setting, whereas men's claims of success are not influenced by the setting (Gould & Slone, 1982). This modesty norm is embedded within the communal orientation expectations for women. Indeed, women are socialized to highly value communal goals, such as the goal to help others and connect with others (Diekmann, Brown, Johnston, & Clark, 2010). Women are therefore expected to be selfless, which is one of the components of modesty (Wade, 2001). Because women are expected to be selfless, they are also expected to advocate for others rather than for themselves. The implication then is that the modesty norm pressures women to advocate for rewards for other people, but not for themselves. Such cultural norms may be one reason why gender disparities persist in hiring practices, promotions, awards, raises, and other important workplace outcomes (Amanatullah & Morris, 2010; Rudman, 1998).

Norm-Consistent and Inconsistent Behavior

What happens when someone adheres to (vs. violates) a given gender norm? Adhering to gender norms can be beneficial. Women who behave in a norm-consistent manner are liked more than women who behave in a norm-inconsistent manner (Crawford, 1988). For example, a woman who displays sadness (a gender-appropriate emotion for women; Condry & Condry, 1976) in an interview setting is viewed more positively than the same woman who displays anger—with the opposite being true for men (Brescoll & Uhlmann, 2008). This positive perception of norm consistency translates to other important outcomes. For example, women who adhere to gender norms by not expressing anger are accorded higher status and higher wages, and they are seen as more competent than women who do express anger (Brescoll & Uhlmann, 2008; Rudman & Glick, 2001).

Whereas acting in a norm-consistent manner is often beneficial (Wade, 2001), violating a given norm is negatively regarded. People who behave in a manner inconsistent with gender norms often suffer interpersonal consequences (Brescoll, 2011; Brescoll & Uhlmann, 2008; Moss-Racusin et al., 2010; Rudman, 1998; Rudman & Glick, 1999). For example, even in circumstances where agentic qualities are necessary (e.g., management or CEO positions), women are more personally derogated and disliked by others when they display agentic (masculine) characteristics (Brescoll, 2011). This “backlash” can ultimately result in agentic women experiencing hiring, promotion, and wage discrimination (Rudman & Glick, 1999).

Women who boast about their own accomplishments violate the gender norm of modesty (Rudman, 1998). Such “self-promoting” is defined as divulging one's own accomplishments and credentials. In an interview setting, where such self-promotion might be viewed as essential to success, women

might find themselves in a double bind: If they self-promote, they are violating gender norms and might experience backlash; if they do not self-promote, they might not convey their qualifications (Bowles & Babcock, 2012). Thus, even though the setting requires self-promotion, women's violation of the gender norm may lead to negative consequences.

Furthermore, women may be more likely to “police” other women's gender norm violation. As a demonstration of this pattern, Rudman (1998) had women and men engage in an interview task with two other people. One of the applicants was a self-promoting woman and the second was either a self-promoting man or a self-effacing man. Participants were told they would be choosing one of the two applicants as their partner in a competitive game with the potential to win a cash prize. Results showed that only women found the self-promoting woman less competent, less socially attractive, and less hireable than the self-promoting man. What is more, women disproportionately chose the self-promoting man as their partner over the self-promoting woman; however, men chose equally between men and women. Importantly, the results showed that when a self-promoting woman was up against a strong male applicant, she was less likely to get the job, especially if women were making the hiring decision (Rudman, 1998).

Not only do onlookers disparage women who violate gender norms, but women themselves often go to great lengths to avoid the potential backlash associated with norm violations, even when it goes against their self-interest (Brescoll, 2011). For instance, women who are modest and communal should not be out for self-gain, and research shows that women do not negotiate as effectively as men—not because they are inherently unskilled at negotiations, but because women downplay their negotiation skills to avoid the backlash associated with gender norm violation (Amanatullah & Morris, 2010). In their research, women who self-promoted by negotiating on behalf of themselves (thus violating the modesty gender norm) conceded much more than those who were negotiating on behalf of others (which is consistent with a communal interdependent gender norm). Results suggest that women are not unable to negotiate, but instead women may not negotiate on their own behalf in order to avoid the consequences associated with norm violation.

When women are promoting the accomplishments of a peer, this other-orientation does not violate the modesty gender norm. As evidence, Moss-Racusin and Rudman (2010) had participants either promote themselves (modesty norm violation) or promote a peer (modesty norm consistent). When women promoted the accomplishments of another person, they showed increased promotion success; in contrast, when asked to promote themselves, women were less successful and felt ill at ease. Thus, similar to the pattern we saw with negotiation research, it does not appear that women are incapable of promoting accomplishments; rather, women seem to hold back when it comes to specifically promoting their *own* accomplishments. Additionally, men in Moss-Racusin

and Rudman's study reported higher levels of success after self-promoting than women, suggesting that the barriers to self-promotion that are present for women do not extend to men.

Women's motivation for self-promoting seems to be bounded by specific contextual features, including situational norms that suggest acceptance of the behavior versus norms that trigger backlash fears (Rudman, Moss-Racusin, Glick, & Phelan, 2012). Indeed, people are typically uninterested in and do not value activities that are perceived to violate gender norms (Allen & Smith, 2011; Boiche, Plaza, Chalabaev, Guillet, & Sarrazin, 2014; Diekmann et al., 2010; Horgan & Smith, 2006). For example, heterosexual men who participated in a medical task setup as norm-inconsistent (i.e., a task typical of nurses) reported lower interest in the task compared to men who engaged in the *same task* that was presented as norm-consistent (i.e., a task typical of doctors; Allen & Smith, 2011). Certainly, stereotypes and social norms contribute to a person's reduced motivation, and such reduced motivation in turn reinforces those very social norms—together creating a reciprocal feedback loop (Eagly, Wood, & Diekmann, 2000; Rudman et al., 2012; Smith, 2004; Thoman, Smith, Brown, Chase, & Lee, 2013).

