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An Examination of Body Objectification and Social Physique Anxiety in Women and Men: The Priming Effects of Anticipating a Brief Social Interaction

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An Examination of Body Objectification and Social Physique Anxiety in Women and
Men: The Priming Effects of Anticipating a Brief Social Interaction

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Abstract

Body objectification occurs when individuals adopt an observer's view of their body and treat their body as an object. This process has been linked to appearance anxiety and shame, decreased awareness of internal bodily states, eating disorders, depression, and sexual dysfunction (see Fredrickson & Roberts, 1997, for a review). The current investigation is based on objectification theory (Fredrickson & Roberts, 1997), a sociocultural framework that describes the experiences and psychological risks of those who objectify their bodies. This study examined trait levels of self-objectification and social physique anxiety in women and men, as well as state levels following an experimental prime.

One hundred ninety-two participants were assigned to one of three conditions: expecting to meet an opposite-gender person, expecting to meet a same-gender person, or no mention of meeting another person. It was predicted that women would have significantly higher trait self-objectification and appearance anxiety than men but that this gender gap would decrease in the opposite-gender condition with respect to state levels. In addition, women and men in the opposite-gender condition were expected to evidence higher state self-objectification and social physique anxiety than their same gender peers in the other two conditions. Further, a buffering effect was explored for men and women in the same-gender condition. The primary design of the study was a 2 by 3 by 2 (Gender x Condition x Time) mixed ANCOVA.

As expected, trait social physique anxiety was significantly higher for women than for men. However, trait self-objectification was similar across genders, and the gender gap did not narrow for state levels of either dependent variable. Patterns revealed that state self-objectification was

highest in the opposite-gender condition relative to the other two conditions for both genders. In addition, a buffering effect appeared in the same-gender condition for self-objectification, particularly for men. Women's state social physique anxiety was highest in the same-gender condition, whereas men's levels were highest in the control condition. Interpretations of the findings and implications of the study are discussed.

An Examination of Body Objectification and Social Physique Anxiety in Women and Men: The Priming Effects of Anticipating a Brief Social Interaction

Body objectification, or self-objectification, is a process by which individuals treat their bodies as objects, or as entities that exist for the use and pleasure of others. Derived from objectification theory (Fredrickson & Roberts, 1997), body objectification describes the experience of adopting an observer's view of one's body. Objectification theory, as outlined by Fredrickson and Roberts (1997), is a theoretical framework that aims to describe the experiences and psychological risks of females who objectify their bodies. The theory is based on a sociocultural framework, which asserts that appearance- and body-related cultural values influence how women view their bodies. Objectification theory posits that body objectification occurs because the sexually objectifying culture in which we live socializes women to treat themselves as objects. Girls and women cannot escape the widespread messages regarding beauty and sexual ideals that permeate Western culture, and they learn quickly that their social and economic life outcomes can be determined by other people's evaluations of their appearance. Thus, girls and women are socialized to internalize an observer's perspective of their physical body, and body surveillance is used as a strategy to help judge and perhaps increase the value they will hold in society.

Although objectification theory was derived from girls' and women's experiences and most of the research involves women, men and boys also experience sexual objectification, pressures to conform to a certain body size and shape, and disadvantages when they do not meet such ideals. Researchers have shown that appearance is heavily valued in Western culture for both genders. Two meta-analyses have found that for both genders, being perceived as physically attractive has been associated with a wide range of positive outcomes, including being perceived

as more sociable, dominant, sexually warm, and mentally healthy; receiving more help from strangers; and receiving higher incomes than unattractive people (Feingold, 1992; Hosoda, Stone-Romero, & Coats, 2003). Further, some research has shown that the negative effects of being unattractive are particularly detrimental for women and girls. For example, research has shown that obese women experience more negative effects related to their educational and economic attainments than obese men (Wooley & Wolley, 1980), and women deemed unattractive by co-workers are described more negatively than comparably unattractive men (Wallston & O'Leary, 1985). In addition, women report more negative experiences related to their weight (e.g., harassment, insults, teasing) than men (Cossrow, Jeffery, & McGuire, 2001), and obese women experience more stigmatization than men in sexual relationships (Chen & Brown, 2005). Thus, it may be especially adaptive for women to become their own first surveyors.

Although a person's preoccupation with appearance may advantage her in ways such as social and economic benefits, this preoccupation does not come without costs. According to objectification theory (Fredrickson & Roberts, 1997), body objectification can lead to habitual body monitoring, which in turn can increase body shame and anxiety, reduce peak motivational states (i.e., being fully absorbed in a challenging physical or mental activity), and diminish awareness of internal bodily states. It is posited that the variables associated with body objectification play a role in eating disorders, depression, and sexual dysfunction (Fredrickson & Roberts, 1997). Due to these harmful consequences, it is important to understand body objectification in both genders. The current research examines trait and state levels of body objectification, as well as the related variable of appearance anxiety, in women and men.

Cultural Influences on how Individuals View their Bodies

Many cultural factors intersect to influence how a person views their body. These factors include socialization processes that occur through family, peers, and the media, as well as historical changes over time (e.g., technology). For the purpose of this paper, emphasis will be placed on the cultural construction of beauty norms.

Culture plays a role in the development of body objectification and related variables (e.g., body dissatisfaction, unhealthy eating patterns) through the construction of beauty norms. Although hard to imagine in the current Western appearance-driven culture, beauty has not always been the central self-defining characteristic for females. In a fascinating analysis of girls' diaries across time, Joan Jacobs Brumberg (1997) described how in the 19th century, these diaries portrayed desired characteristics such as self-control, service to others, schooling, and belief in God. Brumberg described how prior to WWI, girls' expression of individuality was based on "good works," compared to today's "good looks." She discussed how, as a consequence of technological advances, such as the automobile and telephone, girls' and women's mobility and autonomy increased as they separated from traditional family, community, and church ties. Brumberg asserted that as a consequence, girl's self-esteem and identity began to depend more on external (e.g., appearance) than internal (e.g., values) attributes. Girls and women began viewing the body as a strategy for self-improvement rather than good deeds or education. Around this time (WWI) also came the lean, flat-chested, cropped hair beauty ideal described as the "flapper" look. This ideal is often the first to be described by historians who examine beauty norms across time in America.

Although the flapper look of the 1920s was lean and boyish-looking, examining beauty norms throughout history reveals that beauty ideals have changed over time. Only a few hundred

years ago, the ideal image of a woman was full-figured, which was an indication of both health and wealth. Moreover, in the 1950s, the epitome of European-American feminine beauty, Marilyn Monroe, was a size 16 with voluptuous curves (Through the Decades, 2006). The beauty ideal of the next decade shifted quickly to mimic model Twiggy's "heroin chic," ultra-thin look, followed by a shift to a more toned look in the 1970s. The 1990s saw a return to the ultra-thin body ideal with Kate Moss's super-slim body as the European-American feminine ideal of beauty once again (Through the Decades, 2006).

In addition, research examining the sizes and weights of models, Miss America winners, and Playboy centerfolds has shown that the sizes and weights of these primarily European-American women have significantly decreased over time and are significantly lower than the average woman (Leit, Pope, & Gray, 2001; Wiseman, Gray, Mosimann, & Ahrens, 1992). In the late 1960s, female models weighed about 8% less than the average woman in the United States; in 1991, they weighed 23% less (Wolf, 1991). In the 1950s, the average body mass index (BMI; an index of weight relative to height) of Miss America winners was 19.4; by the late 1980s, it was 18 (Leit et al., 2001). The World Health Organization's cutoff for anorexia is a BMI of less than 17.5. Meanwhile, BMI levels of the average woman in the United States aged 18 to 24 increased from 22 in 1970 to just over 24 in 1990 (Leit et al., 2001).

The above described beauty ideal, however, does not hold for every female ethnic identity group in the United States. Overall, African-American women have a more flexible standard for attractiveness and weight, focusing on a multitude of body and non-body features, such as personal style, hairstyle, and skin color (Celio, Zabinski, & Wilfley, 2002). In addition, African-American adolescent girls appear to identify attitudes and personality as more important to "beauty" than physical appearance. Although perhaps more flexible, current idealizations for

African-American girls and women embody European-American features such as light skin, smooth hair, narrow noses, and small lips (Bond & Cash, 1992; Kashubeck-West & Saunders, 2001).

Asian Americans also idealize some aspects of European American appearance and body features. For example, current feminine idealizations among Asian Americans embody double eye-lids, narrow noses, and light skin (Kashubeck-West & Saunders, 2001). Further, Latinas living in the United States demonstrate a perhaps even more complex intersect of cultures in that there is much cultural exchange between the United States and Hispanic countries, including exchanges of Western beauty ideals. In addition, Latinas also tend to hold more traditional gender roles than many other ethnicities, and traditional feminine gender roles have been found to be associated with more body image concerns and disordered eating than less traditional roles (Altabe & O'Garro, 2002). These findings suggest that Latinas may be at risk for body- and eating-related pathology.

Although the majority of research on body- and eating-related variables has been focused on women, the literature on masculine ideals and men's body- and eating-pathology has grown considerably in the last few decades. Researchers have found that Western masculine ideals differ somewhat from the feminine ideal. Researchers have suggested that although less concerned with weight, men are increasingly concerned with shape and muscularity (Westmoreland & Anderson, 2002). The "Adonis complex," named after the Greek V-shaped half-man, half-god, has been used to describe the increasing obsession that men experience with fitness and muscularity (Westmoreland & Anderson, 2002).

Similar to the female beauty norms, researchers agree that the media is also at least partially responsible for upholding unattainable male attractive norms. For example, Leit et al.

(2001) reported that the proportion of undressed men in beauty and fitness magazines went from 3% of advertisements in the 1950s to 35% in the 1990s. However, this proportion is still under that of undressed women. The masculine attractive ideal has also changed considerably over time in U.S. culture. The average Playgirl centerfold in 2000 was estimated to have 12 pounds less fat and 27 pounds more muscle than the average centerfold 25 years earlier (Leit et al., 2001). Although research on masculine ideals has made great strides, variations in masculine ideals between different ethnic groups have not been examined to the same extent as they have in women.

Harmful Consequences Associated with Body Objectification

According to objectification theory, a host of mental health risks are associated with body objectification, including eating disorder symptoms, depression, and sexual dysfunction.

According to the theory, four important cognitive and affective variables relate to body objectification. These variables include body shame, appearance anxiety, lack of “flow” (e.g., ability to be fully absorbed in a challenging cognitive or physical task), and poor interoceptive awareness of bodily states. The theorized relationships between body objectification and these variables will be described here, and research findings will be discussed in a later section.

Body shame occurs when a person evaluates her or his body relative to an internalized cultural ideal and perceives that he or she does not meet this ideal (Fredrickson & Roberts, 1997). As previously mentioned, girls and women, and to some extent boys and men, are heavily exposed to an unobtainable beauty or attractive ideal body in Western culture. When they are unable to meet this ideal, body shame may be an unavoidable consequence. According to objectification theory, the experience of shame mediates the relationship between body

objectification and all three of their proposed mental health risks: eating disorders, depression, and sexual dysfunction.

Another proposed affective variable related to body objectification is appearance anxiety. The realization that one's body is being observed and evaluated can lead to anxiety about body exposure. Moreover, not knowing how and when this evaluation will occur can create anxiety. According to objectification theory, appearance anxiety mediates the relationship between body objectification and eating disorders, depression, and sexual dysfunction.

