

Group Processes & Intergroup Relations

<http://gpi.sagepub.com>

Gender moderates the self-regulatory consequences of suppressing emotional reactions to sexism

Sarah E. Johnson, Melissa A. Mitchell, Meghan G. Bean, Jennifer A. Richeson and J. Nicole Shelton

Group Processes Intergroup Relations 2010; 13; 215
DOI: 10.1177/1368430209344867

The online version of this article can be found at:
<http://gpi.sagepub.com/cgi/content/abstract/13/2/215>

Published by:



<http://www.sagepublications.com>

Additional services and information for *Group Processes & Intergroup Relations* can be found at:

Email Alerts: <http://gpi.sagepub.com/cgi/alerts>

Subscriptions: <http://gpi.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.co.uk/journalsPermissions.nav>

Citations <http://gpi.sagepub.com/cgi/content/refs/13/2/215>

Gender moderates the self-regulatory consequences of suppressing emotional reactions to sexism

Group Processes & Intergroup Relations

13(2) 215–226

© The Author(s) 2010

Reprints and permissions: <http://www.sagepub.co.uk/journalsPermissions.nav>

DOI: 10.1177/1368430209344867

gpir.sagepub.com



Sarah E. Johnson,¹ Melissa A. Mitchell,²
Meghan G. Bean,¹ Jennifer A. Richeson,¹
and J. Nicole Shelton³

Abstract

This study examined whether members of low-status, stigmatized groups are less susceptible to the negative cognitive consequences of suppressing their emotional reactions to prejudice, compared with members of high-status, non-stigmatized groups. Specifically, we examined whether regulating one's emotional reactions to sexist comments—an exercise of self-regulation—leaves women less cognitively depleted than their male counterparts. We hypothesized that the greater practice and experience of suppressing emotional reactions to sexism that women are likely to have relative to men should leave them less cognitively impaired by such emotion suppression. Results were consistent with this hypothesis. Moreover, these results suggest that our social group memberships may play an important role in determining which social demands we find depleting.

Keywords

emotion suppression, self-regulation, sexism, social stigma

Paper received 31 December 2008; revised version accepted 14 July 2009.

Our social group memberships play a profound role in shaping the types of social situations, and thus the social demands, we are likely to encounter. For instance, members of minority, low-status social groups are more likely to encounter prejudice than members of majority, high-status groups. In the present work, we sought to examine whether their more frequent exposure to prejudice may, ironically, leave members of low-status groups more resilient to potential cognitive consequences of encounters with prejudice, compared with members of high-status groups. Specifically, the

present research examined the role of gender in moderating the cognitive costs of suppressing emotional responses to sexism. We contend that

¹ Northwestern University

² Florida State University

³ Princeton University

Corresponding author:

Sarah E. Johnson, Department of Psychology,
2029 Sheridan Road, Evanston, IL 60208, USA
[email: sjohnson@u.northwestern.edu]

by virtue of their gender, women are more likely than men to have experience with suppressing their emotional responses to blatant sexism. As a consequence, we predict that suppressing emotional reactions to sexism should be less cognitively depleting for women than for men.

Cognitive costs of emotion suppression

Emotion suppression (i.e., expressive suppression) is an emotion regulation strategy defined as an individual's efforts to prevent "ongoing emotion-expressive behavior" (e.g., frowns, facial signs of distress and alarm) from being outwardly visible (Gross, 2002, p. 283). Compared with other emotion regulation strategies, suppression has been found to be particularly costly (e.g., Butler et al., 2003; Gross & John, 2003; Gross & Levenson, 1993; Richards & Gross, 2000). In particular, evidence suggests emotion suppression can have deleterious effects for various components of cognition, including working memory (e.g., Richards & Gross, 2000). In addition to impairing working memory, research suggests that emotion suppression may also impair the broad class of cognitive operations that rely on executive resources, including self-regulation (Baumeister, Bratslavsky, Muraven, & Tice, 1998). According to Baumeister and colleagues' strength model of self-regulation (Baumeister, Vohs, & Tice, 2007; Muraven & Baumeister, 2000), monitoring, adjusting or inhibiting one's actions requires executive resources. When individuals engage in self-regulation, furthermore, they deplete these executive resources (albeit temporarily), leaving them less able to engage in any subsequent tasks that require self-regulation.

Given that emotion suppression involves efforts to conceal one's automatic emotional reactions to a stimulus, it certainly qualifies as an act of self-regulation and, according to Baumeister and colleagues, should leave individuals temporarily depleted and, thus, less able to engage in other self-regulatory tasks. Consistent with this claim, Baumeister et al. (1998) found that participants who had suppressed their emotions while watching an emotionally-evocative film clip subsequently underperformed on an anagram

task—a task that requires persistence and, thus, self-regulation for its successful completion—compared with participants who did not suppress their emotions during the clip.

