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Self-Subjugation Among Women: Exposure to Sexist Ideology, Self-Objectification, and the Protective Function of the Need to Avoid Closure

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Despite extensive evidence confirming the negative consequences of self-objectification, direct experimental evidence concerning its environmental antecedents is scarce. Incidental exposure to sexist cues was employed in 3 experiments to investigate its effect on self-objectification variables. Consistent with system justification theory, exposure to benevolent and complementary forms of sexism, but not hostile or no sexism, increased state self-objectification, self-surveillance, and body shame among women but not men in Experiment 1. In Experiment 2, we replicated these effects and demonstrated that they are specific to self-objectification and not due to a more general self-focus. In addition, following exposure to benevolent sexism only, women planned more future behaviors pertaining to appearance management than did men; this effect was mediated by self-surveillance and body shame. Experiment 3 revealed that the need to avoid closure might afford women some protection against self-objectification in the context of sexist ideology.

Keywords: benevolent sexism, complementary stereotypes, self-objectification, need for cognitive closure, system justification

Taught from infancy that beauty is women's sceptre, the mind shapes itself to the body, and roaming round its gilt cage, only seeks to adorn its prison. —Mary Wollstonecraft, A Vindication of the Rights of Woman: With Strictures on Political and Moral Subjects

Awareness of oneself as a social object is a distinct component of being human (Cooley, 1902/1964; Duval & Wicklund, 1972; James, 1890/1981, Vol. 1, Chapter 10; Mead, 1934). According to Cooley (1902/1964), "we perceive in another's mind some thought of our appearance, manners, aims, deeds, character, friends, and so on" (p. 184). Yet, scholars have also documented that taking such an external observational standpoint on the self can have significant psychological and social costs when people come to view themselves predominantly through an objectified social lens (e.g., Allport, 1954; Bartky, 1990; Deaux & Major, 1987; de Beauvoir, 1952; Fredrickson & Roberts, 1997; Gibbons, 1990; Jost & Hamilton, 2005). Of particular interest in the present research is the cultural milieu that encourages girls and women to adopt an objectified perspective on their bodies, so that eventually they

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view and "treat *themselves* as objects to be looked at and evaluated" (Fredrickson & Roberts, 1997, p. 177, emphasis in original). This process is referred to as self-objectification, and it may represent yet another way in which members of disadvantaged groups internalize harmful beliefs about themselves, thereby perpetuating their own state of disadvantage (e.g., Jost, 1995; Jost, Banaji, & Nosek, 2004).

The Process of Self-Objectification

Studies have documented that girls and women are targets of sexual objectification more often than boys and men (for review see Fredrickson & Roberts, 1997). Sexual objectification is a ubiquitous phenomenon whereby women are reduced to the status of "mere instruments" insofar as sexualized evaluations of women separate a woman's body, body parts, and sexual functions from her personal identity and mental life (Bartky, 1990; Kaschak, 1992). The sexualized way in which women's bodies are evaluated within Westernized cultural contexts has both personal and political implications for women's lives. According to objectification theory (Fredrickson & Roberts, 1997), regular encounters of sexual objectification coax women into taking a third-person (e.g., "How do I look?") versus first-person (e.g., "How do I feel?") self-perspective, such that they come to view themselves through this objectified social lens (self-objectification). The chronic selfsurveillance that accompanies this self-perspective reflects the extent to which women come to "police" or monitor their physical appearance from such an external observational standpoint (Berger, 1972; de Beauvoir, 1952; McKinley & Hyde, 1996).

More than a decade of research on objectification theory has documented the significant costs of self-objectification to women's subjective well-being (Breines, Crocker, & Garcia, 2008; Mercurio & Landry, 2008) and cognitive performance (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; Quinn, Kallen,

Twenge, & Fredrickson, 2006). It is also associated with greater fear and perceived risk of rape (Fairchild & Rudman, 2008), greater hostility toward other women (Loya, Cowan, & Walters, 2006), greater likelihood of self-harm (Muehlenkamp, Swanson, & Brausch, 2005), stronger endorsement of cosmetic surgery (Calogero, Pina, Park, & Rahemtulla, 2010), and a disproportionately higher rate of mental health risks, including depression (Grabe, Hyde, & Lindberg, 2007; Tiggemann & Kuring, 2004), disordered eating (Calogero, Davis, & Thompson, 2005; Tylka & Hill, 2004), and sexual dysfunction (Calogero & Thompson, 2009; Steer & Tiggemann, 2008). In particular, researchers have consistently identified body shame as a negative emotional consequence of self-objectification (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996; Moradi & Huang, 2008)—and body shame mediates the deleterious effects of self-objectification on well-being and mental health (Calogero, 2009; Noll & Fredrickson, 1998; Quinn, Kallen, & Cathey, 2006; Tiggemann & Slater, 2001).