A third proposed variable related to body objectification is the ability to experience peak motivational states, or "flow." Researchers have described flow as the ability to be fully absorbed in challenging mental or physical activity and have posited that to achieve flow, it is necessary to lose self-consciousness in the activity (see Csikszentmihalyi, 1990, as cited in Fredrickson & Roberts, 1997). Researchers have shown that intrinsic motivation is reduced when persons are made self-aware (see Plant & Ryan, 1985, as cited in Fredrickson & Roberts, 1997). Flow is interrupted when others or the self draws attention to the appearance or functions of the body. According to objectification theory, an inability to experience flow mediates the relationship between body objectification and depression by curbing the pleasure gained from peak motivational states.

The final proposed variable related to body objectification is a lack of awareness of internal bodily states. By adopting an observer's perspective of their bodies, individuals may become alienated from their bodies and bodily sensations (Fredrickson & Roberts, 1997). According to objectification theory, focusing cognitive resources on habitual body monitoring leaves fewer perceptual resources for attending to inner body experiences (e.g., hunger, sexual arousal). In addition, the common female experience of dieting requires active suppression of

hunger cues, which suggests a mediating role for awareness of internal bodily states between body objectification and disordered eating. Moreover, according to objectification theory, the lack of awareness of bodily states plays a role in sexual dysfunction by hindering women's awareness of physiological changes associated with sexual arousal.

Gender Differences in Trait Body Objectification

According to objectification theory, girls and women experience higher levels of sexual objectification and more pressure from the media to meet beauty ideals in their daily lives than do boys and men. The media bombards consumers with the perfectly-shaped objectified female body in advertisements, music videos and lyrics, video games, magazines, movies, and television. Further, reactions and comments from peers and family members, such as comments about body size and shape, might also contribute to the objectification of girls' and women's bodies. Therefore, according to objectification theory, women evidence higher levels of trait body objectification than men. Indeed, research findings have been generally consistent with this prediction.

Two major scales have been developed to measure the construct of body objectification: the Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998) and the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996). Developed in accordance with objectification theory, the SOQ measures trait body objectification by assessing the extent to which an individual views their body in objectified terms. The OBCS includes three subscales: body surveillance, body shame, and control beliefs. However, most research on body objectification has used the surveillance subscale only.

Noll and Fredrickson (1998) developed the SOQ based on the experiences of females; thus, the bulk of research has been on girls and women. However, the SOQ has been used with

men, with gender differences emerging indicating that women generally exhibit higher levels of trait body objectification than men. One study reported an average score of -1.61 (similar emphasis or slightly less emphasis on appearance than competence) for women and -9.59 (moderately more emphasis on competence than appearance) for men on the SOQ. Scores could range from -25 to $+25$ (only 10 items were used), with more positive scores indicating a greater emphasis on appearance (Tiggemann & Kuring, 2004). In another study (Hebl, King, & Lin, 2004), the SOQ was scored differently such that 10 body attributes (5 appearance based and 5 competence based) were rank ordered from 1 to 10 in terms of how important each attribute was to their physical self-concept. The total score of trait body objectification was calculated by summing their score for the five appearance-based items. Hebl et al. (2004) reported a marginally significant gender difference ($p < .08$) in levels of trait body objectification. Scores could range from 15 to 40 with higher scores indicating more body objectification; the mean score for women was 25.30 compared to 24.09 for men. Both genders' ratings indicated moderate levels of body objectification.

On the surveillance subscale of the OBCS, one study found that the average score for women was 32 compared to 27.5 for men (range = 8 to 48, with higher scores indicating more surveillance; Tiggemann & Kuring, 2004). Both genders' ratings again indicated moderate levels of surveillance, and the gender difference was significant. McKinley (1998) found that although the OBCS was internally consistent for male college students, the relationship with body esteem was stronger for women than for men. Moreover, she found that gender differences in body esteem were not significant when OBCS scores were controlled for, suggesting a strong role for body objectification in how women experience their bodies.

Although the OBCS and SOQ have been found to be internally consistent for men, there is a paucity of theoretical and experimental research examining body objectification in men and boys. Thus, one cannot help but question whether these scales adequately capture the lived experiences of body objectification in males. Some researchers have modified the SOQ for men so that the items reflect the experience of body objectification within the context of masculine “attractiveness” ideals. For example, Tiggemann and Kuring (2004) suggested that the words *strength* and *weight*, both of which are used in the SOQ, might hold different meanings for women and men. For example, with an emphasis on muscularity, *strength* may actually be more of a physical appearance attribute for men, although it is categorized as a body competence attribute in the SOQ.

Research Findings on Body Objectification

Along with assessing gender differences in trait body objectification, investigators have examined both correlates and effects of trait and state body objectification. Researchers have examined the relationships between trait body objectification and numerous psychological experiences (e.g., body shame, appearance anxiety). They have also experimentally manipulated states of body objectification in individuals and drawn comparisons between experimental and control groups on several cognitive, affective, and behavioral variables such as disordered eating, negative affect, sexual dysfunction, and performance on math tests.

Correlational (Non-Experimental) Findings

In accordance with objectification theory, researchers have found a relationship between body objectification and disordered eating, negative affect, problems with sexual functioning, and dissatisfaction with life. Models based on objectification theory have consistently shown that the relationships between body objectification and disordered eating, self-esteem, satisfaction

with life, and depression are mediated by body shame. This finding has appeared in several replications, most of which show partial mediation in female samples (Mercurio & Landry, 2008; Moradi et al., 2005; Noll & Fredrickson, 1998; Tiggemann & Kuring, 2004; Tylka & Hill, 2004). In addition, limited findings suggest that appearance anxiety plays a mediating role in the relationship between body objectification and disordered eating and depression (Muehlkamp & Saris-Baglama, 2002; Tiggemann & Kuring, 2004). However, results concerning flow and interoceptive awareness are inconsistent (Tiggemann & Kuring, 2004; Tylka & Hill, 2004). Further, Muehlenkamp, Swanson, and Brausch (2005) found that not only did body objectification relate to negative body regard, which was related to depression, but also, depression was related to the behavioral measure of purposeful self-harm (e.g., cutting, burning). These results are noteworthy given the severe consequences of such behaviors.

Objectification theory also posited an association between problems with sexual functioning and body objectification. Steer and Tiggemann (2008) found that the relationships between self-objectification and self-consciousness during sexual activity and decreases in sexual functioning were mediated by body shame and appearance anxiety in their sample of college-aged women. Research in the area of gender and sexual activities has also provided some support for this prediction. For example, a relationship has been found between having a sense of being on display, or feeling as if others are watching you, and “spectatoring,” or feeling disengaged from the sexual experience as if you were watching from an observer’s point of view during sexual scenarios. Further, spectatoring has been identified as a barrier to women’s comfort with sex (Masters & Johnson, 1970).

Experimental Findings

Correlational studies based on objectification theory have greatly expanded our knowledge concerning the relationship between body objectification and negative psychological variables; however, causality cannot be evaluated without an experimental design. Thus, researchers have tested for causal relationships by priming participants to experience a state of body objectification in the lab and observing the effects of the manipulations. Women have been primed by trying on swimsuits, anticipating a man's gaze, completing a scrambled sentence task with objectifying words, and reading objectifying text. Men have also been primed to experience body objectification; however, only three experimental studies have included men. As previously mentioned, researchers have generally concluded that women experience more sexual objectification in their daily life, and therefore, evidence higher levels of trait body objectification than men. However, the paucity of research using men makes it difficult to assess whether and in which contexts men experience a state of body objectification and to what extent this might occur. Furthermore, for those studies that have included men, problems with the designs make it difficult to draw any firm conclusions.

One year after the publication of objectification theory, the coauthors of the theory and their colleagues conducted a groundbreaking experimental study using both men and women (Fredrickson et al., 1998). The researchers aimed to prime a state of body objectification by randomly assigning participants to try on either a swimsuit/pair of swimming trunks or a sweater. The investigators concealed the intent of the study by telling participants that the study examined "emotions and consumer behavior." Participants were asked to make ratings on three items: a unisex scent, an item of clothing (swimsuit/swimtrunks or sweater: the manipulation), and cookies and a chocolate drink. After evaluating the unisex scent to bolster the cover story, participants went into a dressing room to evaluate an item of clothing, where they received

instructions over headphones. Participants were asked to find a garment (swimsuit/swimtrunks or sweater, depending on the condition) that closely corresponded to their size and to try it on (several sizes were available). They were then instructed to look in a full-length mirror and evaluate the clothing item. While wearing the garment, participants completed a body shame questionnaire, which was embedded within filler items. After completing the questionnaire and redressing, participants were presented with two Twix bars. The experimenter left the room for 5 minutes while the participants made their taste ratings. When finished, the participants were debriefed and left the room, and the leftover food and drink was measured as an indicator of dietary restraint.

In this study, the Twenty Statements Test (TST; modified from Bugenta & Zelen, 1950) was used as a manipulation check to measure state body objectification. Instructions for this projective measure asked participants to make 20 different statements about themselves that completed the sentence 'I am ____' in reference to how the item of clothing made them feel about themselves. The number of statements categorized as 'body shape and size' (versus other attributes) indicated the level of state body objectification. The researchers found that both genders in the swimsuit/swimtrunks condition experienced higher levels of state body objectification than those in the sweater (control) condition. Those in the swimsuit/swimtrunk condition made an average of four body size and shape responses ($SD = 3.2$) compared to two statements in the sweater condition ($SD = 2$). Further, as assessed by the TST, the level of state body objectification did not differ between genders. However, women evidenced higher levels of body shame, scored lower on the math test, and evidenced more restrained eating than men. The authors also found that women in the prime condition experienced higher levels of body shame

and restrained eating and lower math performance than women in the control condition, whereas no differences between conditions were found for men.

This discrepancy in gender differences between conditions, that is, no difference between state body objectification yet significant differences in body shame, restrained eating, and math performance, seems puzzling at first. However, one must remember that body objectification can occur independently from negative affective states and behaviors. For example, individuals can experience body objectification and not body shame; although they are objectifying their body, they are not necessarily displeased with what they see. This is not to say that other negative consequences do not occur (e.g., exhausting cognitive resources). However, it provides a possible explanation for why the men in this study experienced body objectification to the same extent as the women, yet they did not experience the other harmful variables measured in the study.

The second experiment using both men and women was designed similarly. However, Hebl et al. (2004) argued that having men try on a loose fitting pair of swimming trunks would not prime a state of body objectification (or lead to other negative consequences such as body shame) to the same extent as would having women try on tight-fitting swimsuits. Thus, Hebl and her colleagues ($N = 400$, racially diverse) randomly assigned the men in their study to try on either a sweater or a tight-fitting swimsuit (a Speedo) that was as revealing as the women's swimsuits. Similar procedures were implemented in the Hebl et al. study as were in Fredrickson et al. (2004), and the researchers again used the TST to measure state body objectification. However, this time, participants were asked to complete only 10 (compared to 20) 'I am ___' statements.

Hebl et al.'s manipulation proved to be successful for both genders. Those in the prime condition made an average of 2.29 body size and shape statements ($SD = 1.77$) compared to .97 statements in the control condition ($SD = 1.29$). However, inconsistent with Fredrickson et al. (2004), and surprising considering that the design intended to increase the level of state body objectification experienced by men, women made significantly more statements about body size and shape ($M = 2.11$) than men ($M = 1.15$). The researchers also found that, overall, women experienced higher levels of body shame, lower self-esteem, did worse on the math test, and ate less candy than men after the manipulation. However, unlike Fredrickson et al. (2004), women *and* men of all ethnicities in the prime condition had higher levels of body shame, lower ratings of self-esteem, and worse performance on a math test than those in the control condition.