One way that stereotypes and norms harm a person's performance and motivation is through the adoption of performance-avoidance goals (Brodish & Devine, 2009; Smith, 2004; Smith, Sansone, & White, 2007). Contemporary achievement goal scholarship (Elliot & McGregor, 2001; Finney, Pieper, & Barron, 2004; Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000) shows performance-avoidance goals orient the person toward avoiding performance failure relative to others; alternatively, performance-approach goals orient a person toward performing well relative to others. These goals are differentially activated by salient contextual cues (Urdu, 1999). Thus, one question we ask in the present article is whether engaging in self-promotion under gender norm-consistent versus inconsistent conditions influences women's adoption of performance goals. Moreover, women's lower self-promotion performance and motivation could potentially correlate with performance-avoidance goal adoption given that these avoidance goals are associated with a host of maladaptive outcomes, including underperformance and decreased interest (Harackiewicz et al., 2000).

If the self-promotion context is made more positive, women may adopt fewer performance-avoidance goals and instead adopt more performance-approach goals. Performance-approach goals are characterized by a mixture of both positively and negatively valenced antecedents, including a fear of failure, high competence valuation, and competitiveness (Elliot & McGregor, 2001). Educational studies show a consistent link between performance-approach goals and increased academic performance, and sometimes, increased academic interest (Harackiewicz et al., 2000).

A Situational Arousal Account of Modesty Norm Violation

One potential way to make self-promoting more positive for women is by reducing situational arousal. People often experience situational arousal when they act inconsistently (Zanna & Cooper, 1974). Indeed, people are motivated to behave in a way to maximize consistency and to minimize inconsistency in cognitions, feelings, and actions (Shaw & Skolnick, 1973). In this context, consistency implies that the cognitions, feelings, and actions of an individual "match." For example, if a woman knows that norms dictate that women should not brag about their accomplishments yet she finds herself in a situation where she must self-promote, this "mismatched" experience can trigger situational arousal. Such arousal is often experienced as discomfort, anxiety, fear, or nervousness, as well as physiological symptoms such as increased perspiration or heart rate (Zanna & Cooper, 1974). Situational arousal can be misattributed, however, reducing the influence of the discomfort. Zanna and Cooper (1974) found that when provided with an alternate external source of arousal (i.e., a pill that ostensibly caused arousal), participants induced to experience high cognitive dissonance were less likely to feel they needed to act consistently and were less likely to change their opinions to match their behavior. Because participants were able to misattribute the arousal associated with cognitive dissonance to the pill, they did not have to adjust their opinions in order to alleviate the arousal caused (in this case) by cognitive dissonance. Their results suggest that when situational arousal is misattributed to an alternate external source, the need to act consistently is alleviated (Cooper, 1998; see also Cooper, Zanna, & Taves, 1978; Zanna & Cooper, 1974).

Misattributing situational arousal is a potential way, then, for someone to overcome the need to act consistently. Less is known about whether such misattributions of arousal can work to overcome deeply embedded anxiety and fear resulting from cultural gender norms and expectations. Two studies on stereotype threat and misattribution do offer promising evidence; in both studies, results showed it was possible for women to overcome the anxiety associated with taking a stereotype-threatening test (in which the norm is for women to fail the exam) and improve their performance when an alternative source for arousal was provided (Ben-Zeev, Fein, & Inzlicht, 2005; Johns, Schmader, & Martens, 2005). Typically, when women are in a stereotype-relevant situation (such as when taking a math test) even subtle cues such as marking their gender on the test, or being outnumbered by men, can trigger stereotype threat and lead to lower performance (Inzlicht & Ben-Zeev, 2000; Smith et al., 2007; Smith & White, 2002). Yet, when women were given an external source to misattribute their arousal (they were taught that the stereotype itself is the source of anxiety or shown a subliminal noise generator that supposedly

emitted an arousal-causing noise), women performed better on the math test compared to women who were not given an external source (Ben-Zeev et al., 2005; Johns et al., 2005). Thus, it appears that misattributing arousal might serve as one pathway to reduce the discomfort associated with violating the gender modesty norm and thus free women to engage in high-level self-promotion.

Study Overview

Given that the desire to behave consistently with the modesty norm acts as a barrier to self-promotion in women (Moss-Racusin et al., 2010; Rudman, 1998; Rudman & Glick, 1999), our project aimed to test whether women who violate the modesty norm but are given an opportunity to misattribute any arousal would show an improvement in their self-promotion. We compared these results to a condition in which women completed a similar task but did not break the modesty norm—namely by promoting the accomplishments of someone else. We assessed both motivation (interest, performance-approach goal adoption, and performance-avoidance goal adoption) and promotion performance (actual and self-perceived). We also included two potential control variables: length of the promotion essay in terms of word count and participants' ratings about the perceived value of the promotion task.