Group membership, practice, and self-regulatory strength

Taken together, the literature on emotion suppression in particular, and self-regulation more broadly, suggests that suppressing emotional reactions to sexism should be cognitively costly. That is, individuals who suppress their emotional reactions to sexism should experience the aforementioned cognitive costs—including self-regulatory depletion. In the present work, however, we propose that the cognitive costs of suppression may be attenuated for women relative to men, given women's greater experience and, thus, practice with the suppression of sexism-induced emotion. This prediction stems from an aspect of Baumeister and colleagues' strength model of self-regulation that is often overlooked. Specifically, the model suggests that, like a muscle, individuals can build their self-regulatory muscles through training or practice.

Consistent with this theory, recent research has found that practice with self-regulatory tasks can decrease the degree to which such tasks are depleting (Gailliot, Plant, Butz, & Baumeister, 2007; Oaten & Cheng, 2006; for a review, see Baumeister, Gailliot, DeWall, & Oaten, 2006). In addition to experimental studies demonstrating the efficacy of training and practice in bolstering individuals' self-regulatory strength, a few studies have also addressed the possibility that individuals might acquire self-regulatory strength by virtue of dispositional factors or other relatively stable characteristics (Gailliot et al., 2007; Seeley & Gardner, 2003). For instance, Smart and Wegner (1999) instructed female participants to act as if they had an eating disorder that they were trying to conceal during an interpersonal interaction; afterwards, participants' cognitive functioning was assessed. Results revealed that whereas attempting to conceal an eating disorder was cognitively disruptive for women who did not actually have

an eating disorder (i.e., those who were simply pretending to have one for the study), attempting to conceal an eating disorder was not similarly disruptive for women who actually had a disorder. In the discussion of their results, Smart and Wegner (1999) posited that participants with actual eating disorders presumably have repeated interpersonal encounters in which they attempt to hide their condition, which, in turn, provides them with considerable practice that makes concealing their disorder less cognitively costly.

In the current work, we consider the influence of gender group membership, and the differential experiences with sexism it typically confers, on the cognitive costs of suppressing emotional responses to sexism. Recent research supports the premise that group memberships may influence the degree to which individuals find particular tasks depleting (Johnson & Richeson, 2008, 2009; Salvatore & Shelton, 2007; see also Trawalter & Richeson, 2008, for a similar argument). Building on this idea, we wondered whether individuals who are more likely to have experience suppressing their emotional reactions to prejudice are subsequently less depleted by such acts than are individuals who are relatively unlikely to have experience suppressing their emotional reactions to prejudice.

In effect, this hypothesis suggests a “particular resilience” to depletion among members of a devalued group (Inzlicht, Aronson, Good, & McKay, 2006). At first blush, this may seem to run counter to extant evidence regarding the relationship between self-regulatory resources and possessing a devalued identity—namely, that possessing a devalued, or stigmatized, identity is costly and leads to impairments. For instance, Inzlicht and colleagues (Inzlicht, McKay, & Aronson, 2006) have found that subsequent to experiencing a social identity threat (e.g., women about to take a challenging math test), individuals exhibit self-regulatory depletion (e.g., poorer performance on a handgrip measure). This previous research, however, differs from the current work in two ways.

First, whereas previous research compares the costs of managing a devalued identity relative to the situation of no identity threat (that is, a within-group comparison), the current research

poses a between-group comparison: examining the costs of regulating in the face of sexism between individuals from two different groups presumed to have differential experience with such regulation. In a related investigation (Johnson & Richeson, 2009), we examined whether the depleting effect of self-presenting with racial solo status varies by racial group membership in a sample of students in a predominantly White university context. We reasoned that racial minority students are likely to have more experience self-presenting as racial solos (i.e., as the only member of their racial group) compared with White students, and, as a result, should find such a task less depleting. Consistent with this expectation, whereas White participants who self-presented as racial solos persisted less on a difficult task afterwards compared with White participants who did not have solo status, solo status did not undermine the self-regulatory resources of racial minority participants.

The second way in which the present research differs from previous work—wherein stigmatized but not non-stigmatized group members exhibit negative cognitive effects—is its focus on blatant discrimination. Indeed, the predictions of the present work are consistent with recent research by Salvatore and Shelton (2007) demonstrating that in the face of blatant discrimination, Black participants exhibited less cognitive depletion compared to Whites, presumably due to greater familiarity with responding to such situations among the former group. Building on these findings, we examine whether gender moderates the effects of suppressing emotional reactions to blatant sexism.