Despite the innovative design and informative results, an important limitation exists for both of these studies. The context of the prime might have held different meanings for men and women. For example, it might be that the men in the studies were less accustomed than the women to the experience of evaluating their bodies in front of a mirror while wearing minimal clothing (particularly for the Hebl et al. study, for which Speedos were worn). In fact, Fredrickson et al. (2004) pointed out that the men's experiences while trying on the *swimtrunks* were characterized by awkward and silly emotions, compared to more intense emotions of disgust and shame experienced by the women wearing swimsuits. These affect profiles suggest that the men in this study may have been reacting to the novelty of the situation, which might have confounded the results. If feeling awkward and unfamiliar, the men's responses might have reflected this novelty (e.g., feeling strange) rather than the salience of their body size and shape. Women, however, are more likely to be accustomed to the experience of trying on swimwear in front of a mirror than men, particularly revealing, tight-fitting swimwear, because that is the only

swimwear available to women. Taken together, these factors make it more likely that women's responses would not reflect feelings of unfamiliarity but rather more evaluative statements. An equally familiar context for both genders would help eliminate this "novelty" explanation and would be more useful in understanding the extent to which men and women experience state body objectification.

The third experimental study that included men involved subtly exposing participants to objectifying words (Roberts and Gettman, 2004). With the use of a scrambled sentence task, the researchers primed either a state of body objectification, bodily empowerment, or no prime was presented to 70 men and 90 women. The authors disguised the purpose of the study by presenting the scrambled sentence test as a test of language ability. Participants were instructed to construct four-word sentences from a scrambled list. For the priming conditions, 15 of the 25 words contained a word related to either a state of body objectification (e.g., sexiness, posing) or body competence (e.g., fitness, wellness). After completing this task, the participants were asked to fill out a packet of questionnaires, which they were told contained measures unrelated to the study. One questionnaire assessed the extent to which sexual experiences were perceived as desirable and appealing, and the TST measured state body objectification. On the TST, participants were asked to complete 20 "I am ____" statements; however, unlike Fredrickson et al. (2004) and Hebl et al. (2004), both (a) body size and shape, and (b) physical appearance statements were used to indicate state body objectification.

The researchers found that their manipulation was successful; participants in the body objectification condition made an average of 1.92 'body size and shape' and 'physical appearance' statements ($SD = 1.4$), compared to an average of 1 statement in the body empowerment condition ($SD = 1.1$). However, a main effect for gender was also found such that

women made significantly more 'body size and shape' and 'physical appearance' statements ($M = 1.51$) than did men ($M = .98$). The interaction between gender and condition was non-significant. Moreover, similar to the Fredrickson et al. (1998) study, women in the body objectification condition experienced higher levels of body shame, appearance anxiety, and rated the appeal of the physical aspects of sex lower than women in the body empowerment condition, whereas men's ratings on these variables did not differ between conditions. Although the researchers did not report the mean body appearance and competence statements made in the different conditions separately for each gender, these findings suggest that the researcher's prime produced body objectification in both men and women. However, after receiving the body objectification prime, only women experienced the accompanying negative affective states.

Findings from these three studies that included men in their samples were consistent in that the researchers' manipulations proved successful in priming a state of body objectification in both genders. However, the designs of these studies leave some questions unanswered. First, state body objectification was not adequately measured; scales designed to assess body objectification specifically were not employed. Moreover, the TST was administered and scored in various ways, which might have resulted in the inconsistent findings concerning whether men and women can be primed to experience similar levels of state body objectification. Further, the novelty of the situation for men in the first two studies (i.e., evaluating themselves in the mirror while in swimwear) might have accounted for some of the results. An experimental condition that controls for how accustomed both men and women are to the prime context, as well as multiple, reliable, and valid measures of state body objectification, would be helpful in better understanding the extent to which state body objectification occurs in men and women.

Several other experimental studies have been conducted using only women, a few of which have used an experimental prime context that would have been equally familiar to men had they been included in the sample. One such study involved having women anticipate a man's gaze (Calogero, 2004). Calogero argued that merely imagining a situation in which one would be evaluated could negatively influence how a woman feels about her body. She asserted that having women anticipate a man's gaze would induce a state of body objectification and have similar effects as those documented by researchers priming a state of body objectification through more direct avenues.

To test this hypothesis, Calogero manipulated gaze anticipation in 105 European-American women. The intent of the study was disguised; participants were told that the study related to "mind, body, and health issues." Participants were taken to a private room where they completed a packet of questionnaires that included demographics and a measure of trait body objectification (the SOQ) embedded within a bogus questionnaire about physical health. Participants were then taken to another room, and the individuals in the experimental groups were told that the second half of the study involved interactions between strangers. One-third of the participants were told they would be speaking with a woman stranger, one-third with a man stranger, and one-third were not told anything about speaking with a stranger. The participants were then instructed to complete the final questionnaires, which included measures of body shame, social physique anxiety, and dietary intent embedded within filler items. However, no measure of state body objectification was administered; thus, differences in state body objectification between the experimental and control conditions could not be examined. No social interaction actually occurred.

Calogero found that those women anticipating a male gaze scored higher on body shame and social physique anxiety than those anticipating a female gaze, but not higher than those in the control condition. The authors suggest that anticipating a female gaze might have a type of buffering effect on negative affective variables, or reduce the negative effects of body objectification. However, previous research also suggests that women compare and evaluate each other, leading to negative affect (Thornton & Maurice, 1997); thus, more research is needed to better understand these processes.

Although body objectification was not measured, and men were not included in the sample, Calogero's prime was presumably equally familiar to both genders. However, some research suggests that men and women are evaluated on different dimensions in dating situations, and thus would be concerned about different aspects of their presentation. Researchers have found that when evaluating a potential dating partner, on average, men choose women's physical attributes as most important, whereas women choose men's ambition, status, and dominance as most important (Evans & Brase, 2007; Townsend & Wasserman, 1998). A priming context that alerts both women and men to the fact that they will be evaluated on the same dimensions (e.g., physical attributes, personality traits) after an opposite gender "romantic" interaction would help to control for the above-mentioned influences.

Conclusions and Gaps in Past Research

Although few studies have included men in their sample, past research indicates that, in general, women experience higher levels of trait body objectification than men. This finding is likely due to the fact that women experience more sexual objectification and pressures to conform to the ideal body size and shape during their daily lives than do men. Even less research has examined gender differences in state body objectification. Findings stemming from those

studies that have included men have been inconsistent in terms of under what conditions and to what extent men and women experience state body objectification. Further, state body objectification has not been adequately measured, and the priming context has not always been equally familiar to both genders.

The Current Study

The current study examined the extent that state body objectification and social physique anxiety were primed in women and men. Unlike previous studies, the current study used a context in which the experimental prime was equally familiar to both genders. Building from the Calogero (2004) study, the current study primed a racially diverse sample of men and women to anticipate the gaze of a similarly aged member of the opposite gender (romantic condition). Similar to Calogero's study, the current study also included a friendship condition, in which individuals anticipated meeting a same gender individual and potential friend, as well as a control condition, in which no social interaction was mentioned. In this way, the researcher could more closely examine the possible buffering effect on state body objectification for women anticipating a female gaze. The effects on state body objectification for men anticipating a male gaze could also then be examined. Further, the current study employed the same measures to assess trait body objectification and appearance anxiety at pretest and state body objectification and appearance anxiety at the time of the experimental procedures. This way, the researcher could accurately examine changes between trait and state levels due to the effects of the prime.

The following hypotheses were proposed:

- 1) Women will have significantly higher levels of trait body objectification and appearance anxiety than men.

- 2) Women and men in the romantic relationship conditions will evidence the highest levels of state body objectification and appearance anxiety relative to their same gender peers in the friendship and control conditions; however, it is less clear whether a buffering effect will occur for women and/or men in the friendship conditions and how these variables will compare with the romantic and control conditions for both genders.
- 3) As already stated, women and men have different histories with respect to how they view their bodies, and therefore, women will likely have higher levels of trait body objectification and appearance anxiety than men. These higher trait levels are likely related to the experience of state body objectification and appearance anxiety. However, the current study alerts both genders in the romantic relationship condition that they will be evaluated on physical appearance and personality characteristics. Therefore, it is expected that gender differences in the romantic relationship condition in trait levels will be narrower for state levels; that is, men's ratings of state body objectification and appearance anxiety in the romantic relationship condition will be nearer to women's ratings than will be their trait ratings.

Methods

Design

The design of the study was a 2 by 3 by 2 (Gender x Condition: Relationship, Friendship, Control x Time) mixed design with gender and condition as between-subjects variables and time as a within-subjects variable.

Participants

A power analysis indicated that with alpha set at $p < .05$ and expecting a moderate effect size (Cohen's $d = .50$), to achieve medium power, 192 participants were needed. The original sample consisted of 191 participants. However, six participants did not attend the second experimental session, ending in a sample size of 185. Participants were recruited through (a) flyers posted across campus at the student center, classroom buildings, library, etc., and (b) the psychology human subjects pool. Participants recruited through flyers received \$15 for their participation. Participants recruited from the human subjects pool were given course credit. Thirty-seven participants (20%) received course credit and 148 (80%) received monetary compensation.

Demographic information is reported in Table 1. The sample consisted of 93 men and 92 women. The mean age of participants was 22.4 years ($SD = 3.2$) and ranged from 18 to 30 years. Eleven percent of the sample was first year students, 18% sophomores, 24% juniors, 34% seniors, 12% graduate students, and 1% staff. One participant did not report year in college. Sixty-two percent self-identified as Caucasian, 22% as African American, 2% as Asian American, 2% as Hispanic, 5% as Multiracial, and 7% as "Other." Two participants did not report their race. This sample reflected the racial demographics of the student population. Six individuals (3%) self-identified as homosexual and seven (4%) as bisexual. Two participants did not report their sexual orientation. One homosexual participant was randomly assigned to the romantic relationship condition. However, his mean scores on the dependent variables did not differ from the overall mean scores for participants in the same condition.

Ninety-two (50%) of the participants identified themselves as single and 93 (50%) as in a committed relationship. The same proportions were observed for participants who were and were

not interested in meeting a potential dating partner of the opposite sex. The average length of current romantic relationship was 11.8 months ($SD = 17.5$) and ranged from 0 to 84 months.

Table 1

Sample Demographics

Gender	<i>N</i>	Percentage
Female	92	50%
Male	93	50%
<i>TOTAL</i>	185	100%

Sexual Orientation	<i>N</i>	Percentage
Heterosexual	170	92%
Homosexual	6	3%
Bisexual	7	3%
<i>TOTAL</i>	183 (two missing)	100%

Ethnic identity	<i>N</i>	Percentage
European American	115	62%
African American	38	21%
Asian American	4	2%
Hispanic	4	2%
Multiracial	9	5%
Other	13	7%
<i>TOTAL</i>	183 (two missing)	100%

Year in college	<i>N</i>	Percentage
Freshman	20	11%
Sophomore	33	18%
Junior	44	24%
Senior	62	34%
Graduate Student	3	13%
Staff	2	1%
<i>TOTAL</i>	184 (1 missing)	100%

Note. Total percentages do not add up to 100% for sexual orientation, ethnic identity, or year in college due to missing data points.

Procedures

Experimenter training. Two female and two male undergraduate research assistants were extensively trained in the experimental procedures. An attempt was made to choose four assistants who were similar in sociability, professionalism, and physical attractiveness. The principal investigator provided detailed oral and written instructions and reviewed and modeled the experimental procedures. Each assistant was required to practice and correctly complete the comprehensive experimental procedures before data collection began.