This reasoning led us to propose two hypotheses. First, we hypothesized that we would replicate the effect of the modesty norm within the normal (no misattribution available condition) such that self-promoting women who violated the modesty norm would be less motivated and would perform worse than women who promoted on behalf of another (Hypothesis 1). Second, we hypothesized that the negative impact of violating the modesty norm would be attenuated by misattribution availability whereby the motivation and performance gap between self-promoting and other-promoting women would close when self-promoting women were provided with a misattribution source for any situational arousal (Hypothesis 2).

Breaking down our second hypothesis, we predicted that when provided with our misattribution-available experimental condition, women who violated the modesty norm would show equal or improved motivation and performance compared to women who did not violate the modesty norm, thus closing the modesty norm gap found under normal conditions (Hypothesis 2a). Furthermore, we predicted that misattribution availability would enhance motivation and performance for women who violated the modesty norm compared to women who violated the modesty norm but were not provided with an alternate external misattribution source (Hypothesis 2b). Finally, we anticipated that the misattribution source would have no effect on women promoting on behalf of another person (Prediction 2c). In sum, we expected that women in the norm violation condition without a misattribution source would differ from the remaining three cells of our 2 (modesty

norm violated vs. not violated) $\times$ 2 (misattribution available vs. not available) design.

Method

Participants and Study Design

Participants were 78 women ($M_{\text{age}} = 19.78$ years, standard deviation = 3.24, range = 18–42; 90.6% White; 2.1% African American; 1% Asian; 1% Latino; 2.1% Native American; 3.2% unreported) introductory psychology students who participated for partial course credit. Participants were randomly assigned to one of four conditions in a 2 (modesty norm violated vs. not violated) $\times$ 2 (misattribution available vs. not available) between-participants design. There were 39 women in each of the misattribution conditions, with approximately equal numbers of participants within each misattribution condition assigned to the modesty norm violated ($n = 21$ in both misattribution conditions) and modesty norm not violated ($n = 18$ in both misattribution conditions) conditions. Because of time constraints, data from four participants (two in each of the misattribution conditions) were incomplete on the survey measures; however, because the surveys were counterbalanced (with the exception of the manipulation check and demographic survey which were always handed out at the very end of the study session), the missing data were not consistently on one outcome. Thus, degrees of freedom we report reflect the number of participants with complete data on that particular measure.

Procedure and Materials

Participants were recruited for a study on the “Psychology of Communication,” supposedly in conjunction with the Office of Career Services, meant “to look at ways to improve personal essays.” All participants were told they would be writing an essay as if they were applying for a US\$5,000 university scholarship and that the essays would be reviewed by a staff member and used in workshops to “aid undergraduates with their writing.” All participants received an actual description of a university scholarship (the “University System Honor Scholarship”). This cover story and design were adapted from Moss-Racusin and Rudman (2010).

At this point, all participants were told that the department was “researching the effects of extraneous distractions on task performance,” and as such, everyone would complete a survey at the very end of the study on their perceptions of any distractions experienced during the session. Participants in the misattribution condition then received information about the “black box subliminal noise generator” (described later). Next, all participants were instructed by the computer about whom to write (modesty norm violation manipulation): themselves (norm violation) or another student (norm not violated). Participants were given 5 min to brainstorm before the computer prompted them to begin typing their essay and then were given 20 min to complete their essay. After time

elapsed, all participants completed a survey packet, were debriefed, and thanked. Participants' essays were saved in Microsoft Word documents, and a separate set of participants rated the quality of the essays.

Modesty norm violation manipulation. All participants completed the same "promotion task" (scholarship essay), but the instructions for the essay differed. Participants assigned to the modesty norm *violation* condition were instructed to write the essay as if they personally were submitting it for the scholarship; specifically, they were told to write about their own accomplishments and successes. Participants assigned to the modesty norm *not violated* condition were instructed to write the essay on behalf of a friend who was submitting for the scholarship, that is, to write about their friend's accomplishments and successes. The use of self- versus other-directed promotion as a manipulation of the modesty norm was adapted from Moss-Racusin and Rudman (2010).

Misattribution availability and manipulation check. For the manipulation of misattribution, we opted to use an external object as the source of situational arousal. (Past research has used items ranging from a cubical booth, screen filters, flickering lights, a pill, and a noise generator.) We selected the subliminal noise generator and created an ominous black box, replete with wires and speakers (Ben-Zeev et al., 2005; Olson, 1988). Participants in the misattribution available condition were told the subliminal noise generator caused side effects such as "increased heart rate, nervousness, and arousal," thereby providing participants with an alternate external source of any discomfort. Participants in this condition were then played sample tones by the experimenter, which in reality were three tones played discretely from an iPod. Participants assigned to the no misattribution available condition were told nothing about the subliminal noise generator therefore not providing them with an alternate, external source of situational arousal. The subliminal noise generator was present in the room in both conditions and in reality did not produce any sounds.

At the end of the study session, all participants completed a "departmental equipment inventory" designed to test the effectiveness of the misattribution manipulation. To ensure that all participants could answer the item, including those not in the misattribution condition, the research assistant handed out a half-page survey and explained "now that you have completed the experiment, the primary investigator and the Departmental Review Board would like to collect your thoughts and experiences regarding the session." The survey included filler items including questions about any noise they might have heard and other elements in the room (e.g., their computer) as well as a target item about the black box generator. Participants responded to the item, "I feel the subliminal noise generator made me feel nervous," on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Motivation measures. Two sets of measures tapped participants' motivations regarding the "promotion task" (essay writing). First, to assess interest, the survey measure of task ratings was adapted from Smith, Sansone, and White's (2007) study, including 5 items ($\alpha = .91$) such as "I would describe this task as very interesting" and "This task was fun to do." All items were rated on a Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), and items were averaged so that higher scores indicated higher levels of each motivation.

