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THE DISRUPTIVE EFFECT OF SELF-OBJECTIFICATION ON PERFORMANCE

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Self-objectification is the act of viewing the self, particularly the body, from a third-person perspective. Objectification theory proposes numerous negative consequences for those who self-objectify, including decreased performance through the disruption of focused attention. In the current study, we examined whether women in a state of self-objectification were slower to respond to a basic Stroop color-naming task. Results showed that regardless of the type of word (color words, body words, or neutral words), participants in a state of self-objectification exhibited decreased performance. This study lends further evidence to objectification theory and highlights the negative performance ramifications of state self-objectification.

Being able to think about the self reflexively is considered an essential element of human consciousness (James, 1892). Both James's and Mead's (1934) theories of self differentiate between an "I," or subjective self, and a "me," or objective self. Likewise, Cooley's (1902) "looking glass self" maintained that people come to know and define themselves by imagining observers' judgments of them. Thus, from a theoretical viewpoint, there has been little argument that people can and do objectify the self. Empirical studies have demonstrated, however, that spending prolonged time thinking about the self can be detrimental. Rumination about the self has been linked to depression (e.g., Nolen-Hoeksema, Morrow, & Fredrickson, 1993; Pyszczynski & Greenberg, 1987), whereas being able to lose the self in total immersion in a task has been connected to feelings of maximal happiness and "flow" (Csikszentmihalyi, 1988). Recently, objectification theorists (Fredrickson & Roberts, 1997) proposed that U.S. women are at particular risk for reflecting on the self as an object—with a specific focus on how their bodies appear to others.

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Women living in the United States are regularly confronted with comments about their bodies and appearance (Swim, Hyers, Cohen, & Ferguson, 2001), and media portrayals of women often depict them as mere bodies or body parts (Archer, Iritani, Kimes, & Barrios, 1983). Living in a culture saturated with the sexual objectification of women's bodies is hypothesized to lead women to take a self-objectifying view of their bodies (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). That is, because women are often treated as objects and their outcomes are dependent on their appearance, they learn to view their own bodies as objects. Research on trait-level self-objectification has largely supported objectification theory. Women who routinely take an objectifying view of the self report increased body shame and preoccupation with body appearance (Miner-Rubino, Twenge, & Fredrickson, 2002; Strelan, Mehaffey, & Tiggemann, 2003). Research on women spanning ages 12 through 84 has shown that trait self-objectification is related to depression and restrictive and bulimic eating disorders (Harrison & Fredrickson, 2003; Miner-Rubino et al., 2002; Muehlenkamp & Saris-Baglama, 2002). As predicted by the theory, the relationship between self-objectification and eating disorders is mediated by feelings of body shame (Noll & Fredrickson, 1998; Slater & Tiggemann, 2002; Tiggemann & Lynch, 2001; Tiggemann & Slater, 2001).

Being in a state of self-objectification signifies that a person has moved from a subjective sense of self as agent to a sense of self as object. A person in a state of self-objectification has the peculiar experience of simultaneously acting on the environment and watching the self

acting on the environment. A state of self-objectification is hypothesized to lead to a disruption in focused attention because part of one's attentional resources are devoted to viewing the self (especially the body) as an object. In the first experimental test of self-objectification, we manipulated the state by asking participants to wear swimsuits or sweaters (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998). When wearing a swimsuit most people are likely to assume a third-person perspective and to view their bodies as objects. As predicted, we found that women wearing swimsuits described themselves more in terms of their bodies, experienced greater body shame and self-related emotions, were more likely to exhibit restrained eating, and performed worse on a math test than women wearing sweaters. Men's emotions and math performance were unaffected by whether they were wearing a swimsuit or a sweater. Women's worse performance on the math test during a state of self-objectification was the first evidence that self-objectification disrupts performance. We hypothesized that self-objectification diminished performance because a portion of the women's attention was devoted to evaluating how they appeared, thereby reducing the amount of attention devoted to the task. If self-objectification regularly disrupts attention—moving one's focus from subjective experience to objective self-awareness (cf. Duval & Wicklund, 1972)—it could have far-reaching consequences for the achievement and motivation of women.