Time 1 for paid participants. One hundred forty-eight participants were recruited via flyers posted around campus and were paid \$15 for their participation over a 9-month period. The recruitment flyer asked potential un-married participants between the ages of 18 and 30 years to e-mail an experimenter if they were interested in participating. They were informed that they would receive \$15 for their participation.

All participants were informed that the researcher was interested in looking at the associations between self-concept, romantic relationships, and friendships. They were told that their participation would involve two parts: completing questionnaires at an initial time point, which would take approximately 20 minutes, and returning to the lab on a second occasion one to two weeks later to complete additional questionnaires. No mention of a possible social interaction was mentioned at the first time point to avoid having a self-selected sample of non-socially anxious individuals at Time 2. Participants were informed that they would be paid \$15 for their participation when they completed the second part of the study. This incentive was decided prior to commencing the study by questioning undergraduate students regarding the amount and type of compensation needed to provide enough incentive to participate. If willing to

partake in the main study, participants provided informed consent. They were assured of their confidentiality, their rights as a research participant, and their compensation.

At the time of recruitment, participants were asked to fill out a questionnaire about relationships and friendships to strengthen the prime. This questionnaire included extraneous items to bolster the cover story that the researcher was interested in friendship and romantic relationship formation (e.g., “What qualities do you bring to a romantic relationship/friendship?” “What qualities do you look for in a romantic relationship/friendship?”). This questionnaire also included questions asking what race/ethnicity the participant preferred in their romantic partners and friends. In addition, the participants were asked if they were currently interested in meeting an opposite-gender dating partner. The latter question was asked so that interest in finding a romantic partner could be evaluated as a possible factor related to state appearance anxiety and body objectification for those in the romantic relationship condition.

The participants were then given two measures of trait body objectification and an appearance anxiety questionnaire, all described as self-concept measures. The body objectification and appearance anxiety items of these measures were embedded within other items (e.g., personality characteristics) to bolster the cover story. When finished, participants scheduled the second part of the experiment for one to two weeks later. E-mail addresses were collected so that the experimenter could remind the participant of their appointment. A card was also given to participants with the date, time, and location of the second part of the experiment, as well as contact information of the primary researcher.

Time 1 for participants recruited from the human subject pool. Thirteen participants completed the Time 1 measures during a department-wide pre-test administered in class on a designated day. A flyer was available for the participants to take with them that provided the e-

mail addresses of the experimenters, and the participants scheduled the second part of the study approximately one to two weeks later. Only those participants who completed the pre-test and who were unmarried and between the ages of 18 and 30 years were eligible to participate.

Due to low participation rates over a 2-month period from the pre-test recruitment, the researchers decided to conduct both time points in their lab the following semester with human subject pool participants. Eleven additional human subject pool participants completed both time points in the lab over a 5-month period.

Time 2 for all participants. The experimental session took approximately 20 minutes. Participants were randomly assigned to one of three conditions: an anticipated opposite-gender romantic relationship interaction, an anticipated same-gender friendship interaction, or no interaction mentioned. Men and women participated individually or in separate groups of two to five people, and groups were divided according to condition. A same-gender experimenter was present for all groups.

When participants arrived for the second part of the study, those in the opposite- and same-gender conditions were told that they had been assigned to the romantic relationship or friendship condition, respectively, for which they would interact with a member of the opposite gender (or same gender) of the preferred race they indicated earlier. Participants in the relationship and friendship conditions were then instructed to complete a short biographical description (age, gender, race, hobbies, and personality qualities) to be given (hypothetically) to their interaction partner. The experimenter told the participants that they would be rating their partner, and would be rated by their partner, on personal qualities such as personality and appearance. Participants were then instructed to return their forms to the researcher and to fill out additional self-concept questionnaires, comprised of the state body objectification and

appearance anxiety scales, disguised with filler items, while waiting to be taken to the next room for their interaction. No actual interaction occurred. Participants assigned to the control condition were asked to complete the same short biographical description and were instructed to return their form to the experimenter when finished, at which time they completed the additional questionnaires.

When finished with the self-concept measures (e.g., state body objectification and appearance anxiety), the participants in all conditions were asked to give their questionnaires to the experimenter, and they were given a final questionnaire assessing what they believed was the purpose of the study. When they were finished, they were orally debriefed and given a written description of the purpose of the study (See Appendix B). Participants were asked not to speak about the study to anyone so that the researcher could obtain reliable information from future participants. Those participants recruited through flyers were given \$15, and those recruited from the human subjects pool were given their participation credit receipt. Contact information of the primary researcher was provided should the participants have any questions.

Measures (See Appendix A)

Demographic questionnaire. This form asked the participants to indicate their gender, age, race, height, weight, year in college, sexual orientation, relationship status (single or committed relationship), and length of current romantic relationship.

Romantic relationship/friendship questionnaire. This questionnaire included three items needed for the analyses: “Do you have a race/ethnicity preference for a potential dating partner/friend?” (separate questions) and “Are you interested in meeting a potential dating partner of the opposite sex?” If the participant responded yes to the first two questions, they were asked to record which race/ethnicity they prefer. Filler items were also included to bolster the

cover story, such as “What do you look for in a romantic partner/friend?” and “What is your longest relationship/friendship?”

Trait body objectification. The first measure to assess trait body objectification was a modified Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998). Developed in accordance with objectification theory, the SOQ (Noll & Fredrickson, 1998) measures trait body objectification by assessing the extent to which an individual views their body in objectified terms (i.e., observable, appearance based). Appearance item ratings were summed to obtain a total score. Higher scores reflect a greater emphasis on appearance, which indicates a higher level of body objectification.

Noll and Fredrickson (1998) found that scores on the SOQ had high test-retest reliability ($r = .92, p < .001$). In addition, scores on the SOQ were positively correlated with a measure of appearance anxiety, or preoccupation with the physical self ($r = .52$), and with a measure of body dissatisfaction ($r = .46$; see Noll & Fredrickson, 1998). Moreover, women who scored higher on the SOQ scored higher on measures of body shame, neuroticism/anxiety, and depression, and lower on intellect (see Smolak & Murnan, 2004). This latter finding supports the prediction from objectification theory that spending cognitive resources on attending to one’s body and appearance may leave fewer resources to think clearly and creatively, although no causal direction can be implied.

For the purposes of the current study, the modified trait SOQ was administered with the instructions, “In general, over the past year, how important has [item] been to how you view yourself, or to your self-concept?” on a 7-point Likert scale ranging from 1 (*not at all important*) to 7 (*extremely important*). A 1-year time frame was chosen for all trait measures because memories for their experiences prior to 1 year might not be accurate, and one year is sufficiently

long to avoid assessing state levels. The objectification items included physical features, skin color, weight, sex appeal, muscle tone, body shape, hair, facial features, size and shape of buttocks and thighs, size and shape of chest, and size and shape of stomach.

The original SOQ items of “physical attractiveness” and “coloring” were changed to “physical features” and “skin color,” respectively, to discourage evaluation and to be more specific, respectively. Body objectification can be independent from body dissatisfaction and evaluation; thus, taking out “attractiveness,” which encourages judgment, tapped into objectification more specifically. In addition, the original item “physical measurements” was replaced with “body shape.” Further, “hair, facial features, size and shape of buttocks and thighs, size and shape of chest, and size and shape of stomach” were added to the measure so that a more encompassing measure of appearance objectification could be gathered. It is important to note that none of these items appeared to be gender- or ethnically-biased. These items were embedded within filler items referring to other attributes (e.g., personality) to reduce the possibility that participants recognized the true purpose of the study.

The modified SOQ, along with other measures, was pilot-tested on undergraduate students to test the reliability, validity, and readability of the measure. Results of this pilot study are reported in the results section. Cronbach’s alpha for the modified SOQ in the main study was .89.

A modified Twenty Statements Test (TST; Bugental & Zelen, 1950; Fredrickson et al., 2004) was also used to measure trait body objectification. The TST is a projective test that was administered with the instructions, “In the 20 blanks below, please make 20 different statements about your self and your identity, in general, as you have seen yourself in the past year, that complete the sentence ‘I ____.’ Complete the statements as if you were describing yourself to

yourself, not to someone else.” The original item stems “I am ____” were changed to “I ____” to encourage more responses.

The number of body shape and size and physical appearance responses served as measures of trait body objectification. More specifically, raters categorized the TST body objectification responses into three groups: nonevaluative (e.g., I have brown skin), positive evaluation (e.g., I like the shape of my body), and negative evaluation (e.g., I am too fat). According to Fredrickson and Roberts (1998), body objectification does not have to be negative. By coding the body objectification responses into neutral, positive, and negative categories, the researcher could more closely examine how each type of response might be affected by the experimental prime and gender.

The principle investigator extensively trained two research assistants on the scoring procedures for the TST. A theoretical rationale and specific examples were provided for which types of statements would be coded as nonevaluative, positive evaluation, and negative evaluation. The research assistants and principal investigator scored several practice protocols. Disagreements were discussed, and additional guidelines were established. The research assistants scored protocols until 97% agreement was reached, and any questions were brought to the principle investigator, who then made the final decision.

Trait appearance anxiety. The Social Physique Anxiety Scale (SPAS; Hart, Leary, & Rejeski, 1989) assessed self-reported anxiety arising as a result of perceptions of others' evaluations of one's body. Participants were instructed to “Indicate the degree to which the following statements have been generally characteristic or true of yourself in the past year” on a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*). Sample items include: “In the presence

of others, I feel apprehensive about my physique/figure” and “When it comes to displaying my physique/figure to others, I am a shy person.”

Hart et al (1989) reported high inter-item reliability (Cronbach’s Alpha = .90) and found that the measure correlated moderately with measures that tap general concerns with others’ evaluations (e.g., social anxiety) and moderately to highly with measures of body cathexis (i.e., body-relevant affect) and body esteem, providing evidence for construct validity. Further, Hart and colleagues found that during an actual evaluation of their physiques, participants high in social physique anxiety reported being significantly more stressed during the physique evaluation, less comfortable with the evaluation, and had more frequent negative thoughts about their body’s appearance during the evaluation than did those participants who scored low on social physique anxiety. These findings provide evidence for criterion-related validity. Inter-item reliability, or Cronbach’s alpha, was .88 for the current study.

State body objectification. The modified SOQ was administered to assess state body objectification. The instructions were modified to read, “Rate how important [item] is to your self-concept in this moment.” Cronbach’s alpha was .94 for the current study.

The modified TST was also administered to assess state body objectification. The instructions were modified to read, “In the 20 blanks below, please make 20 different statements about your self and your identity, as you see your self in this moment, that complete the sentence ‘I ____.’ Complete the statements as if you were describing yourself to yourself, not to someone else.” The same coding and scoring procedures were used as described above for the trait TST measure.

State appearance anxiety. The SPAS was administered to assess state appearance anxiety. The instructions were modified to read, “Rate the degree to which the following

statements are characteristic or true of yourself in this moment.” Cronbach’s alpha was .91 for the current study.