Second, the two performance goal subscales of the Achievement Goal Questionnaire-Revised (Elliot & Murayama, 2008) were used to measure performance-avoidance goals (e.g., "I just wanted to avoid doing poorly on this task") and performance-approach goals (e.g., "My goal for the task was to do better than most of the students"). Each item was rated from 1 (*not at all true of me*) to 7 (*very true of me*), and items for both the avoidance (3 items; $\alpha = .78$) and approach (3 items; $\alpha = .87$) subscales were averaged so that higher scores indicated higher levels of each motivation. Mastery goals were also assessed with 3 items but did not show any meaningful differences and are thus not reported.

Performance measures. We collected two measures of participants' performance: self-perceived performance and judges' ratings of the quality of participants' essays. First, embedded within a larger survey that contained 10 filler items, 4 items assessed participants' perception of the quality of the essay they had written. Using a scale from 1 (*not at all*) to 6 (*extremely*), participants rated: "When others read your essay, how qualified do you think they will rate the applicant?" "When others read your essay, how competent do you think they will rate the applicant?" "How well do you think you performed on your essay today?" and "How well do you think you promoted in your essay today?" Adapted from Moss-Racusin and Rudman (2010), the internal consistency reliability ($\alpha = .80$) of this measure was sound.

Second, similar to procedures used by Moss-Racusin and Rudman (2010), a new sample of 44 introductory psychology students (60.1% women; $M_{\text{age}} = 20.04$ years; 89.7% White) served as naive raters to determine the amount of scholarship money warranted by the quality of each promotion essay. Participants were told they would be rating several personal essays written by other students applying for a US\$5,000 scholarship. Participants received a description of the scholarship for which the essays were written, six randomly selected essays, and six essay scholarship rating sheets. In order to mask the modesty norm violation condition, the norm not violated (other promotion) essays were changed to first person. For example, the sentence "She is very successful" became "I am very successful." Participants were told to rate the essays starting at the top of the pile and to move on only after completely rating the previous essay. The essays each participant-judge received were counterbalanced to control for order effects.

Table 1. Correlations Among the Dependent Measures.

	1	2	3	4	5	6
Potential control variables						
1. Task value	—					
2. Essay word count	.24*	—				
Motivation						
3. Interest	.48***	.19	—			
4. Performance avoidance goals	.04	-.07	.12	—		
5. Performance approach goals	.30**	.22	.37***	.36**	—	
Performance						
6. Perceived performance	.30**	.25*	.20	.02	.29*	—
7. Scholarship amount awarded	-.19	.11	.00	-.31**	-.03	.11

* $p < .05$. ** $p < .01$. *** $p < .001$.

Judges responded to the item “Given a scholarship amount between \$0 and \$5000 how much do you think the applicant will receive?” Each essay written in this study received at least two (and sometimes three) independent dollar amount judgments. Akin to a within-subjects design, with essay as the within variable and scholarship rating as the dependent variable, the goal was to get an average dollar amount from at least two new (naive) participants as to the scholarship amount the essay warranted. The average dollar amount awarded resulted in a data set with the 75 essays as units. No two judges rated the same set of six essays. This overall mean dollar amount served to measure the quality of each participant’s essay performance.¹

Potential control measures. We also explored the possible influence of the variables on task value and effort. To measure task value, 3 items ($\alpha = .83$, e.g. “I think this was a valuable task”) from Smith et al.’s (2007) study were interspersed within the same survey as the interest items detailed above. These items were rated on a Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) and were averaged so that higher scores indicated higher perceived value of the promotion task. As an estimate of effort on the task, the number of words participants wrote for their essay was counted using a word count application.

Results

Preliminary Analyses

The response to the item measuring the effectiveness of the misattribution manipulation was submitted to a 2 (modesty norm violated vs. not violated) $\times$ 2 (misattribution available vs. not available) analysis of variance (ANOVA). As expected, results yielded a significant main effect of misattribution condition, $F(1, 74) = 21.43, p < .001, \eta_p^2 = .23$. Participants in the misattribution available condition ($M = 2.81, SE = .17$) reported that the subliminal noise generator made them feel significantly more nervous compared to the

misattribution not available condition ($M = 1.67, SE = .17$), indicating that the manipulation was successful.

Analyses on our two exploratory variables showed no deficits in task value among women who did and did not violate the modesty norm under normal conditions. Instead, results showed only a significant main effect of modesty norm violation condition, $F(1, 70) = 8.42, p = .005, \eta_p^2 = .11$, such that across misattribution conditions, people valued the task more when self-promoting ($M = 4.89, SE = .19$) compared to when other-promoting ($M = 4.04, SE = .22$). We return to this point in the discussion. Analyses on the exploratory variable of word count as a possible measure of effort yielded a significant interaction between misattribution condition and modesty norm violation condition, $F(1, 71) = 5.59, p = .02, \eta_p^2 = .14$, such that women who violated the modesty norm wrote somewhat fewer words compared to women who did not violate the modesty norm, $F(1, 73) = 3.84, p = .054, \eta_p^2 = .05$. However, this difference was only marginally significant and quite small. Because none of these effects are in directions consistent with our hypotheses, neither task value nor word count can account for our findings and thus were not included in the tests of our hypotheses.