Whereas there is every reason to believe that women are more likely than men to be exposed to sexism, there is also considerable evidence suggesting that women, and other targets of discrimination, are likely to suppress their emotional reactions when they are exposed to prejudice. Research suggests that targets of discrimination in general, and women in particular, rarely challenge individuals who discriminate against them—even when biased views are expressed in their presence (Swim & Hyers, 1999). For instance, Swim and Hyers found that whereas 80% of

women predicted they would confront (i.e., challenge) a man who made a sexist remark in their presence, when they actually were in this situation, less than half (45%) of women actually did so. Furthermore, confronting perpetrators of discrimination against one's group is particularly unlikely when the perceived social costs of confrontation are high (Shelton & Stewart, 2004). And one such situation in which the social costs of confronting are particularly high (and thus suppression most likely) is when the perpetrator holds greater status and power relative to the target. Given that men disproportionately occupy social roles with greater status and power relative to women (e.g., positions of leadership in the workplace), women may frequently find themselves in a position subordinate to that of the perpetrator of a sexist comment/behavior (e.g., at work). Hence, in addition to encountering more sexism relative to men, women may be especially likely to encounter sexism under circumstances in which they feel compelled to conceal—or suppress—their emotional reactions to it in order to avoid social sanctions.

Taken together, this research suggests that women are not only more likely to be exposed to sexism than men, but they are also more likely to have experience suppressing their emotional reactions to sexism compared with men. In the present study, we test whether or not this differential experience will attenuate the typical cognitive costs of emotion suppression—that is, we consider whether suppressing emotional reactions to blatant sexism is less cognitively depleting for women than for men.

The present study

To examine the impact of gender group membership on the cognitive consequences of emotion suppression, male and female participants were instructed either to suppress their emotions or to behave naturally during an interaction wherein they (the participant) interviewed a male confederate who responded in either a sexist or non-sexist manner. It is important to note that this situation differed for male and female participants

in that only female participants were members of the group targeted by the sexist comments. Importantly, however, we anticipated the encounter with these blatantly sexist views to be emotionally evocative for members of both genders. Thus, we expected both male and female participants to experience negative emotion that, for those instructed to regulate their emotional expression, would need to be suppressed.

Subsequent to the interaction with the sexist confederate, participants completed the Stroop (1935) color-naming task as a measure of self-regulatory depletion. We predicted that, as a result of their increased practice with suppressing sexism-induced emotion, female participants would be less depleted after suppressing their emotions during the interaction with the sexist confederate than would be their male counterparts.

Method

Participants

Fifty-eight (30 female) undergraduates took part in the present study in exchange for partial course credit or \$5. Participants were 19 years old on average ($M = 19.3$ years) and predominantly White (74% White, 20% Asian American, 2% Hispanic, and 4% other).

Measures

Stroop color-naming task The Stroop task was used to assess self-regulatory depletion following the interaction. In this task, participants are asked to identify, as quickly as possible, the script color of a word presented on the screen using one of four different color-coded computer keys (red, blue, green, and yellow). The Stroop task consisted of three types of trials: compatible trials, in which the script color matches the color-word that is presented on the screen (e.g., the word “BLUE” in blue print), incompatible trials, in which the script color differs from the color-word (e.g., the word “BLUE” in red print), and control trials, in which a row of x's (“xxxx”) is printed in one of the four colors used in the task. Correct responses

to the incompatible trials require participants to inhibit their pre-potent response of reading the color word (e.g., blue), to instead identify the font color (e.g., red). Thus, responding correctly to incompatible trials requires self-regulatory resources. Depletion is indicated by Stroop interference, or the difference in response latencies for incompatible compared to control trials; greater Stroop interference indicates greater cognitive depletion.

Manipulation checks Participants' compliance with emotion regulation instructions (i.e., either to act naturally in the control condition, or to suppress their emotional expression in the suppression condition) was assessed in two ways. First, participants simply reported the extent to which their "facial expressions showed negative emotions during the interaction" using a scale ranging from 0 (*not at all*) to 6 (*a great deal*). Second, to supplement these self-reports, independent coders rated participants' emotion expression from videotapes of the interview interaction. A clip from the middle of each videotaped interview that contained the third interview question, including the participant reading the question and then listening as the confederate responded (approximately 45 seconds), was extracted from each participant's interaction tape. Four coders watched each clip (without audio) and rated participants' nonverbal emotional expressiveness using two items: (1) overall emotion expression, and (2) facial rigidity (reverse-scored). Coders made their ratings using 7-point scales ranging from 0 (*none*) to 6 (*a great deal*). The four coders showed acceptable reliability for these two items (average Spearman-Brown $R = .70$). A (standardized) composite of the two items was computed for each coder and then these four composites were averaged to form an overall measure of emotion expression.