Results

Results of Pilot Study

It was predicted that (a) the original and modified SOQ would be moderately and significantly correlated, and (b) the modified and original SOQ would significantly correlate with the OBCS. In addition, given the more encompassing nature of the modified SOQ (i.e., included general appearance as well as body features), it was predicted that the original SOQ would correlate more strongly with the Social Physique Anxiety Scale (SPAS) and Body Image Questionnaire (BIQ) than the modified SOQ. Results showed that the original and modified SOQ were strongly correlated ($r = .698, p < .001$). As expected, both the original and modified SOQ were moderately correlated with the OBCS ($r_s = .407$ and $.509, p_s < .05$). Further, whereas the modified SOQ did not significantly correlate with the SPAS or BIQ, the original SOQ was significantly and moderately correlated with the BIQ ($r = .253, p < .05$). This finding makes sense given the more narrow focus of the original SOQ on the body and the more general focus of the modified SOQ on appearance. Inter-item reliability (Cronbach’s alpha) of the modified SOQ in the pilot study was .93.

Preliminary Analyses

Omitted items and skewness. One item was missing from the trait SOQ measure. This data point was replaced with the average rating for that participant on the scale. In addition, 22 trait and 35 state TST protocols had fewer than 20 responses, whereas only 5 trait and 13 state TST protocols had fewer than 15 responses. Therefore, protocols with fewer than 15 responses were excluded from the analyses. After consulting with other researchers familiar with the TST,

the principal investigator chose to compute TST scores based on the proportion of body objectification responses to the total number of responses given. Finally, three entire trait SPAS measures were missing.

Data were also analyzed for skewness and kurtosis. The trait and state TST measures were both positively skewed. Approximately two-thirds of respondents provided no self-objectification response on the TSTs, which severely limited its variance. As such, the trait and state TSTs were dropped from the main analyses.

Control variables. The three experimental groups (e.g., relationship, friendship, control) were compared in terms of demographic and relationship variables to ensure that they did not differ on these variables. Chi-square analyses were used to determine whether the categorical variables of race, relationship status, interest in dating, and sexual orientation differed across conditions, and a multivariate analyses of variance (MANOVA) was used to determine if the continuous variables of age, year in college, length of current relationship, and BMI differed across conditions. No variables were found to differ between conditions.

The relationships between certain demographic and relationship variables, such as race, relationship status, interest in dating, sexual orientation, age, BMI, year in college, and length of current romantic relationship and the dependent variables were also assessed. A MANOVA was used for the categorical demographic variables, and correlations were used for continuous demographic variables.

Race was found to be significantly related to trait self-objectification, $F = 2.58$, $p < .05$, $\eta^2 = .069$. Post-hoc Tukey's HSD analyses indicated that Asian Americans ($M = 59.0$, $SD = 10.4$) had significantly higher levels of trait self-objectification than Hispanics ($M = 31.5$, $SD = 5.8$). On a scale ranging from 1 to 7, the average ratings for Asian Americans and

Hispanics were 4.9 and 2.6, respectively. However, given the low numbers of Asian Americans ($n = 4$) and Hispanics ($n = 4$) in the sample, interpretations for this finding are difficult. The average levels of trait self-objectification for Caucasian, African-American, Multiracial, and those self-identifying as “Other” were 43.5, 47.4, 45.0, and 39.2, respectively ($SDs = 12.9, 14.0, 15.1, \text{ and } 8.2$, respectively). Ratings of trait self-objectification from Caucasian participants were not significantly different from levels reported by any other ethnic group. Trait levels of social physique anxiety did not differ across race, although the pattern of scores between ethnic groups was similar to that for trait self-objectification. Hispanic participants reported the lowest levels of trait self-objectification ($M = 30.8, SD = 15.5$) and Asian Americans reported the highest ($M = 45.3, SD = 16.1$). Average levels for Caucasian, African American, Multiracial, and those self-identifying as “Other” were 44.0, 41.9, 47.1, and 40.2, respectively ($SDs = 14.7, 15.9, 16.8, \text{ and } 8.2$, respectively).

Relationship status also had a significant impact on trait self-objectification scores, $F = 6.11, p < .05$, eta-squared = .033. Single participants ($M = 46.8, SD = 14.3$) had significantly higher levels of trait self-objectification than those in committed relationships ($M = 41.8, SD = 12.3$). The average rating for single participants and those in committed relationships were 3.9 and 3.4, respectively. Further, year in college was significantly negatively correlated with trait and state self-objectification ($rs = -.157$ and $-.185$, respectively, $ps < .05$). Trait and state self-objectification ratings decreased as participants were further along in their college career. The length of participant’s current relationship was also significantly negatively correlated with state self-objectification ($r = -.165, p < .05$). State self-objectification ratings decreased as current relationship duration increased. Finally, BMI was significantly positively correlated with trait

social physique anxiety ($r = .156, p < .05$). Trait social physique anxiety increased as BMI levels increased. These variables were used as covariates in the primary analyses.

Scores on all measures between the participants who received monetary versus course credit compensation and between participants seen by different experimenters (separated by gender of experimenter) were compared using a MANOVA to assess whether the samples differed systematically on these variables. No differences were found in the dependent variables across type of compensation or experimenter. Further, an attritional analysis was conducted to compare the scores on all measures at Time 1 between those individuals who attended Time 2 and those who did not to examine whether those individuals who did not participate in the second session differed in any systematic way from those who did. No differences were found in demographic, relationship, or Time 1 dependent variables between those who did and did not complete Time 2.

Relationship between self-objectification and social physique anxiety. The correlation between trait self-objectification and social physique anxiety was small to medium (Pearson's $r = .208, p < .05$).

Primary Analyses

Means and standard deviations for the dependent variables by condition are reported in Table 2. The statistics are reported separately for women and men so that gender patterns can be viewed and due to significant gender differences in trait social physique anxiety (see Results section).

Table 2

Mean Scores, Standard Deviations, and Average Ratings for Women and Men for the Dependent Variables by Condition

Dependent variable	<i>M</i>	<i>SD</i>	Average rating
<i>Trait SOQ</i>			
Relationship condition	45.3	15.2	3.8
Women	45.9	13.7	3.8
Men	44.9	16.4	3.7
Friendship condition	45.7	11.1	3.8
Women	47.3	9.7	3.9
Men	44.2	12.2	3.7
Control condition	41.9	14.7	3.4
Women	41.5	15.3	3.4
Men	42.3	14.3	3.5
TOTAL	44.5	13.8	3.7
Women	45.0	13.2	3.8
Men	44.0	14.5	3.7

State SOQ

Relationship condition	42.9	15.9	3.6
Women	42.9	15.0	3.6
Men	42.8	16.8	3.6
Friendship condition	39.8	13.2	3.3

Women	41.2	12.1	3.4
Men	38.1	14.1	3.2
Control condition	40.7	14.9	3.4
Women	40.8	15.7	3.4
Men	40.6	14.3	3.4
TOTAL	41.2	14.7	3.4
Women	41.8	14.2	3.5
Men	40.7	14.3	3.4

Trait SPAS

Relationship condition	41.4	15.2	3.5
Women	44.0	15.0	3.7
Men	38.4	13.1	3.2
Friendship condition	44.0	15.0	3.7
Women	51.9	14.7	4.3
Men	36.7	11.3	3.1
Control condition	41.6	12.8	3.5
Women	42.1	11.6	3.4
Men	41.0	14.4	3.4
TOTAL	42.4	14.5	3.6
Women	46.4	15.0	3.9
Men	38.4	12.8	3.2

State SPAS

Relationship condition	38.4	14.9	3.2
Women	43.5	15.1	3.7
Men	34.0	13.4	2.8
Friendship condition	42.2	14.7	3.5
Women	48.1	16.3	4.0
Men	36.7	10.5	3.1
Control condition	39.8	13.3	3.4
Women	40.2	11.8	3.4
Men	39.8	15.2	3.4
TOTAL	40.2	14.4	3.4
Women	44.0	14.8	3.7
Men	36.4	13.0	3.1

Note. Scores on the SOQ and SPAS ranged from 1 (*not at all important/not at all true*) to 7 (*extremely important/extremely true*). Reported scores are estimated marginal means.

Gender comparisons in trait levels (Hypothesis 1). Women were expected to report significantly higher levels of trait self-objectification and social physique anxiety than men. This expectation was confirmed for trait social physique anxiety. The mean total score for women was 46.9 ($SD = 15.3$), compared to 38.7 ($SD = 13.0$) for men, $t = -3.87$, $p < .05$, Cohen's $d = .58$. On a scale from 1 to 7, the average ratings for women and men were 3.9 and 3.2, respectively, indicating moderate and mild levels of social physique anxiety. Contrary to expectations, levels of trait self-objectification were not significantly different for men ($M = 44.0$, $SD = 14.6$) and women ($M = 44.6$, $SD = 13.1$). On a scale from 1 to 7, the average rating for both women and men was 3.7, indicating moderate levels of self-objectification.

Analyses using gender, condition, and time as independent variables. The primary analyses involved separate 2 by 3 by 2 (Gender x Condition x Time) ANCOVAs using self-objectification and social physique anxiety as dependent variables. Separate ANCOVAs were chosen due to the conceptual differences between self-objectification, a cerebral construct that is not necessarily associated with a negative self-evaluation, and social physique anxiety, an emotional construct that is generally construed as negative. Further, the correlation between the dependent variables was small to medium ($r = .208$). Gender and condition were treated as between-subjects variables and time was treated as a within-subject variable. Post-hoc analyses using estimated marginal means and t-tests were used when the ANCOVAs were significant. Means, standard deviations, and average ratings for the two dependent variables are reported in Table 2.

A Time by Condition effect was predicted such that levels of state self-objectification and social physique anxiety were expected to be highest for participants in the relationship condition relative to the friendship and control condition, whereas no differences were expected across

conditions in trait levels (Hypothesis 2). Further, although somewhat exploratory in nature, previous research led to the expectation of a buffering effect for state levels in both dependent variables for women, and perhaps men, in the friendship condition relative to their same-gender peers in the relationship and control conditions. In addition, although again exploratory, trait levels of the dependent variables were also predicted to be lower than state levels for those in the relationship condition, whereas the reverse was expected for those in the friendship condition.

The ANCOVA revealed a significant Time by Condition effect for self-objectification, $F(1, 169) = 3.36, p < .05, \eta^2 = .038$. Paired sample t-tests revealed that levels of trait self-objectification for those in both the relationship ($M = 45.1, SD = 15.2$) and friendship conditions ($M = 45.8, SD = 11.0$), but not in the control condition, were significantly higher than levels of state self-objectification ($M = 42.6, SD = 15.9$ for relationship condition; $M = 39.9, SD = 13.5$ for friendship condition), $t_s = 2.05$ and 4.45 , respectively, $p_s < .05$. The average rating for trait self-objectification for those in both the relationship and friendship conditions was 3.8 , compared to 3.6 and 3.3 , respectively, for state self-objectification. Cohen's d was $.19$ for the relationship condition and $.48$ for the friendship condition. Although this finding was expected for the friendship condition, the opposite pattern was expected for those in the relationship condition. As expected, trait and state self-objectification were similar for those in the control condition ($M = 41.3, SD = 14.7$ for trait; $M = 40.4, SD = 14.8$ for state; Average rating = 3.4 for both). All other ANCOVA main and interaction effects were non-significant.

The ANCOVA revealed a trend toward significance for the three-way interaction of Time by Condition by Gender for social physique anxiety, $F(1, 170) = 2.98, p = .053, \eta^2 = .034$. To explore this trend, separate 2 by 3 (Time x Condition) ANCOVAs were conducted for each gender.

The ANCOVA for men revealed a significant Time by Condition effect, $F(1, 85) = 3.18$, $p < .05$, eta-squared = .07. Similar to what was found for self-objectification and contrary to expectations, pairwise comparisons showed that for men in the relationship condition, trait social physique anxiety ($M = 38.4$, $SD = 13.1$; Average rating = 3.2) was significantly higher than state social physique anxiety ($M = 34.0$, $SD = 13.4$; Average rating = 2.8), $p < .05$, Cohen's $d = .33$. However, these scores did not differ across time for the friendship or control conditions.