One plausible alternative explanation for this initial performance finding, however, is "stereotype threat." Math is a domain in which there is a stereotype that women are less capable, and wearing a swimsuit may have simply reminded women of this stereotype. Work by Spencer, Steele, and Quinn (1999; Quinn & Spencer, 2001) and Shih, Pittinsky, and Ambady (1999) has shown that reminding women of either their gender or stereotypes about women's math ability leads to depressed math performance. Importantly, stereotype threat occurs only on tasks linking a particular identity (e.g., gender) to a particular domain (e.g., math). It does not occur in nonstereotyped domains such as verbal ability for women. Thus, wearing the swimsuit could have led to worse performance on the math test because stereotypes about women's abilities had become salient and not because self-objectification splits attention between the self as object and the task. In the current study we conducted a more stringent test of whether self-objectification interferes with attention by examining performance on a Stroop color-naming task. On the Stroop task, participants are simply asked to name the color of the ink in which words appear. We predicted that women experiencing state self-objectification would be slower to respond to the modified Stroop task. There are no gender stereotypes about color-naming, but as discussed in more detail below, responses to the Stroop are affected by allocation of attentional resources (Cohen, Dunbar, & McClelland, 1990). If women in a state of self-objectification are slower to name ink colors, this finding would help us to rule out stereotype threat as an explanation and, more importantly, to show that self-objectification interferes with attention and performance at a very basic level.

Two additional features of the experiment increase its external validity. First, we included a diverse sample of participants including women from African American, Asian American, Latina American, and European American ethnic backgrounds. Self-objectification processes are hypothesized to affect all women who live in an objectifying culture. Second, we included three types of words in the Stroop task: traditional color words, body-related words, and neutral words. We hypothesized that women in a state of self-objectification would be slower to respond to all three types of words because it is not the content of the task that is affecting performance but the lack of attentional resources available for any focused task.

METHOD

Participants and Design

Eighty-three women participated in this study. Data from 4 participants were excluded due to computer malfunction and suspicious behavior, leaving 79 participants randomly assigned to one of two experimental conditions: swimsuit or sweater. Participants included 18 African Americans, 20 European Americans, 21 Asian Americans, and 20 Latina Americans. Participants were recruited via ads and posters around a college campus and were paid $20. They ranged in age from 19 to 28, with a mean of 21.3 years.

Procedure

Participants were tested individually and told that the study concerned "emotions and consumer decisions" and that they would be evaluating everyday items. Participants first evaluated a unisex scent in order to bolster this cover story.

The next task was to try on and evaluate an item of clothing in a completely private dressing room with a full-length mirror. To keep the experimenter blind to experimental condition, participants received the instructions for this task over headphones. By random assignment, the item of clothing was either a one-piece swimsuit or a v-neck sweater. This task is the manipulation of self-objectification. Both swimsuits and sweaters were available in a range of sizes. Participants were asked to find and try on the garment that most closely corresponded to their size. Instructions asked the participants to look at themselves in the mirror and then complete a packet of questionnaires that included the modified Twenty Statement Test (TST) and the measures of body shame. Once finished with these questionnaires they were told that it often takes time to feel comfortable in a new item of clothing and they were in the "moderate habituation" condition. While waiting to "habituate" to the garment, participants, while still wearing either the swimsuit or the sweater, completed the modified Stroop task. Afterwards, participants redressed and opened the door to

signal the experimenter. Participants were queried for suspicions and fully debriefed. After debriefing, participants were weighed with their backs to the numbers of the scale, and their height was measured. Height and weight were used to calculate body mass index (BMI).

Materials

Manipulation checks of state self-objectification. As used in Fredrickson and colleagues (1998), a modified TST (Kuhn & McPartland, 1954) served as one manipulation check. The participants were instructed to "think about how wearing this particular item of clothing makes you feel about your self and identity." They were then presented with the stem "I am——" 20 times. Participants' responses were coded by two independent coders using the coding scheme in Fredrickson and colleagues that categorized answers into six categories: body shape and size, other physical appearance, physical competence, traits or abilities, states or emotions, and uncodable. Participants experiencing self-objectification should describe themselves more in terms of body shape and size than those not experiencing self-objectification. Inter-rater agreement on the body shape and size category was .83.