Emotional experience In order to verify that the interaction with the sexist confederate induced negative affect as anticipated, participants reported the degree to which they were experiencing negative affect both before and

after the interview task using a single item adapted from Richards and Gross (2000). In particular, participants rated the extent to which they were experiencing negative emotion on a scale ranging from 0 (*not at all*) to 6 (*a great deal*). In addition to these self-reports, the confederate evaluated the participants' emotional experience using the 10 negative affect items from the Positive and Negative Affective Schedule (PANAS; Watson, Clark, & Tellegen, 1988): distressed, guilty, scared, afraid, hostile, irritable, ashamed, upset, nervous, and jittery ($\alpha = .88$).

Post-experimental questionnaire Participants completed a funnel debriefing form that probed for suspicion about the research procedures.

Procedure

When they arrived at the lab, participants were greeted by an experimenter who explained that she was expecting one more participant (i.e., the male confederate) to arrive, and then provided them with a consent form to read and sign. The experimenter then introduced the study, explaining that researchers were trying to uncover people's true feelings about sexism and were asking students to interview each other about their thoughts on a number of sexism-related issues. Participants were informed that they had already been randomly assigned to serve as the interviewer. Furthermore, in an effort to make the confederate's (blatantly sexist) responses more believable, participants were told the researchers had specifically recruited participants who had scored on the extreme high or low ends of a sexism scale at a pre-test to serve as interviewees, in order to capture the full range of attitudes on sexism.

Next, participants completed the pre-interview emotional experience measure and then were given instructions for the interview task. Participants were given a list of questions and instructed to ask all of the questions on the list and avoid saying anything else. In addition, in a further attempt to minimize suspicion, participants

were informed that the interviewees had been instructed to be as honest as possible in responding to the questions, “even if people might find their responses to be controversial or offensive.” Next, participants were introduced to the emotion regulation task using instructions adapted from Richards and Gross (2000). Specifically, participants in the suppression condition were told, “It is important that you maintain a neutral facial expression while you listen to your partner’s comments—that is, suppress any emotional reactions or facial expressions. To do this, concentrate on keeping your facial muscles from moving and keeping a straight face.” In contrast, participants in the control condition were told, “It is important that during the interview you behave naturally while you listen to your partner’s responses—that is, feel free to display your emotions and facial expressions, just as you would in a conversation with someone you know.” Finally, in order to insure adherence to the instructions, the experimenter emphasized the importance of following the directions to avoid “influencing the interviewee”.

At this point, participants were brought to a room where the confederate was waiting. A video camera was positioned in the corner of the room so that participants’ facial expressions could be recorded throughout the interaction. Participants were instructed to begin the interview as soon as the experimenter left. The confederate responded to each sexism-related question with a scripted response.¹ For example, his response to the questions “What do you think of women in leadership positions? What do you think your experience would be like if you had a woman as your boss?” was delivered as follows:

I know it’s becoming more common every year, but I don’t like the idea of women in leadership positions. I know this sounds controversial and un-P.C., but men and women have different leadership styles. Men are more aggressive and competitive, whereas women are more cooperative and encouraging. These characteristics make women poor leaders, but

better in the home. The skills men have make them more valuable and successful leaders.

The interview was stopped after five minutes, at which point participants were brought to a separate room to complete the post-interview emotional experience measure. Next, participants completed the Stroop task, framed as part of a separate study. Finally, they completed the post-experimental questionnaire. At the end of the session, participants were fully debriefed and given the opportunity to erase their videotape if they desired (none did).

Results

Sample attrition

Data from 12 participants were eliminated prior to analyses. One participant’s Stroop data were not recorded and, unfortunately, 11 participants correctly suspected their interaction partner was a confederate. Thus, the analyses reported herein were conducted using data from the remaining 46 participants.²

Manipulation checks

Emotional experience To confirm the interaction with the sexist confederate-induced negative emotion, participants’ ratings of negative emotion experienced before the interview were subtracted from their ratings made after the interview. As expected, the interview with the confederate induced negative affect ($M_{diff} = 1.56$), $t(43) = 6.69$, $p < .001$. Further, as predicted and consistent with previous research (Richards & Gross, 2000), there was no effect of emotion regulation condition (suppression vs. control) on the amount of negative affect induced, $F(1, 42) = .10$, $p = .75$, $\eta_p^2 = .002$.