Contrary to expectations, the Time by Condition interaction was not significant for women. However, analyses were conducted to explore patterns in the data. As expected, and similar to what was found for self-objectification, paired-sample t-tests revealed that for women in the friendship condition, trait social physique anxiety ($M = 51.9$, $SD = 14.7$; Average rating = 4.3) was significantly higher than state levels ($M = 48.1$, $SD = 16.3$; Average rating = 4.0), $t = 2.25$, $p < .05$, Cohen's $d = .25$. This finding is consistent with the buffering effect found in previous research for women in the friendship condition. However, contrary to expectations, no differences in trait and state levels were found in the relationship condition. As expected, no differences were found in the control condition.

Although limited power made it difficult to find significant differences in state levels across conditions, these patterns are reported here. As already mentioned, levels of state self-objectification and social physique anxiety were expected to be highest for participants in the relationship condition relative to the friendship and control condition (Hypothesis 2). The analyses were separated by gender to explore patterns that may differ between women and men.

As expected, patterns revealed that women's state self-objectification levels were higher in the relationship condition ($M = 42.9$, $SD = 15.0$; Average rating = 3.6) than in the control condition ($M = 40.8$, $SD = 15.7$; Average rating = 3.4), Cohen's $d = .14$. Levels in the friendship

condition fell between the other two conditions ($M = 41.6$, $SD = 12.1$; Average rating = 3.5). For men, as expected, patterns revealed that state self-objectification levels were higher in the relationship condition ($M = 42.8$, $SD = 16.8$, Average rating = 3.6) than in the friendship condition ($M = 38.1$, $SD = 14.1$, Average rating = 3.2), Cohen's $d = .31$. Levels in the control condition fell between the other two conditions ($M = 40.6$, $SD = 14.3$; Average rating = 3.4).

Similar to what was found for state self-objectification, patterns revealed that women's levels of state social physique anxiety were higher in the relationship condition ($M = 43.5$, $SD = 15.1$, Average rating = 3.6) than in the control condition ($M = 40.2$, $SD = 11.8$, Average rating = 3.40), Cohen's $d = .25$. However, women in the friendship condition had much higher levels of state social physique anxiety ($M = 48.1$, $SD = 16.3$; Average rating = 4.0) than women in either of the other two conditions, a pattern that was not found for state self-objectification. Cohen's d for the friendship condition compared to the relationship and control conditions for social physique anxiety are .29 and .56, respectively. Contrary to expectations, men's state social physique anxiety levels were lowest in the relationship condition ($M = 34.0$, $SD = 13.4$, Average rating = 2.8), followed by the friendship condition ($M = 36.7$, $SD = 10.5$, Average rating = 3.1) and the control condition ($M = 39.7$, $SD = 15.2$, Average rating = 3.3).

Gender differences in state levels of the dependent variables were expected to be narrower than gender differences in trait levels for participants in the relationship condition (Hypothesis 3). However, findings were generally not consistent with this prediction. The difference in state levels of self-objectification between men and women (Difference = 0.1; M s = 42.8 for men and 42.9 for women; Average rating = 3.6 for both) was only slightly narrower than the difference in trait levels (Difference = 1.0; M s = 44.9 and 45.9, Average ratings = 3.7 and 3.8, respectively). In addition, the gender difference in trait levels of social physique anxiety

between men and women was actually narrower (Difference = 6.5; $M_s = 38.4$ and 44.9 , Average ratings = 3.2 and 3.7, respectively) than the gender difference in state levels (Difference = 9.5; $M_s = 34.0$ and 43.5 , Average ratings = 2.8 and 3.6, respectively).

Analyses Using Relationship Status as a Fourth Independent Variable

Given the association between relationship status and self-objectification that was found in the preliminary analyses and the conceptual relationship between relationship status and the dependent variables, analyses were conducted using relationship status as a fourth independent variable. The analysis involved two 2 by 3 by 2 by 2 (Gender x Condition x Time x Relationship Status) ANCOVAs with self-objectification and social physique anxiety as the dependent variables. Length in current relationship was used as a covariate for the self-objectification analysis, and BMI was used as a covariate for the social physique anxiety analysis. Given the exploratory nature of these analyses, no clear hypotheses were drawn. However, emphasis was placed on exploring findings for women and men in the relationship condition. It might be expected that single women and men in the relationship condition would report higher state levels than trait levels (within-subject) and that singles would report higher state levels than those in committed relationships (between-subject). Means, standard deviations, and average ratings on the dependent variables for single participants and those in committed relationships are reported in Table 3.

Table 3

Mean Scores, Standard Deviations, and Average State (T2) Ratings for Women and Men in the Relationship Condition for the Dependent Variables by Relationship Status

Dependent variable	<i>M</i>	<i>SD</i>	Average rating
<i>State SOQ</i>			
Women			
Single	40.6	17.8	3.4
Committed Relationship	44.8	12.4	3.7
Men			
Single	44.1	16.6	3.7
Committed Relationship	39.5	17.6	3.4
TOTAL			
Single	42.4	17.2	3.5
Committed Relationship	42.1	15.0	3.5
<i>State SPAS</i>			
Women			
Single	46.7	19.9	3.9
Committed Relationship	41.4	11.1	3.5
Men			
Single	34.1	12.8	2.8
Committed Relationship	33.8	15.6	2.8

TOTAL

Single	40.4	16.3	3.4
Committed Relationship	37.6	13.2	3.1

Note. Scores on the SOQ and SPAS ranged from 1 (*not at all important/not at all true*) to 7 (*extremely important/extremely true*). Reported scores are estimated marginal means.

Within-subject findings for self-objectification. The ANCOVA revealed a significant Time by Condition effect, $F(1, 33) = 4.32, p < .05$, eta-squared = .05, and Time by Relationship Status effect, $F(1, 33) = 6.75, p < .05$, eta-squared = .04. All other ANCOVA main or interaction effects were non-significant. The Time by Condition effect was explored in the analysis described earlier. Therefore, post-hoc analyses were run only on the Time by Relationship Status effect. Paired sample t-tests revealed that for single individuals (collapsed across conditions), but not for those in committed relationships, levels of trait self-objectification ($M = 46.3, SD = 14.7$) were significantly higher than state self-objectification ($M = 42.3, SD = 15.2$), $t = 4.33, p < .01$, Cohen's $d = .27$. The average ratings of trait and state self-objectification for single individuals were 3.9 and 3.5, respectively, indicating moderate and mild levels. However, because this finding is collapsed across conditions, no information is provided specific to the impact of relationship status for those in the relationship condition.

Although limited power made it difficult to find significant differences between trait and state levels of self-objectification across relationship status for those in the relationship condition, these patterns are reported here. The analyses were separated by gender to explore patterns that may differ between women and men. Contrary to expectations, patterns revealed that single women in the relationship condition had higher trait levels of self-objectification ($M = 47.7, SD = 16.2$; Average rating = 4.0) than state levels ($M = 40.6, SD = 18.0$; Average rating = 3.4), whereas women in committed relationships reported similar trait ($M = 44.4, SD = 11.6$; Average rating = 3.7) and state levels ($M = 44.8, SD = 12.4$; Average rating = 3.7). A similar pattern was found for men. Single men in the relationship condition had higher trait levels of self-objectification ($M = 47.7, SD = 16.2$; Average rating = 4.0) than state levels ($M = 44.1, SD = 16.6$; Average rating = 3.7), whereas men in committed relationships reported similar trait ($M =$

38.0, $SD = 15.8$; Average rating = 3.2) and state levels ($M = 39.4$, $SD = 17.6$, Average rating = 3.3).

Within-subject findings for social physique anxiety. The ANCOVA revealed a significant Time by Gender by Condition effect, $F(2, 33) = 3.04$, $p < .05$, eta-squared = .036, that was explained by a significant Time by Gender by Condition by Relationship Status effect, $F(2, 33) = 3.28$, $p < .04$, eta-squared = .04. All other ANCOVA main and interaction effects were non-significant. Post-hoc comparisons were again separated by gender to aid in organization.

Paired-sample t-tests revealed that for single men in the relationship and friendship conditions, but not for those in the control condition, levels of state social physique anxiety ($M = 34.1$, $SD = 12.8$ and $M = 36.1$, $SD = 12.3$, respectively) were lower than those for trait ($M = 38.0$, $SD = 13.3$ and $M = 40.3$, $SD = 12.7$, respectively). $T(1, 24) = 3.79$, $p < .05$ for the relationship condition and $t(1, 14) = 2.60$, $p < .05$ for the friendship condition. Cohen's d s were .30 and .34, respectively. The average ratings of state social physique anxiety for single men in the relationship and friendship conditions were 2.8 and 3.0, respectively, versus 3.2 and 3.4 for trait social physique anxiety, respectively. Although this finding was somewhat expected for men (single and in committed relationships) in the friendship condition and is consistent with the buffering effect, the finding was contrary to expectations for those in the relationship condition. No paired sample comparisons were significant for women.

Patterns of differences between trait and state levels across relationship status for those in the relationship condition were also explored for social physique anxiety. In the relationship condition, single women reported similar levels of trait and state social physique anxiety (M s = 46.8 and 46.7, SD s = 19.6 and 19.9; Average rating = 3.9 for both), as did women in committed relationships ($M = 43.6$, $SD = 15.1$ for trait; $M = 41.4$, $SD = 11.1$ for state; Average ratings = 3.6

and 3.5, respectively). However, a different pattern emerged for men. Both single men and men in committed relationships reported higher levels of trait social physique anxiety ($M_s = 38.0$ and 39.5 , respectively, $SD_s = 13.3$ for both; Average ratings = 3.2 and 3.3, respectively) than state ($M_s = 34.1$ and 33.8 , $SD_s = 12.8$ and 15.6 , respectively; Average ratings = 2.8 for both).

Between-subjects findings for state self-objectification. Findings showed that for single men, as expected, levels of state self-objectification were significantly higher for those in the relationship condition ($M = 44.1$, $SD = 16.6$) compared to those in the friendship condition ($M = 34.1$, $SD = 13.0$), $t = 2.03$, $p < .05$, Cohen's $d = .68$, consistent with the buffering effect found in previous research for the friendship condition. The average rating for single men in the relationship condition was 3.7 compared to 2.8 for those in the friendship condition, indicating moderate and mild levels, respectively. However, this finding was not found for single women or individuals in committed relationships.

Additional analyses were separated by gender to explore patterns that may differ between single women and men and those in committed relationships for participants in the relationship condition. Contrary to expectations, patterns revealed that state self-objectification for single women in the relationship condition ($M = 40.6$, $SD = 18.8$; Average rating = 3.4) was lower than for women in committed relationships ($M = 44.8$, $SD = 12.4$; Average rating = 3.7), Cohen's $d = .23$. However, the opposite was true for men. As predicted, state self-objectification for single men in the relationship condition ($M = 44.1$, $SD = 16.6$; Average rating = 3.7) was higher than for men in committed relationships ($M = 39.5$, $SD = 17.6$; Average rating = 3.3), Cohen's $d = .25$.

One explanation for these findings could be that relationship status and interest in meeting a dating partner were independent of each other. That is, perhaps being single did not

overlap with interest in a dating partner and being in a committed relationship did not overlap with lack of interest. Results of basic chi-square analyses did not confirm this explanation. Significantly more participants in committed relationships denied interest in meeting a dating partner (80%) compared to those who endorsed interest (20%), $\chi (1, 93) = 32.54, p < .001$. Further, significantly more single participants endorsed interest in meeting a dating partner (79%) than those who denied interest (21%), $\chi (1, 92) = 31.70, p < .001$.