Three measures of body shame were included as a second manipulation check. After rating various aspects of the garment itself, participants read the statement "Sometimes it is not a matter of changing aspects of the garment, but that certain garments look better on certain bodies. Please indicate which of the following things you would want to change about your body in order to feel more comfortable wearing this garment in public." They then rated each of 14 body attributes (e.g., shoulder, thighs, waist) on whether they desired change and the intensity of their desire for change on a 1 (*very mild*) to 9 (*very intense*) scale. We computed a sum of body changes desired (possible range from 0 to 14) and sum of intensity of desired change. In addition, we used 24 phenomenological body shame items on a 1 (*I want to hide*) to 5 (*I want to be with others*) scale from Tangney, Miller, Flicker, and Barlow (1996). Following the procedure of Fredrickson and colleagues (1998), each measure was standardized and then summed to form a single measure of body shame. The composite body shame measure ranged from −4 to +6, with $M = 0$, $SD = 2.7$. Internal reliability was .92.

Modified Stroop task. To examine whether self-objectification would interfere with attention processes, we used a modified Stroop task. The Stroop paradigm offers a very strong and clear measure of attentional resources. Versions of the Stroop color naming task, where participants are asked to name the color of the ink in which words are printed, have been used in hundreds of psychological experiments (for a review, see MacLeod, 1991). The Stroop effect is based on processing priorities (see MacLeod & Mathews, 1991; Roelofs, 2003), or the interference of attention given to one process (reading) over another (naming ink color). Using a parallel distributed processing account, which has now been supported by fMRI topography (Peterson et al., 1999), Cohen and colleagues (1990) have shown that regardless of which part of the Stroop effects are thought to be automatic or controlled, both are affected by the allocation of attentional resources. That is, decreases in attentional resources available for the task lead to slower overall responding (see Engle, 2002; Kane & Engle, 2003, for related discussions). Thus, use of the Stroop task is uniquely suited to our goal of testing an allocation of attentional resources hypothesis.

Participants were presented with words on a computer screen and were instructed to name the color of the ink of the word as quickly as possible. A microphone was placed in front of each participant. The experiment-generating program PsyScope (Cohen, MacWhinney, Flatt, & Provost, 1993) recorded the time from when the word first appeared on screen until the participant began to speak. Reaction time was recorded through a button box that provided accurate timing within one millisecond. Once the participant named the ink color, there was a 200 ms interstimulus interval, and then the next word appeared. Participants completed three blocks of 50-word trials. One block contained 5 color words (blue, red, green, yellow, and pink) with each word appearing 10 times, one block contained 10 body-related words (shape, body, diet, thigh, ugly, pounds, weight, stomach, fat, and hips) with each word appearing 5 times, and one block contained 10 neutral words (civil, switch, fans, week, rent, learn, slum, distant, topic, and kid) with each word appearing 5 times. The body and neutral words were approximately matched for word length and frequency (Kucera & Francis, 1967). There was random ordering of the words within each block. The ink color of the word was randomly paired with the words, except that the color of the ink and the color word never coincided. The order of the blocks of words was counterbalanced, and block order was randomly assigned to participants.

RESULTS

Manipulation Checks

We expected that the swimsuit condition would cause participants to feel "I am my body" with special emphasis on body shape and size. The body shape and size statements from the TST were analyzed with a 4 (ethnic background) x 2 (condition: swimsuit or sweater) analysis of covariance (ANCOVA) with BMI as a covariate. Results showed a main effect of condition, $F(1,70) = 14.72$, $p < .01$, with those in the swimsuit condition feeling more as their bodies ($M =$ 5.88 statements) than those in the sweater condition ($M =$ 2.84 statements). There was no main or interaction effect for ethnicity. BMI was not a significant covariate. Regardless of ethnic background and BMI, wearing a swimsuit is a situation that created a feeling of the self as body.

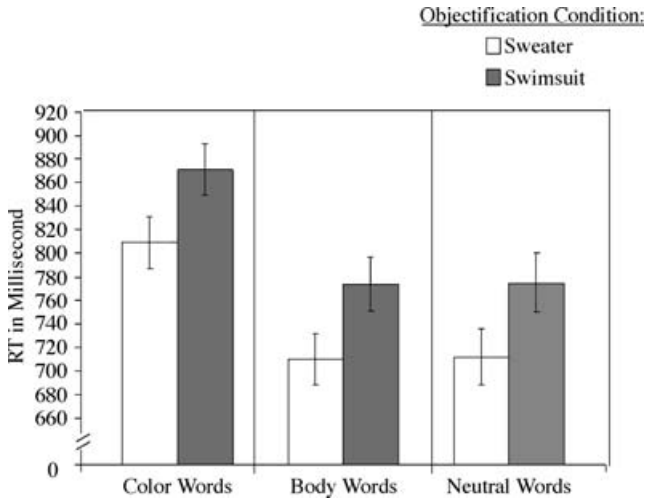

Fig. 1. Reaction times to Stroop task (mean +/− 1 standard error) by condition and word type.