Table 1 displays the correlations among all our measures. Because several of the motivational variables were significantly and positively correlated with each other (albeit not highly correlated), an overarching 2 (modesty norm violated vs. not violated) $\times$ 2 (misattribution available vs. not available) multivariate analysis of variance was conducted using the three motivational dependent measures. The predicted significant interaction emerged across the three motivation measures, $F(3, 67) = 13.79, p < .001$, Wilks’s $\Lambda = .62, = .22, \eta_p^2 = .38$. As such, we felt justified in conducting separate univariate ANOVAs on each motivation measure.

Hypothesis Testing

For our overall analyses exploring motivation and performance, we conducted separate 2 (modesty norm violated vs. not violated) $\times$ 2 (misattribution available vs. not available) ANOVAs on each measure, expecting to find

Table 2. Means Across Dependent Measures for Modesty Norm $\times$ Misattribution Conditions.

Dependent Measure	Misattribution Unavailable		Misattribution Available	
	M	SE	M	SE
Motivation				
Interest				
Violated	2.85 _b	.27	3.88 _a	.28
Not violated	4.03 _c	.34	2.48 _b	.30
Performance avoidance goal adoption				
Violated	4.35 _b	.20	3.56 _a	.20
Not violated	3.51 _a	.23	3.68 _a	.21
Performance approach goal adoption				
Violated	3.38 _b	.22	4.25 _a	.22
Not violated	3.69 _b	.26	3.37 _b	.24
Performance				
Perceived performance				
Violated	3.66 _b	.16	4.29 _a	.17
Not violated	4.37 _a	.19	4.08 _a	.18
Judged performance				
Violated	\$1675.04 _b	242.53	\$2611.91 _a	253.82
Not violated	\$2662.60 _a	290.78	\$2433.82 _a	282.10

Note. Means within each dependent measure not sharing a subscript differ at $p < .05$ using simple effect analyses.

significant interactions. Across misattribution conditions, no main effect of modesty norm violation condition emerged on the motivational variables (experience of interest, performance-avoidance goal adoption, or performance-approach goal adoption) or on the two performance variables (self-perceived performance and judged promotion quality). Instead, results yielded the predicted significant interaction between misattribution available condition and modesty norm violation condition for the experience of interest, $F(1, 70) = 18.76$, $p < .001$, $\eta_p^2 = .21$; for performance-avoidance goal adoption, $F(1, 71) = 5.22$, $p = .02$, $\eta_p^2 = .07$, and for performance-approach goal adoption, $F(1, 71) = 6.29$, $p = .01$, $\eta_p^2 = .08$. Analyses similarly yielded a significant interaction between misattribution condition and modesty norm violation condition for perceived performance, $F(1, 74) = 6.84$, $p = .01$, $\eta_p^2 = .08$, and judged promotion quality in dollars, $F(1, 73) = 4.73$, $p = .03$, $\eta_p^2 = .06$. With these omnibus test results establishing significant interactions for all three motivation measures and both performance measures in mind, we next report the results organized around our two hypotheses. We used simple effect analyses to interpret any meaningful differences across our four conditions.

Hypothesis 1: Replication of the effects of modesty norm violation. Our first hypothesis focused on replicating prior findings of violating the modesty norm whereby, under normal conditions (i.e., no misattribution available), women would report lower motivation and perform worse when promoting the self than when promoting another person. As seen in Table 2 (under the Misattribution Unavailable column), follow-up simple effect analyses decomposing the overall significant interaction for women's motivation previously reported

showed that, *when no misattribution was available*, our first hypothesis was partially confirmed. As predicted, violating the modesty norm by promoting the self resulted in women experiencing significantly less interest, $F(1, 70) = 7.43$, $p = .008$, $\eta_p^2 = .10$, and endorsing significantly more performance-avoidance goals, $F(1, 71) = 7.46$, $p = .008$, $\eta_p^2 = .10$, compared to women who did not violate the modesty norm. Surprisingly, under these normal conditions with no misattribution available, no significant difference emerged between groups violating the modesty norm or not on performance-approach goal adoption.

Turning to women's promotion performance, follow-up simple effect analyses showed that in line with our hypothesis, under normal conditions when a misattribution source was unavailable, women who violated the modesty norm perceived they had performed significantly worse than nonviolating women, $F(1, 74) = 8.19$, $p = .005$, $\eta_p^2 = .10$ (see Table 2 under the Misattribution Unavailable column). Furthermore, essays written by self-promoting women were awarded significantly less scholarship money than essays written by other-promoting women, $F(1, 73) = 6.80$, $p = .01$, $\eta_p^2 = .09$ (see Table 2).

Hypothesis 2: Misattribution availability. To test our second hypothesis, we examined the significant overall interactions reported previously for evidence that when attribution of situation arousal to an external source was available, the deficiencies we found in motivation and performance among women who violated the modesty norm under normal conditions would be eliminated or reversed. Now focusing on the full 2×2 interaction, we compared women who violated the modesty norm to those who did not violate the norm when a misattribution was both unavailable and available.