Although relationship status and interest in meeting a dating partner were indeed significantly related when collapsed across genders, these relationships may have differed for women and men. For example, one possible explanation for the finding that single women in the relationship condition reported lower levels of state self-objectification than women in committed relationships could be that single women were less interested in meeting a dating partner than single men, which would have translated into lower levels of self-objectification relative to single men. However, although a slightly higher percentage of single men (81%) were interested in meeting a potential dating partner than single women (77%), the chi-square analysis was non-significant, $\chi (1, 92) = .168, p = .682$. Another possible explanation could be that the women in this study were more likely than men to describe their relationship status as committed, yet still be interested in meeting a dating partner. However, a closer examination shows the opposite trend. Of those participants in committed relationships, a slightly lower percentage of women (18%) were interested in meeting a potential dating partner than men (25%). However, the chi-square analysis was non-significant, $\chi (1, 93) = .755, p = .385$.

Between-subject findings for state social physique anxiety. Patterns revealed that, as expected, state social physique anxiety for single women in the relationship condition ($M = 46.7, SD = 19.9$; Average rating = 3.9) was higher than for women in committed relationships ($M =$

41.4, $SD = 11.1$; Average rating = 3.5). However, state social physique anxiety for single men and men in committed relationships were similar ($M_s = 34.1$ and 33.8 , $SD_s = 12.8$ and 15.6 , respectively; Average rating = 2.8 for both).

Summary of Findings

As expected, and consistent with the first hypothesis, trait levels of social physique anxiety were significantly higher for women than men; however, trait levels of self-objectification were similar across genders. Results were less consistent with the second and third hypotheses, and when patterns did fit the hypotheses, they were non-significant. Nevertheless, interesting insights were gained involving the relationship between body objectification and social physique anxiety.

Discussion

Overview

Previous researchers have primed self-objectification through many different contexts. However, most of this research has been conducted on women, and self-objectification and related constructs have not always been adequately measured. The current study examined the extent to which state self-objectification and appearance anxiety were primed in both women and men. Trait levels were also assessed. The context of the experimental prime was equally familiar to both genders, and the study included a friendship condition to examine the potential buffering effects of meeting a same-gender partner. In this section, gender differences in trait levels of self-objectification and social physique anxiety are discussed, followed by interpretations of the primary analyses. Limitations and directions for future research are also included.

Gender Differences in Trait Self-Objectification and Social Physique Anxiety

Consistent with prior research, women reported significantly higher levels of trait social physique anxiety than men. However, men and women reported similar levels of trait self-objectification. Although this lack of gender difference was somewhat unexpected, there is a paucity of studies examining gender differences in trait self-objectification that have included male participants. Moreover, in their original article, Fredrickson and Roberts (1997) theorized that body objectification could occur independently from negative affective states and behaviors. For example, individuals can experience body objectification and not body shame or anxiety; although they are objectifying their body, they are not necessarily displeased with what they see. This theory provides a possible explanation for why the men in this study reported similar levels of trait self-objectification as the women, yet they reported much lower levels of trait appearance anxiety than the women. In addition, this finding points to a possible exaggeration in media portrayals of women's focus on their appearance. The current study found that men and women are preoccupied with their appearance to a similar extent; however, perhaps due to suffering harsher consequences when feminine beauty ideals are not met (Chen & Brown, 2005; Cossrow, Jeffery, & McGuire, 2001), women experience higher levels of appearance anxiety than men when under the same circumstances.

Interpretations of the Main Analyses

Despite some surprising findings, several insights were gained, particularly with respect to the important differences between self-objectification and social physique anxiety. Results for the two dependent variables are discussed across experimental conditions, gender, time, and relationship status.

State self-objectification and social physique anxiety across experimental conditions. As expected, patterns showed that men and women alike reported the highest levels of state self-

objectification in the relationship condition compared to the friendship and control conditions. Thus, consistent with previous research, both genders were more preoccupied with their appearance when anticipating an interaction with an opposite-gender partner than when anticipating a same-gender partner or when they did not anticipate a meeting. In addition, although patterns revealed that women's levels of state self-objectification were similar in the friendship and control conditions, men's levels were lower in the friendship condition than in the control condition, consistent with the buffering effect found in previous research for women (Calogero, 2004).

A different pattern emerged for social physique anxiety. Women reported the highest levels of state social physique anxiety in the friendship condition, followed by the relationship and control conditions. Thus, women experienced the most anxiety when anticipating an interaction with another woman, followed by anticipating an interaction with a man. In essence, expecting to meet any person, woman or man, created more anxiety than not expecting to meet anyone. The opposite was true for men. Men in the control condition reported the highest levels of state social physique anxiety, followed by the friendship and the relationship conditions. Thus, expecting to meet any person, man or woman, appeared to have a buffering effect on men's appearance anxiety.

Although these findings seem puzzling at first, several explanations are possible. First, researchers have found that overall, women experience higher levels of social anxiety than men (Kessler et al., 1994). Given that the participants were anticipating a social interaction, perhaps women experienced higher levels of social anxiety than men, which might in turn have led to elevations of other types of anxiety, including social physique anxiety. Alternatively, perhaps the fact that women experience higher appearance anxiety than men helps explain why women

report higher levels of overall social anxiety than men. Similarly, a gender-additive model has been used to explain the larger increases in depression levels reported by adolescent girls than boys. That is, body image and eating-related pathology experienced by girls during adolescence accounts for their larger increases in depression relative to boys during this time. (Stice & Bearman, 2001). More research is needed to help understand the relationship between appearance and social anxiety.

Research exploring the attributes on which men and women are evaluated might also help explain these results. Although both genders were told that they would be evaluated on the same attributes (e.g., personality, appearance), strong social influences may have affected the results. For example, researchers have found that women are evaluated to a higher extent on their appearance than men; whereas men are evaluated on attributes such as ambitiousness, women are most heavily evaluated on appearance (Evans & Brase, 2007). Moreover, women suffer more serious consequences than men when their appearance does not match current beauty ideals (Chen & Brown, 2005; Cossrow, Jeffery, & McGuire, 2001). Thus, the women in this study may have anticipated being evaluated on their appearance by both men and women and had more at stake (e.g., stigma, harsher judgments) if they were evaluated negatively, leading to higher levels of appearance anxiety. Conversely, the men in this study may have anticipated being evaluated on other dimensions, such as financial success and ambitiousness, particularly by women, which presumably would not lead to the same levels of appearance anxiety. Further, it is possible that, although the men expected to be evaluated on non-appearance dimensions by women, they nevertheless expected to be evaluated on their appearance by other men. These expectations could explain why the men in the current study reported lower levels of state social physique

anxiety in the relationship than the friendship condition. Measuring other variables in men, such as anxiety surrounding financial and career success, might help clarify these questions.

Although patterns revealed that women and men reported higher levels of self-objectification when expecting to meet an opposite-gender partner compared to a same-gender partner, they reported lower levels of social physique anxiety when expecting to meet an opposite-gender partner compared to a same-gender partner. These findings point to important differences between the two dependent variables; namely, individuals do not experience these constructs similarly in the same context. It appears that although self-objectification is elevated most when expecting to meet a person of the opposite gender, social physique anxiety is elevated most when expecting to meet someone of the same gender. This finding might suggest that cerebral constructs are activated with opposite-gender contexts, whereas affective constructs are activated with same-gender contexts. Alternatively, perhaps men and women believe that their same-gender peers will more harshly judge them on appearance than their opposite-gender peers. This possibility was previously discussed for men, and could also be true for women. However, Calogero (2004) found an opposite pattern for women in her study; that is, expecting to meet another woman had a buffering effect on social physique anxiety. Further, it is unclear why these perceptions would apply to social physique anxiety but not self-objectification. More research is needed to clarify these questions.

Comparisons between trait and state levels of self-objectification and social physique anxiety. Trait levels of self-objectification were significantly higher than state levels in the friendship condition, collapsed across gender. This finding was expected for those in the friendship condition and is consistent with the buffering effect for individuals anticipating a same-gender interaction. Moreover, the buffering effect was found for women's social physique

anxiety in the friendship condition. Contrary to expectations, however, trait levels of self-objectification were also significantly higher than state levels in the relationship condition, collapsed across gender. Further, men's reports of trait social physique anxiety were significantly higher than state levels in the relationship condition. Perhaps even more surprising are the patterns showing that state levels were lower than trait levels for participants in the control condition. These findings are unexpected given that no manipulation occurred in this condition.

A number of reasons may explain the general trend, with a few exceptions, of trait levels being higher than state levels. First, for those in the relationship condition at least, expecting to meet an opposite-gender partner may have "truly" decreased levels of state social physique anxiety from previously reported trait levels. As previously discussed, perhaps the participants in this study perceived that their opposite-gender peers would judge them less harshly on appearance attributes than would their same-gender peers. Alternatively, it is possible that participants experienced a negative bias when reporting trait levels. The experimenters instructed participants to rate their levels of trait self-objectification and social physique anxiety in terms of how they had viewed themselves over the past year. It is possible that the most intense or most negative events and related affective experiences were recalled when retrieving memories, which would have led to elevated reports of trait levels. However, when asked to rate these experiences in the moment, the negative bias might not have occurred. It is also possible that a testing effect transpired such that participants were exposed and desensitized to the items at Time 1 (e.g., "In the presence of others, I have felt apprehensive about my physique/figure"), leading to lower affective intensity levels at Time 2.

Comparisons of state self-objectification and social physique anxiety for single participants and participants in committed relationships. As expected, single men in the

relationship condition reported higher levels of state self-objectification than men in committed relationships. However, the opposite was true for women. Single women in the relationship condition reported lower levels of state self-objectification than women in committed relationships. Several possible explanations were statistically tested in an attempt to understand these findings. However, none of these explanations were confirmed. Relationship status and interest in meeting were not found to be independent of each other for women or men. In addition, single men and women were similarly interested in meeting potential dating partners. Women and men were also just as likely to report being in a committed relationship, yet still be interested in meeting a potential dating partner. Thus, further research is needed to clarify these findings.

As expected, and contrary to what was found for self-objectification, single women in the relationship condition reported significantly higher levels of state social physique anxiety than women in committed relationships. Thus, although single women reported lower levels of state self-objectification than women in committed relationships when expecting to meet a man, they still reported higher levels of social physique anxiety than women in committed relationships. A different pattern emerged for men in the relationship condition. Single men and men in committed relationships reported similar levels of state social physique anxiety. Therefore, although single men experienced more state self-objectification than men in committed relationships, they reported similar levels of appearance anxiety.

These findings highlight the conceptual difference between self-objectification and social physique anxiety and indicate that in the same context, one construct can be elevated and not the other. That is, an individual does not need to be highly preoccupied with their appearance to experience appearance anxiety, and, as previously noted, one does not necessarily experience

high levels of appearance anxiety when preoccupied by their appearance. Further, gender patterns point to the different ways in which men and women experience these phenomena.

Limitations and Future Directions

Overall, the results were only at times consistent with previous research and with the current hypotheses. Moreover, when they were consistent, they were often merely patterns and did not reach significance. Perhaps the most parsimonious explanation for the inconsistent findings is that the experimental manipulation was not strong enough to affect the dependent variables as predicted. Although an examination of the integrity checks revealed that participants were unaware of the purpose of the study, believability of the experimental prime was not directly measured. Thus, it is unclear whether participants in the experimental conditions believed that they would indeed meet a man or woman as described by the experimenter. Future researchers should consider collecting believability ratings at the end of the experiment and consider ways to strengthen the experimental prime.