In addition to confirming the interaction-evoked negative emotion in all participants, we also examined differences (if any) in how male and female participants responded to the sexist confederate. This revealed a trend for female participants to report a greater increase in negative affect than male participants, $t(42) = 1.62$, $p = .11$ —a pattern that is not

surprising given that women were the target of the discriminatory comments. In addition to these self-reports, we examined the confederate ratings of the participants' negative emotional responses. A 2 (participant gender: male vs. female) \times 2 (condition: control vs. suppression) factorial ANOVA revealed only a trend for participant gender, $F(1, 42) = 2.35, p = .13, \eta_p^2 = .05$; female participants appeared to be somewhat more affected (negatively) than male participants. Closer inspection of the data, furthermore, revealed that this trend was evident, albeit far from reliable, in the control condition (respective $M_s = 1.77$ and $1.44, p > .25$), but not in the suppression condition (respective $M_s = 1.35$ and 1.34). Taken together, these results suggest that interacting with the sexist male confederate was emotionally evocative for both men and women, and, if anything, women were more upset by the sexist comments than were men.

Emotion suppression Self-reports of emotional expression were submitted to a 2 (participant gender: male vs. female) \times 2 (condition: control vs. suppression) factorial ANOVA. This analysis revealed a main effect of condition, $F(1, 42) = 5.49, p = .024, \eta_p^2 = .11$. In particular, participants in the suppression condition reported expressing less negative emotion ($M = 1.48$) compared to those in the control condition ($M = 2.15$). In other words, based on their own reports of their expressive behavior, participants followed the instructions given to them. In addition, a main effect of gender emerged such that women reported expressing more negative emotion ($M = 2.40$) than did men ($M = 1.23$), $F(1, 42) = 16.7, p < .001, \eta_p^2 = .28$. This finding is consistent with previous research suggesting that, in general, women tend to be more emotionally expressive than men (Kring & Gordon, 1998). Importantly, however, the gender by condition interaction was not significant, $F < 1, ns$. In other words, despite their overall greater levels of expression, women in the suppression condition reported significantly less expression ($M = 1.95$) than women in the control condition ($M = 2.85$), $F(1, 42) = 5.02, p = .03, \eta_p^2 = .11$. In sum, self-reports of emotional

expression suggested participants complied with their emotion regulation instructions.

In addition to these self-reports, compliance with emotion regulation instructions was assessed via naïve judges' ratings of participants' facial expressiveness from the videotaped interactions. These standardized ratings were submitted to a 2 (gender: male vs. female) \times 2 (condition: control vs. suppression) factorial ANOVA. This analysis revealed only a main effect of emotion regulation condition, $F(1, 42) = 4.05, p = .05, \eta_p^2 = .10$. Consistent with self-reported emotion expression, participants instructed to suppress were rated as less emotionally expressive ($M = -.22$) than participants who were told to behave naturally ($M = .23$). Together with the self-reported expression results, this evidence suggests that participants indeed followed the emotion regulation instructions given to them.

Stroop interference

Prior to analyses, Stroop data were trimmed in accordance with conventions used in previous work (e.g., Richeson & Trawalter, 2005). In particular, response times more than 2.5 standard deviations above the mean (i.e., response times greater than 1240 ms) were recoded as 1240 ms, and response times less than 200 ms were recoded as 200 ms. Stroop interference scores were calculated by subtracting the mean response times for compatible trials from mean response times for incompatible trials. These scores were then submitted to a 2 (participant gender: male vs. female) \times 2 (condition: control vs. suppression) factorial ANOVA.

As predicted, this analysis revealed only a significant interaction between emotion regulation condition and gender, $F(1, 42) = 6.17, p = .017, \eta_p^2 = .13$. An inspection of the means reveals a pattern consistent with predictions (see Figure 1). In particular, consistent with previous work, men instructed to suppress their emotions were somewhat more depleted—that is, they tended to reveal greater Stroop interference—than men in the control condition, $F(1, 42) = 5.10, p = .029, \eta_p^2 = .11$. In contrast, however, women did not

show this same effect of suppression. Women who suppressed did not show greater depletion than women in the control condition, $F(1, 42) = 1.53$, $p = .22$, $\eta_p^2 = .04$. Indeed, the means actually reveal a nonsignificant trend in the opposite direction; women in the suppression condition were slightly less depleted compared to women in the control condition. Finally, and consistent with predictions, men in the suppression condition were significantly more depleted than women in the suppression condition, $F(1, 42) = 5.47$, $p = .024$, $\eta_p^2 = .12$, whereas the groups did not differ reliably in the control condition, $F(1, 42) = 1.33$, $p = .26$, $\eta_p^2 = .03$. In sum, these results support our hypothesis that gender may moderate the cognitive costs of suppressing emotional reactions to sexism.