Figure 1. The amount of scholarship money awarded in dollars by student judges (judged performance) across the four cells of the 2×2 design crossing modesty norm violation with misattribution availability.

Hypothesis 2a: Closing the modesty norm violation gap. As shown in Table 2, follow-up simple effect analyses showed that when the subliminal noise generator was available to misattribute any arousal, violating the modesty norm (by promoting the self) resulted in women reporting significantly more interest for the task compared to those women who did not violate the modesty norm, $F(1, 70) = 11.69, p = .001, \eta_p^2 = .14$. Likewise, women who violated the norm with a misattribution available endorsed significantly more performance-approach goals, $F(1, 71) = 7.29, p = .009, \eta_p^2 = .09$, and adopted similar levels of performance avoidance goals compared to women who did not violate the modesty norm, $F(1, 71) = 0.20, p = .66, \eta_p^2 = .00$. Thus, for both positive forms of motivation (interest and performance approach goal adoption), having a misattribution source reversed the deficit motivation expressed by women who violated the modesty norm to make self-promoting more motivating than other-promoting. For performance avoidance goals, the former modesty norm violation gap was closed, with both patterns for motivational measures confirming Hypothesis 2a.

Analyses on performance also showed support for Hypothesis 2a by closing the modesty norm violation gap. When a misattribution source was available, the previously found differences between self- and other-promotion on perceived performance and judged promotion quality were eliminated. As shown in Table 2, women who violated the modesty norm perceived equally good performance and received equally high scholarship funding (see Figure 1) when a misattribution was available. These results confirm that having a misattribution available to offset situational arousal alleviates (or even improves) the motivational and performance differences between those who violate the modesty norm and those who do not violate the norm.

Hypothesis 2b: Modesty norm violation and misattribution. Next, we wanted to test whether our misattribution availability intervention could improve the motivation and

performance for women who violated the modesty norm. Results confirmed this hypothesis. Compared to women violating the modesty norm under normal conditions, women promoting the self with a misattribution available were significantly more likely to express interest in the task, $F(1, 70) = 7.03, p = .01, \eta_p^2 = .09$, to endorse fewer performance-avoidance goals, $F(1, 71) = 8.03, p = .006, \eta_p^2 = .10$, and to adopt more performance-approach goals for the task, $F(1, 71) = 7.71, p = .007, \eta_p^2 = .10$.

Performance was also enhanced for women violating the modesty norm with a misattribution available, compared to when it was unavailable. As seen in Table 2, follow-up simple effect analyses showed promoting the self with a misattribution available resulted in significantly better self-perceptions of performance compared to when no misattribution was available, $F(1, 74) = 7.28, p = .009, \eta_p^2 = .09$, and resulted in women receiving more scholarship money from the judges, $F(1, 73) = 7.12, p = .009, \eta_p^2 = .09$. Thus, Hypothesis 2b was confirmed across all three motivational and both performance measures.

Prediction 2c: Modesty norm non-violation and misattribution. Finally, we wanted to examine whether the availability of the misattribution influenced the motivation and performance (one way or the other) for women who did not violate the modesty norm. Assuming that no situational arousal comes from engaging in a modesty-norm consistent task (promoting another person), we did not expect any influence of misattribution availability. As shown in Table 2, for women who did not violate the modesty norm, misattribution availability did not change the adoption of performance-avoidance goals or the adoption of performance-approach goals. Surprisingly, other-promoting women did report significantly less interest for the task when a misattribution was available (vs. not available), $F(1, 70) = 11.77, p = .001, \eta_p^2 = .14$. We return to this point in the Discussion section. Performance was also largely unaffected by misattribution availability for women who did not violate the modesty norm. Indeed, misattribution condition did not meaningfully change perceived performance or judged quality of the essay when the modesty norm was not violated. With the exception of reported interest, the results generally suggest that the availability of an external source to misattribute situational arousal did not help or hurt the motivation or performance of women who did not violate the modesty norm.

Discussion

Our results replicated and extended past work on the negative effects women experience when violating the modesty norm versus not under normal conditions (when no external source was available to attribute situational arousal). In line with Hypothesis 1, these self-promoting women experienced less interest, were more likely to adopt performance-avoidance

goals, had poorer perceptions of their own performance, and their essays were judged lower in quality compared to women who promoted on behalf of another. Encouragingly, results showed that we were able to close this modesty norm violation gap with misattribution availability. When women who violated the modesty norm in the presence of a subliminal noise generator that they were told could be a source of discomfort, the motivational and performance differences between those who violated the modesty norm or not were eliminated or even reversed. What is more, these positive effects of the misattribution availability were evident when comparing women who violated the modesty norm under normal conditions with those who violated the norm with the misattribution available. The positive effects of the misattribution available for women who violated the modesty norm came largely without consequence to the women who did not violate the modesty norm (albeit with one exception, discussed below).

Taken together then, our results suggest that the availability of a misattribution source for situational arousal improved the promotion experience and the quality of promotion for women who violated the modesty norm. Importantly, our results also showed that women who violated the modesty norm and were given a misattribution arousal source reported greater interest in the promotion task compared to those not given a misattribution source. Improving women's momentary self-promotion performance is important to be sure, but enhancing women's interest is key because such intrinsic motivational experiences could potentially result in more long-term motivation to engage in other self-promotion tasks (Csikszentmihalyi, 1978; Thoman et al., 2013). To our knowledge, ours is the first work to demonstrate that violating the modesty norm impacts the experience of interest in self-promotion.