We conducted a 4 (ethnic background) × 2 (condition) ANCOVA on body shame, with BMI covaried. BMI was a significant covariate, $F(1, 69) = 13.01, p < .01$. As predicted, there was a main effect for condition, $F(1, 69) = 16.09, p < .01$, with women in the swimsuit feeling more body shame ($M = 1.15$, $SD = 2.96$) than women in the sweater ($M = -.99$, $SD = 2.06$). There was no main or interaction effect for ethnicity. Women of all four ethnic backgrounds experienced increased shame in this self-objectifying situation.

Performance on Modified Stroop Task

To examine whether self-objectification interfered with performance, we conducted a 4 (ethnic background) × 2 (condition) × 3 (word type: body, neutral, color) mixed-design ANCOVA with ethnic background and condition as between-subjects measures and word type as a within-subject measure. BMI was included as a covariate. Within-subjects tests showed no main effects or interactions. BMI was not a significant covariate. The between-subjects tests revealed the predicted main effect of condition, $F(1, 67) = 4.45, p < .05$, with women in the swimsuit exhibiting longer reaction times ($M = 807$ ms) than women in the sweater ($M = 744$ ms). There was neither a main effect for ethnicity nor an interaction. See Figure 1 for means and standard errors across word type. As predicted, women of all ethnicities performed worse in the self-objectifying situation across all word types.

DISCUSSION

The manipulation of state self-objectification was successful, with women in the swimsuits reporting they felt more defined by their bodies and increased body shame. As predicted, results from the Stroop task showed that self-objectification interfered with performance. Women in the objectification condition took longer to respond to all types of Stroop words, showing a general decrement in performance. This finding occurred on a task that is not related to any gender stereotypes, thereby helping to rule out a stereotype threat explanation for the results. There were no main effects or interactions with ethnic background. As predicted, all of the women were similarly affected by a state of self-objectification.

The current results highlight one important negative consequence of living in an objectifying culture: fewer attentional resources. Although the millisecond difference may be small, the cumulative effects may be large. Self-objectification can occur in many everyday interactions—through gaze, commentary, or other self-objectifying cues. Such objectification may drain attentional resources for women in "real world" situations. Every day, women encounter performance situations such as taking exams, presenting projects to fellow coworkers or students, interviewing for jobs, or competing in athletic events. As the present study suggests, feeling objectified in such situations can cause women to split their attention between the task at hand and the monitoring of their appearance. Even small decrements in performance could impact outcomes. Moreover, this split of attention could affect women's joy in their everyday activities because they may not completely immerse themselves in the process of doing (Csikszentmihalyi, 1990). Thus, the millisecond differences in attentional allocation may have a range of damaging effects.

This study has a number of limitations. Because our sample size for each ethnicity was small, one concern is whether there was enough power in the current study to examine ethnic differences in the experience of self-objectification. A recent study with a much larger diverse sample ($N = 400$) found that self-objectification affected women of varying ethnic backgrounds in very similar ways, with no ethnic differences for body shame or for describing the self in terms of body shape and size on the TST (Hebl, King, & Lin, 2004). Thus, the current null effects for ethnicity have been reported previously. Another limitation of the current study is that it employed a population of college-aged women. The adolescent and young adult years may be those in which women are most concerned with their appearance. Future studies need to explore whether self-objectification has similar effects for older women. Finally, the present study included only women participants. Although men may experience self-objectification, they are not theorized to suffer from the same negative consequences as women. The detrimental ramifications tied to self-objectification come from the chronic way in which women's bodies are objectified in the culture. Some research (Fredrickson et al., 1998) has shown that women, but not men, experience body shame and negative emotions when in a self-objectifying situation. However, Hebl and colleagues (2004) have found that men do show increased shame in self-objectifying situations. Future research might examine whether the negative

consequence of disrupted attention is specific to women's experience.

The research literature has documented that when the self becomes an object of attention, either through prolonged rumination or self-objectification, people may be more inclined to experience negative affect, self-consciousness, social anxiety, and poorer decision making (see Mor & Winquist, 2002; Wilson, 2002, for reviews). This study adds to the growing empirical support for objectification theory by highlighting the negative performance ramifications of state self-objectification.

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