Discussion

The present work examined the cognitive costs of suppressing emotions in response to blatant sexism. Because women are likely to have more practice suppressing their emotional reactions to sexism than men, we reasoned that women would be less depleted after engaging in emotion suppression during an interview with a sexist peer compared with men. Consistent with our predictions, results revealed that the depleting effect of emotion suppression was moderated by gender. In particular, men who suppressed their emotional reactions to

the sexist peer exhibited significantly greater Stroop interference (i.e., they were more cognitively depleted) compared with men who were instructed to act naturally (i.e., not to suppress) during the interaction. By contrast, the Stroop performance of women who were instructed to suppress their emotions during the interaction did not differ from women who were instructed to act naturally. In turn, the present findings provide intriguing evidence that suppressing emotions to blatant sexism may be less detrimental to the cognitive functioning of women than of men.

Limitations and future directions

Although the present work offers valuable insight into the relationship between self-regulation and exposure to prejudice, there are some limitations. First, this research builds on the assumption that women have more practice regulating their emotions in the face of sexism than do men—but we did not directly measure participants' prior experience with sexism or suppressing their reactions to these events. Thus, future research should explicitly test the veracity of this proposed mechanism.

Consequently, there remain viable alternative explanations for the present findings. For instance, one explanation is that rather than reflecting the effects of differential practice contending with blatant sexism, these results could instead reflect a more pervasive gender difference in practice with suppression. That is, if women suppress more than men in general, then they might be more practiced at emotion suppression in all domains, not just in response to sexist behavior. However, work by Gross and John (2003) suggests that, in fact, men, on average, tend to report engaging in emotion suppression more than women (i.e., they agree more with the statement "I control my emotions by not expressing them"). In other words, this suggests that men—not women—tend to (habitually) suppress their emotions. Hence, it is unlikely that the gender difference found here would generalize to other situations in which men and women are instructed to suppress their emotions.

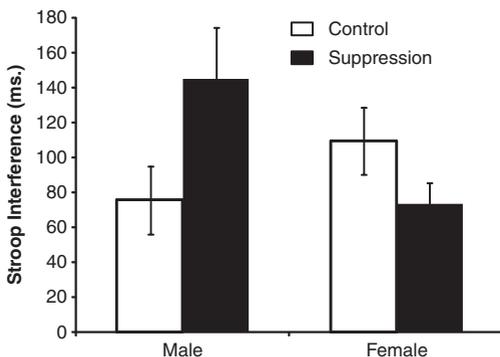


Figure 1. Stroop interference as a function of emotion regulation condition and participant gender.

Another potential explanation for the current findings stems from the fact that we employed only male confederates and thus the sexist responses were aimed specifically at women; in other words, whereas the female participants were members of the targeted group, the male participants were members of the perpetrator's group. It is possible that the self-regulatory demands of suppressing emotional reactions to prejudice directed at one's own social group differ from those associated with suppressing emotional reactions to prejudice directed toward another social group. Hence, the cognitive costs incurred from suppressing one's emotional reactions to prejudice may be different for individuals who are the direct targets of prejudice, compared with individuals who are not—or individuals who are members of the perpetrator's group.

Although this facet of the design may disallow a nuanced view of emotion regulation in response to discrimination for members of different groups (e.g., targets, non-targets, perpetrators), it is likely that any differences in this regard would have undermined our ability to observe the pattern of results found. Specifically, targets of prejudice are likely to have at least as strong, if not stronger, emotional reactions to prejudice than are members of the perpetrator group or third-party observers. Indeed, participants' self-reports of their emotional responses were consistent with this expectation: women revealed more negative emotional reactions to the sexist confederate than did men. Given that stronger emotional reactions should be harder to suppress—that is, require more effortful self-regulation—one might expect that women would be more depleted by suppressing their emotional reactions to sexism directed at other women compared with men. Of course, the opposite pattern of results was found, suggesting that differences in practice with such emotion suppression for targets and perpetrators of prejudice may be strong enough to trump differences in target and perpetrator emotional reactivity.

Nevertheless, because only women were the targets of prejudice in this study, male and female participants may have been experiencing different emotions in response to the confederate's sexist

remarks, and it may be this difference that produced the pattern of results. Men, for example, may have been suppressing shame and guilt whereas women may have been suppressing anger.³ To investigate this alternative explanation, we re-examined the confederate ratings of participants' emotional reactions, considering each PANAS item separately. Results of this supplementary analysis revealed no differences in the emotional reactions (as assessed by the confederate) of male and female participants in the suppression condition (all $ps > .30$), bolstering our confidence that participants in this condition were able to suppress their emotional reactions. However, analyses did reveal some differences in the control condition. Specifically, women in the control condition were rated as more hostile, upset, irritable, and distressed than men, $ts > 2.01$, $ps < .06$, consistent with their self-reports. There were no reliable differences, however, on the remaining six items, including how ashamed, nervous, and guilty participants seemed, $ps > .25$. Although these findings did not reveal clear differences in the emotional experiences of male and female participants, future work would benefit from a more systematic examination of targets' experiences of different negative emotions when exposed to prejudice and how those reactions may differ from those of non-targets.