Greater task interest typically depends on the type of achievement goals adopted during task engagement (Elliot & Harackiewicz, 1996). Indeed, our data showed that women adopted more performance-avoidance goals when self-promoting under normal conditions and adopted more performance-approach goals when self-promoting with a misattribution available. Although not examined as a mediator (because goals were assessed following the promotion task), future research would benefit from understanding how performance-goal adoption, especially performance-avoidance goals, might influence self-promotion experiences. We had predicted that women who violated the modesty norm under normal conditions would adopt performance-approach goals less often, but this was not the case. Perhaps the nature of the task instructions (to write an essay to try to win a scholarship) subtly triggered performance-approach goals to "do well compared to others" among all participants, washing out the effects. Nevertheless, when a misattribution was available, performance approach goals were adopted more often by women who violated the modesty norm compared to those who did not

violate the norm suggesting that these goals are important to consider.

As laid out at the onset, the act of self-promotion is a violation of the modesty norm. Thus, we explored the possibility that task value and effort (as indexed by number of words written) would also be negatively impacted when violating the modesty norm. Yet, under normal conditions (i.e., when no misattribution source was available), the perceived value of the task remained the same no matter if the modesty norm was violated or not. Moreover, collapsing across the two misattribution conditions, women who promoted the self rated the task higher in value compared to women who promoted other people. It is possible that the nature of the task (a scholarship essay) is seen as more personally valuable generally speaking because of the potential for direct financial gain. Certainly, decades of work on the "self-referencing" effect and "ego-involving" task orientations suggest that self-related tasks are often processed at a deeper level and are viewed as more important and interesting (Butler, 1987; Symons & Johnson, 1997). Still, despite seeing the higher value of the self-promotion task, these women were less likely to enjoy the task and suffered performance decrements compared to women who did not violate the modesty norm under normal conditions.

Furthermore, our results showed some negative effects of the subliminal noise generator such that women who other-promoted when the misattribution source was available reported less task interest compared to women who other-promoted without a misattribution available. It was predicted that other-promoting would not be affected by the availability of a misattribution because other-promoting does not violate the modesty norm. One possibility for this finding is that the misattribution source muted any positive feelings people might have when writing about the accomplishments of a friend, decreasing any "basking in reflected glory" affiliation experiences (Snyder, Lassegard, & Ford, 1986). However, we interpret these results with caution, given that no other measure showed these unexpected results.

Potential Sources of Situational Arousal

Taken together, results of the current project showed that violating the modesty norm can act as a barrier to women's self-promotion and that, under normal circumstances (when no misattribution source for any discomfort is provided), self-promotion is of lower perceived and actual quality; results in greater performance-avoidance goal adoption; and diminishes the experience of interest. However, when women self-promote under conditions that provide an opportunity to misattribute any situational arousal, the gap between violating the modesty norm and not violating the modesty norm was eliminated (to similar levels of performance-avoidance goal adoption as well as perceived and actual performance) or even reversed (higher interest and performance-approach goal adoption). This evidence

suggests that, under particular situational arousal-reducing circumstances, women are able to promote as well for themselves as they do for others.

There are a number of possible explanations for these findings. For example, decades of research on Festinger's cognitive dissonance theory shows that when people behave in a manner inconsistent with their own beliefs, they experience discomfort (Festinger & Carlsmith, 1959; see also Cooper et al., 1978; Elliot & Devine, 1994; Harmon-Jones, Brehm, Greenberg, Simon, & Nelson, 1996). Cognitive dissonance occurs any time a person has two psychologically conflicting cognitions, such as behaving in a manner inconsistent with opinions, or as we argue here, when behaving in a manner inconsistent with gender norms. Thus, women in our study may have experienced arousal because they were asked to self-promote and such behavior is inconsistent with the modesty norm.

Another possible explanation is that women who self-promote experience fear-of-backlash (for a review, see Rudman et al., 2012), and this backlash fear manifests as situational arousal. As outlined in the backlash avoidance model (Moss-Racusin & Rudman, 2010), women experience worry and fear over the (often very real) "social and economic penalties" associated with violating gender norms (Brescoll, 2011; Rudman, 1998). This fear of backlash may manifest as situational arousal, although this connection remains for future research to document. Worry or fear over confirming a stereotype is yet another alternative explanation for the source of situational arousal experienced by women who self-promoted in our study. Women who worry about confirming a stereotype, ironically, underperform and experience reduced task motivation (for reviews, see Nguyen & Ryan, 2008; Thoman et al., 2013). Although the role of anxiety in stereotype threat effects on performance is uncertain (see Smith, 2004, for a review), there is converging evidence that stereotype threat creates generalized situational arousal (Johns et al., 2005; O'Brien & Crandall, 2003) that may manifest as physiological arousal (Croizet et al., 2004). Thus, to the extent that women who self-promoted were concerned about confirming gender stereotypes, stereotype threat may have triggered situational arousal. Our current data cannot speak to the nature of the situational arousal, but no matter the explanation (e.g., cognitive dissonance, fear of backlash, and stereotype threat), our data show when a source for any uncomfortable arousal was provided, this misattribution resulted in increased promotion success.