In addition, the results may have been affected by a negative bias when participants were asked to report trait levels of self-objectification and appearance anxiety as they remembered these experiences over the past year. The results may also have been influenced by a testing effect, such that individuals' ratings of the dependent variables at Time 2 may have been dampened due to exposure and perhaps desensitization from responding to the same items at Time 1. Future researchers might consider conducting an experiment that measures only state levels. Although the within-subject effects would be lost with this type of study, the researchers could confirm that their results were not due to testing effects or a negative bias.

As previously mentioned, another limitation of the study involves the categorical measurement of the participant's interest in a dating partner and levels of commitment in current

relationships. Future researchers should measure these variables on a continuous scale to understand how these constructs relate to the dependent variables.

Another weakness of the study involves the limitation of the sample to college men and women. Thus, the conclusions drawn are applicable only to this population. Research examining self-objectification and social physique anxiety in community samples is needed to aid in generalization of the findings.

In addition, only one valid measure of self-objectification was used in the current study. The Twenty Statements Test was not used due to minimal variance and skewness. This measure has frequently been used in previous research, and it would have been helpful to compare results from the current study to this prior research. Future researchers should consider including additional self-objectification measures, as well as other dependent variables not related to appearance, such as anxiety concerning careers and financial success. These latter measures might help to capture the experiences of men in these various contexts.

Researchers should also continue exploring the relationships between self-objectification and affective, evaluative constructs such as appearance anxiety, shame, and dissatisfaction. It seems that men and women experience these constructs to different extents in various contexts and that experiencing self-objectification does not necessitate experiencing affective constructs, and vice versa. Understanding the potential consequences of both types of experiences in different contexts may aid in developing prevention methods and effective treatments.

Research examining the association between appearance anxiety and social anxiety for women and men is also needed. Previous research has shown that the greater increases in depression during adolescence reported by girls than boys can be explained by gender socialization (Wichstrom, 1999) and by the higher levels of body dissatisfaction and other

appearance and eating-related difficulties reported by girls than boys (Nolen-Hoeksema, 1994). Stice and Bearman's (2001) gender-additive model explains how the increased risk for depression in girls relative to boys during adolescence can be accounted for by a broad constellation of body image concerns and eating disturbances. Similarly, perhaps the higher levels of social anxiety reported by women than men could at least partly be explained by women's higher levels of appearance-related anxiety.

Finally, it is important that researchers continue to examine, through experimental studies, how variables such as self-objectification, appearance anxiety, body shame, and flow relate to mental health problems such as depression, eating disorders, and sexual dysfunction. Designing new ways to measure these constructs, including behavioral measures, will help clarify the link between affective and cognitive variables and mental health risks as outlined by Fredrickson and Robert's (1997) original theoretical article. Further, understanding these links will aid in developing prevention and treatment models.

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Appendix A

Measures

Demographic Questionnaire

Age: _____

Gender (circle): M F

Race/ethnicity (circle): Hispanic Asian American African American

White Multiracial (list): _____

Other (list): _____

Year in college (circle): Freshman Sophomore Junior Senior

Graduate Student Staff/faculty

Height: _____

Weight: _____

Relationship Status (circle): Single Committed Relationship Married

If in a romantic relationship, how long have you been in this relationship? _____ months

Sexual Orientation (circle): Heterosexual Homosexual Bisexual

Friendship/Relationship Questionnaire

1. List three characteristics you look for in a romantic partner:

2. Do you have a race preference for a potential dating partner? (circle): Y N

3. If yes, which race? _____

4. List three characteristics you look for in a friend:

5. Do you have a race preference for a potential friend? (circle): Y N

6. If yes, which race? _____

7. How long is your longest romantic relationship?: _____

8. How long is your longest friendship?: _____

9. Are you interested in meeting a potential dating partner of the opposite sex? (circle):

Y N

Self-Objectification Questionnaire

In general, over the past year, rate how important each of the following items has been to your self-concept (or how you view yourself). [Time 2 directions will read “Rate how important each of the following items is to your self-concept (or how you view yourself) in this moment”]

Please indicate your rating on the following scale:

1	2	3	4	5	6	7
<i>Not at all</i>	<i>A little</i>	<i>Once in a while</i>	<i>Somewhat</i>	<i>Fairly</i>	<i>Quite a bit</i>	<i>Extremely</i>
<i>important</i>	<i>important</i>	<i>important</i>	<i>important</i>	<i>important</i>	<i>important</i>	<i>important</i>

1. _____ social skills
2. _____ work ethic
3. _____ being a good friend
4. _____ physical features
5. _____ political activism
6. _____ spirituality
7. _____ body shape
8. _____ skin color
9. _____ optimism
10. _____ efficiency
11. _____ having a long-term relationship
12. _____ weight
13. _____ having close friends
14. _____ self-improvement
15. _____ size/shape of chest
16. _____ sex appeal
17. _____ education
18. _____ doing good for others
19. _____ muscle tone
20. _____ being well-liked
21. _____ having close family
22. _____ size/shape of stomach
23. _____ your job
24. _____ facial features
25. _____ being an good romantic partner
26. _____ making money
27. _____ size/shape of buttocks and thighs
28. _____ volunteering
29. _____ hair
30. _____ religion
31. _____ physical measurements (hip, chest measurements)
32. _____ having a romantic partner

Twenty Statements Test

In the 20 blanks below, please make 20 different statements about your self and your identity, in general, as you have seen yourself in the past year [Time 2 will read “as you see yourself in this moment] that complete the sentence ‘I am ____.’ Complete the statements as if you were describing yourself to yourself, not to someone else.

1. I am _____
2. I am _____
3. I am _____
4. I am _____
5. I am _____
6. I am _____
7. I am _____
8. I am _____
9. I am _____
10. I am _____
11. I am _____
12. I am _____
13. I am _____
14. I am _____
15. I am _____
16. I am _____
17. I am _____
18. I am _____
19. I am _____
20. I am _____

Social Physique Anxiety Scale

Indicate the degree to which the following statements have been generally characteristic or true of you in the past year [Time 2 will read “are characteristic or true of yourself in this moment].

1	2	3	4	5	6	7
<i>not at all true</i>	<i>slightly true</i>	<i>fairly true</i>	<i>moderately true</i>	<i>quite a bit true</i>	<i>very true</i>	<i>extremely true</i>

1. _____ I have been [am] comfortable with the appearance of my physique/figure
2. _____ I have not worried [do not worry] about wearing clothes that might make me look too thin or overweight.
3. _____ I wished [wish] I wasn't so uptight about my physique/figure
4. _____ There are times when I have been [am] bothered by thoughts that other people are evaluating my weight or muscular development negatively
5. _____ When I have looked [look] in the mirror I felt [feel] good about my physique/figure.
6. _____ Unattractive features of my physique/figure have made [make] me nervous in certain social settings.
7. _____ In the presence of others, I have felt [feel] apprehensive about my physique/figure
8. _____ I have been [am] comfortable with how fit my body appears to others
9. _____ It has made me [makes me] uncomfortable to know others were [are] evaluating my physique/figure.
10. _____ When it comes to displaying my physique/figure to others, I have been [am] a shy person.
11. _____ I felt [feel] relaxed when it was [is] obvious that others were [are] looking at my physique/figure.
12. _____ When in a bathing suit, I felt [feel] nervous about the shape of my body.

Self- description

In the space below, please write three or four sentences describing your age, gender, race/ethnicity, hobbies, and personality qualities:

Integrity Check

In the space below, please write what you believe the purpose of this experiment is:

Appendix B

Debriefing Statement

The researcher for this experiment is interested in body objectification. Body objectification is a process by which individuals treat their bodies as objects and adopt an observer's view of their body. In other words, when an individual focuses on their body and aspects of their body become important to them, they are experiencing body objectification. The purpose of this study was to examine under what conditions women and men tend to experience body objectification and appearance anxiety. Participants in the study were divided into three groups. Those in the romantic relationship condition were made to anticipate meeting, being viewed by, and being evaluated by an individual from the *opposite* sex. Those participants in the friendship condition were made to anticipate meeting, being viewed by, and being evaluated by an individual from the *same* sex. Finally, some participants were assigned to the control condition, in which no mention of meeting another person occurred. The researcher is interested in examining the means by which women and men experience body objectification and appearance anxiety and whether there is a "buffering" effect when meeting a same-sex person.

Appendix C

Instructions for Experimenters

Time 1:

“Hi, I’m _____. I am working with a researcher in the psychology department. We are interested in looking at the associations between self-concept, relationships, and friendships, and you will receive \$15/course credit for your participation. The experiment involves two parts: filling out forms right now, which will take about 20 minutes, and attending a 20-30 minute session in Stadler Hall in 1 or 2 weeks, during which you will complete the study. Are you interested in participating?”

If the participant is interested, have them complete the consent form. Point out to the participant the limits of confidentiality and the anonymity of the study (e.g., data will be linked together by a code and will not be linked to their names). Be sure to address any questions that the participant might have, but do *not* indicate that they will anticipate meeting someone when they come to the second session. Give the participant the demographics questionnaire, the friendship/relationship questionnaire, the trait SOQ, the trait TST, and the trait SPAS. Be sure to have the participants spread out so as not to influence the responses of others. When finished, ask the participant to sign up for a 30-minute time slot 1 or 2 weeks ahead. Record the participant’s e-mail address or phone number, depending on which they prefer, and give the participants a reminder appointment card (includes day, time, room, directions, and principal investigator’s contact information). Let them know that someone will contact them one or two days before the experiment.

Experimenter's instructions at Time 2

“Thank you so much for coming. My name is _____. I am working with a researcher in the psychology department, and we are interested in studying the associations between self-concepts and relationships with others. You have been assigned to the romantic relationship, or opposite-sex [friendship, or same-sex] condition (no assignment mentioned to controls). In this condition, you will meet a man/woman who is a student here at UMSL and who has agreed to participate in the study. You will be given a description that your interaction partner has written about him/herself. Please also take a minute to write a short description of yourself, which will be given to your interaction partner. [Control condition participants will simply be asked to write a short description of themselves.]

Distribute bogus other-description forms (making sure to give correct description to each individual depending on the participant's condition, sex, and race preference) and self-description forms. When finished: (only for opposite gender and same gender conditions)

“We are interested in how romantic relationships [or friendships] are formed. You and your partner will interact for 5 minutes. We suggest that you just engage in small talk and ask each other questions to get to know each other. When finished, you will be rating your partner, and will be rated by your partner, on personal qualities. While waiting to set up the rooms, please take the time to carefully complete these self-concept questionnaires.”

Distribute state SOQ, TST, and SPAS. When finished: (for all)

“We have one last form for you to complete.”

Distribute integrity check. When finished, explain to the participants that no actual interaction is going to occur. Distribute debriefing statements, thank the participants, and give participants \$15 in compensation for their time and effort. Be sure to say the following:

“It is very important to not speak to anyone about the experiment because it would jeopardize the “prime” and the results of the study if people knew that they were not actually going to meet anyone.

Appendix D

Descriptions of Bogus Interaction Partners

Matt/Angie is a White/African-American/Hispanic/Native-American/Asian-American [no race mentioned] part-time student at UMSL who also works part-time at a restaurant. He/she is majoring in Communication and enjoys hanging out with her/his friends, going to movies, photography, and being outdoors. She/he sees his/her qualities as being friendly and honest.