Another factor that is likely to influence individuals' responses to prejudice is the nature of the prejudice itself. A recent study by Salvatore and Shelton (2007), for example, found that White and Black participants exhibited different levels of cognitive impairment after observing prejudiced behavior, depending on whether this prejudice was subtle or overt. As previously noted, White participants experienced more cognitive impairment than Black participants (as measured by the Stroop task) after they observed overt prejudice. Interestingly, however, White participants experienced less cognitive impairment than Black participants after they observed subtle prejudice. Extending Salvatore and Shelton's (2007) findings to the present work, in other words, suppressing in response to blatant sexism may be more cognitively depleting for men, whereas suppressing in

response to subtle sexism may be more cognitively depleting for women.

Finally, we note that although the present results suggest one potential long-term benefit of acquired practice with suppressing emotions in the face of prejudice, they do not imply that prejudiced encounters are good for members of stigmatized groups. There is considerable evidence that exposure to discrimination is associated with negative physical and mental health (Clark, 2000; Clark, Anderson, Clark, & Williams, 1999; Williams & Jackson, 2005). Moreover, the present findings should not be interpreted as suggesting that suppressing emotions to prejudice is a good strategy for targets of prejudice. Previous research has shown there are a variety of intra-personal costs associated with suppressing emotional reactions to prejudice (Shelton, Richeson, Salvatore, & Hill, 2006). Rather, given research suggesting that targets of prejudice often do suppress their reactions to prejudice, these results simply reveal a potential, unforeseen benefit of engaging in such behavior over time.

Conclusion

The present results indicate that men who suppressed their emotional reactions to a sexist peer experienced significantly greater self-regulatory depletion as a result of this suppression than did women. We argue that our results may be due to women's greater practice suppressing their emotional reactions to sexism compared with their male counterparts. Overall, these results suggest that targets of prejudice may become surprisingly resistant to the negative consequences of prejudice-induced emotion suppression as they accrue experience in this self-regulatory domain (Gailliot et al., 2007). Hence, the present results highlight the need to consider the ways in which members of stigmatized groups demonstrate resilience in the face of repeated exposure to discrimination. More generally, the present findings reveal the ways in which social group memberships, and the self-regulatory experiences they typically confer, can moderate the extent to which particular social demands are cognitively costly.

Notes

1. We pre-tested the confederate's sexist responses to ensure that a college population would indeed perceive them as sexist. Sixteen undergraduates read and rated the confederate's responses on a scale ranging from 1 (*not at all sexist*) to 7 (*extremely sexist*). As expected, the responses were rated significantly above the midpoint ($M = 5.74$), $t(15) = 7.26$, $p < .001$.
2. Participant attrition is an unfortunate, but perhaps somewhat inevitable, aspect of research of this nature. With this in mind, we made an effort to design a cover story that would minimize participants' suspicion of the confederate. Nevertheless, because the expression of blatant sexist views by a peer is somewhat unusual for participants in this university setting, it is not surprising that some participants (correctly) suspected the interviewee was, in fact, an actor. However, because attrition was evenly distributed between conditions, it is unlikely to have affected the results.
3. We acknowledge an anonymous reviewer for suggesting this possibility.

References

- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, *74*, 1252–1265.
- Baumeister, R. F., Gailliot, M. T., DeWall, C. N., & Oaten, M. (2006). Self-regulation and personality: Strength-boosting interventions and trait moderators of ego depletion. *Journal of Personality*, *74*, 1773–1802.
- Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science*, *16*, 351–355.
- Butler, E. A., Egloff, B., Wilhelm, F. H., Smith, N. C., Erickson, E. A., & Gross, J. J. (2003). The social consequences of expressive suppression. *Emotion*, *3*, 48–67.
- Clark, R. (2000). Perceptions of interethnic group racism predict increased vascular reactivity to a laboratory challenge in college women. *Annals of Behavioral Medicine*, *22*, 214–222.
- Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, *54*, 805–816.