Practice Implications

Our results add to the literature that should give search committees and award committees pause in relying heavily on self-generated cover letters and essays in making determinations of merit because women may undersell themselves following societal norms associated with modesty gender norms

(Moss-Racusin & Rudman, 2010). One strength of our project was in testing misattribution as an intervention; we found the availability of an object (in our case, a subliminal noise generator) to misattribute any situational discomfort closed the gap between those women who did and did not violate the modesty norm. Admittedly, a fake subliminal noise generator would be difficult to implement in practice. However, telling people that their computer screen or the cubical in which they are working can cause discomfort are other possible external objects that might be used to attribute situational arousal. The next step is to ferret out the short- and long-term benefits of these and other misattribution strategies. For example, women who are taught to blame gender stereotypes for any discomfort they experience during a math test perform better (Johns et al., 2005). Perhaps women who are taught to blame modesty norms would similarly show an improvement in self-promotion. Along these lines, "normalizing" self-promotion as "part of the job" (particularly in certain domains that are male-dominated, such as science and math) could result in an improvement not only to a woman's self-promotion experience but also her feelings of belonging and motivation for the job itself (for a similar "normalizing" intervention strategy regarding effort expenditures, see Smith, Lewis, Hawthorne, & Hodges, 2013).

Limitations and Next Steps

It is certainly possible that all people, including men, experience situational arousal when promoting the self. Although our focus here was on women, future research will benefit from such a gender comparison. However, the modesty norm is particular to women's gender roles (Bronstein, 2006); because men's gender roles include traits such as arrogance and assertiveness (Moss-Racusin et al., 2010), thus, it is unlikely that the modesty norm would similarly limit men's self-promotion. Nevertheless, men who do violate gender norms associated with agency experience backlash by others. For example, when a male candidate answered interview questions in a modest manner, he suffered interpersonal consequences (by observers) for violating the gender norm that men should be agentic (Moss-Racusin et al., 2010). Future research would also do well to include cross-cultural comparisons to determine the generalizability of the effects of violating the modesty norm (and ways to offset it) because, in some cultures (e.g., Japan), men and women alike are expected to be modest and humble (Markus & Kitayama, 1991).

To our knowledge, our research is the first to consider women's self-promotion motivational experiences and performance tendencies using a misattribution paradigm. Past work assumed women were capable of self-promotion because of their ability to promote another person (Moss-Racusin & Rudman, 2010); thus, the deficiency is assumed to not be in promotion ability per se. Our data are the first known to clearly demonstrate that women's self-promotion can be just as high in quality as other-promotion, and, what is more, that the

promotion experience can be positive. When provided with a source to misattribute discomfort they might experience while self-promoting, women reported enhanced motivation and perceived their performance to be better, and their essays were awarded more scholarship money by independent judges. This is important considering that women must self-promote in order to acquire educational and career advancement. The gender wage gap, for example, persists, and it is possible that the uncomfortable arousal women experience when self-promoting is contributing to this gap. If self-promotion is necessary and women are uncomfortable doing so then, without a situational intervention, their applications may be viewed as lower in quality and thus women may be passed over for promotions and raises. Our data offer insight into one situational option for helping women self-promote to advance in their professions or negotiate better wages or start-up packages.

It is imperative that, as scholars identify ways to help women self-promote, there is a simultaneous effort to combat the very real backlash that self-promoting women face (Bowles & Babcock, 2012; Brescoll, 2011; Moss-Racusin et al., 2010; Rudman et al., 2012). Perhaps there is a threshold for a “proper” amount of self-promotion that would both benefit woman’s educational and career success and not result in social or economic sanctions. Or perhaps there are ways to standardized self-promotion tasks (e.g., with clear question/answer options) or other ways to gain the same information (e.g., require letters of reference instead of self-generated letters—albeit letters of reference can fall subject to gender bias as well; Schmader, Whitehead, & Wysocki, 2007). Indeed, research on reframing task instructions in a way that is modesty norm consistent (e.g., as an opportunity to “politely ask” versus “negotiate”) enhances the likelihood women will initiate a negotiation (Small et al., 2007).

Conclusion

The current findings suggest that women experience uncomfortable arousal when promoting the self because such self-promotion violates gender norms for modesty. American religious leader Howard Hunter (1997, p. 123) once stated in his teachings that: “The girl who chooses to be modest chooses to be respected. A boy who is honest with himself will admit that he likes a girl who is modest in speech, conduct, and dress. Modesty is one of the great virtues.” Such messages about gender and modesty are conveyed in many ways and are ingrained in American culture (Bronstein, 2006; Budworth & Mann, 2010; Rudman, 1998). We demonstrated that, without providing for the misattribution of situational arousal (e.g., discomfort) that resulted from violation of the modesty norm, women may resolve their discomfort by being modest and downplaying their own accomplishments. With a situational intervention, however, women can misattribute the source of situational arousal and are then free to promote themselves. Indeed, bragging ought to be a “right” afforded to everyone.

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Note

1. This methodology was borrowed from Moss-Racusin and Rudman (2010, study 2), with the only exception that we masked the self- versus other-promotion nature of the condition. Among the 44 new participant “scholarship judges,” because no two participants ever rated the same set of six essays, it is not appropriate to compute interrater reliability. The goal was to get an average rating from at least two new participants regarding the scholarship award money the essay warranted, similar to how an actual panel of judges might review applications for a scholarship. This procedure is akin to a repeated measures design with essay as the within-subjects variable and scholarship rating as the dependent variable.

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