- Gailliot, M. T., Plant, E. A., Butz, D. A., & Baumeister, R. F. (2007). Increasing self-regulatory strength can reduce the depleting effect of suppressing stereotypes. *Personality and Social Psychology Bulletin*, *33*, 281–294.
- Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, *39*, 281–291.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*, 348–362.
- Gross, J. J., & Levenson, R. W. (1993). Emotional suppression: Physiology, self-report, and expressive behavior. *Journal of Personality and Social Psychology*, *64*, 970–986.
- Inzlicht, M., Aronson, J., Good, C., & McKay, L. (2006). A particular resiliency to threatening environments. *Journal of Experimental Social Psychology*, *42*, 323–336.
- Inzlicht, M., McKay, L., & Aronson, J. (2006). Stigma as ego depletion: How being the target of prejudice affects self-control. *Psychological Science*, *17*, 262–269.
- Johnson, S. E., & Richeson, J. A. (2008). Is the depleting effect of race-related discussions moderated by racial group membership?. Unpublished raw data, Northwestern University, Evanston, IL.
- Johnson, S. E., & Richeson, J. A. (2009). Solo status revisited: Examining racial group differences in the self-regulatory consequences of self-presenting as a racial solo. *Journal of Experimental Social Psychology*, *45*, 1032–1035.
- Kring, A. M., & Gordon, A. H. (1998). Sex differences in emotion: Expression, experience, and physiology. *Journal of Personality and Social Psychology*, *74*, 686–703.
- Muraven, M., & Baumeister, R. F. (2000). Self-regulation and depletion of limited resources: Does self-control resemble a muscle? *Psychological Bulletin*, *126*, 247–259.
- Oaten, M., & Cheng, K. (2006). Longitudinal gains in self-control from regular physical exercise. *British Journal of Health Psychology*, *11*, 717–733.
- Richards, J. M., & Gross, J. J. (2000). Emotion regulation and memory: The cognitive costs of keeping one's cool. *Journal of Personality and Social Psychology*, *79*, 410–424.
- Richeson, J. A., & Trawalter, S. (2005). Why do interracial interactions impair executive function? A resource depletion account. *Journal of Personality and Social Psychology*, *88*, 934–947.
- Salvatore, J., & Shelton, J. N. (2007). Cognitive costs of exposure to racial prejudice. *Psychological Science*, *18*, 810–815.
- Seeley, E. A., & Gardner, W. L. (2003). The “selfless” and self-regulation: The role of chronic other-orientation in depleting self-regulatory depletion. *Self and Identity*, *2*, 103–117.
- Shelton, J. N., Richeson, J. A., Salvatore, J., & Hill, D. M. (2006). Silence is not golden: Intrapersonal consequences of not confronting prejudice. In S. Levin & C. Van Laar (Eds.), *Stigma and group inequality: Social psychological perspectives* (pp. 65–81). Mahwah, NJ: Erlbaum.
- Shelton, J. N., & Stewart, R. E. (2004). Confronting perpetrators of prejudice: The inhibitory effects of social costs. *Psychology of Women Quarterly*, *28*, 215–223.
- Smart, L., & Wegner, D. M. (1999). Covering up what can't be seen: Concealable stigma and mental control. *Journal of Personality and Social Psychology*, *77*, 474–486.
- Stroop, J. R. (1935). Studies of inference in serial verbal reactions. *Journal of Experimental Social Psychology*, *8*, 643–663.
- Swim, J. K., & Hyers, L. L. (1999). Excuse me—What did you just say?!: Women's public and private responses to sexist remarks. *Journal of Experimental Social Psychology*, *35*, 68–88.
- Trawalter, S., & Richeson, J. A. (2008). Let's talk about race, baby! When Whites' and Blacks' interracial contact experiences diverge. *Journal of Experimental Social Psychology*, *44*, 1214–1217.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070.
- Williams, D. R., & Jackson, P. B. (2005). Social sources of racial disparities in health. *Health Affairs*, *24*, 325–334.

Biographical notes

SARAH E. JOHNSON is a post-doctoral fellow at the Institute for Policy Research and the Department of Psychology at Northwestern University. She received her B.A. in psychology from Emory University and her Ph.D. in social psychology from Northwestern University. Her research interests include the psychological consequences of social stigma and stigma management.

MELISSA A. MITCHELL is a graduate student in the clinical psychology program at Florida State University. She received her B.A. in psychology from Northwestern University.

MEGHAN G. BEAN is a doctoral candidate in the social psychology program at Northwestern University. She received her B.S. in psychology from Tufts University. Her research interests include interpersonal and intergroup factors relevant to trust-development.

JENNIFER A. RICHESON is an associate professor in the Department of Psychology and a Faculty Affiliate at the Institute for Policy Research, both

at Northwestern University. She earned her Sc.B. in psychology from Brown University and her Ph.D. in social psychology from Harvard University. Her work centers on psychological dynamics of negotiating culturally diverse environments, with a particular focus on cognitive, affective, and behavioral dynamics of interracial interactions.

J. NICOLE SHELTON is an associate professor in the Department of Psychology at Princeton University. She earned her B.A. in psychology from the College of William and Mary and her Ph.D. in psychology from the University of Virginia. Her research interests include intergroup interactions, perceiving and responding to prejudice, and ethnic identity.