Previous research has implicated several specific situational antecedents of self-objectification among women. These include exposure to appearance-related commentary (Calogero, Herbozo, & Thompson, 2009) and "fat talk" (Gapinski, Brownell, & LaFrance, 2003); interpersonal experiences of sexual objectification (Kozee, Tylka, Augustus-Horvath, & Denchik, 2007) and stranger harassment (Fairchild & Rudman, 2008); environmental exposure to appearance cues (e.g., appearance-related words, Roberts & Gettman, 2004; bathroom scale, full-length mirrors, Tiggemann & Boundy, 2008) and mass media (Calogero et al., 2005; Harper & Tiggemann, 2008); and merely anticipating a future interaction with a male peer (Calogero, 2004). This research situates the experience of self-objectification within the context of specific interpersonal or media encounters, but it does not address the ideological concomitants of self-objectification, nor does it consider the possibility that self-objectification is part of a broader pattern of system-justifying (as opposed to system-challenging)

In the present research, we investigate the possibility that self-objectification might be activated by broader environmental antecedents that convey information about culturally prescribed gender roles and behaviors—without focusing on appearance. Specifically, we propose that reminders of culturally prevalent sexist ideologies should increase women's self-objectification, insofar as these ideologies justify the status of gender relations in society and coax and flatter women into conforming to traditional gender roles (Glick & Fiske, 2001; Jackman, 1994; Jost & Kay, 2005). Yet, as illustrated above, adopting an objectified self-perspective is detrimental to women both individually and collectively. We argue, therefore, that a system justification perspective is useful for explaining why women would self-objectify as a function of exposure to sexist ideology, "even at the expense of personal and group interest" (Jost & Banaji, 1994, p. 2).

According to system justification theory (Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004), dominant ideologies that justify group inequality can affect the attitudes and behaviors of disadvantaged group members in ways that lead them to accept and preserve the status quo. Self-objectification might be seen as a manifestation of sexist ideologies that preserve the gender status quo by directing women's attention toward appearance management at the expense of other life domains. This is a stronger test of objectification theory, insofar as it suggests that self-

objectification does not stem merely from appearance evaluations, but that self-objectification is actually situated within a more extensive ideological network that justifies and maintains gender inequality by encouraging women's active participation in upholding the prevailing social norms that perpetuate their disadvantaged status (Bem & Bem, 1970; Glick & Fiske, 2001; Jost & Kay, 2005). The primary aim of this article is to report new experimental evidence demonstrating that exposure to pervasive types of sexist ideologies directly increases self-objectification and appearance management among women but not men.

Sexism as Environmental Antecedent of Self-Objectification

Sexism is an insidious component of women's everyday social environments. According to an investigation of sexism using a daily diary methodology, women experience significantly more sexism than do men, reporting at least one to two sexist incidents per week (Swim, Hyers, Cohen, & Ferguson, 2001). These incidents include expressions of traditional gender role stereotypes ("You're a woman, so fold my laundry"), demeaning comments ("Yo bitch, get me some beer"), and sexual objectification ("Forget the belt, look at her rack"). These incidents are by no means exclusive to university settings. As illustrated in Nirmal Puwar's (2004) interviews with female members of the British Parliament, women's continued legitimacy within the legislature requires them to suffer constant sexist remarks and to chronically monitor their appearance to convey the right amount of femininity—all of which makes it difficult to be effective in government.

Although sexism occurs in a variety of ways, hostile and benevolent sexism represent two well-known forms (Glick & Fiske, 1996, 2001). Hostile sexism refers to an openly antagonistic attitude toward women, whereas benevolent sexism refers to a subjectively positive orientation toward women that casts "women as wonderful but fragile creatures who ought to be protected and provided for by men" (Glick et al., 2004, p. 715; see also Eagly, Mladinic, & Otto, 1991). Both types of sexism convey information about the division of structural power between the sexes by portraying women as weaker than men and more suitable for traditional domestic roles. However, benevolent sexism serves a palliative, system-justifying function in that it makes women feel better about their disadvantaged situation (see Jost & Hunyady, 2002; Jost & Kay, 2005). Researchers have suggested that the "velvet glove" approach exemplified by benevolent sexism is more insidious and effective than the "iron hand" of hostile sexism because women are less likely to recognize or challenge it (Jackman, 1994; see also Barreto & Ellmers, 2005). As a result, many women unwittingly participate in the perpetuation of benevolent sexism by striving to attain traditionally feminine qualities (Glick & Fiske, 1996; Kilianski & Rudman, 1998)—thereby collaborating in the maintenance of the current system of gender relations.

A body of research has accumulated to implicate benevolent sexism in the subjugation (and self-subjugation) of women (Abrams, Viki, Masser, & Bohner, 2003; Glick, Sakalli-Ugurlu, Ferreira, & Souza, 2002; Jost & Kay, 2005; Lau, Kay, & Spencer, 2008; Napier, Thorisdottir, & Jost, 2010; Pryor, Geidd, & Williams, 1995; Sibley, Overall, & Duckitt, 2007; Viki & Abrams, 2002). Experiments have revealed that benevolently sexist remarks undermine women's cognitive performance by increasing self-

doubt and worry (Dardenne, Dumont, & Bollier, 2007). Other studies have found that the mere suggestion of sexism can impair women's cognitive performance (Adams, Garcia, Purdie-Vaughns, & Steele, 2006). Building on this prior work, we propose that benevolent sexism may also have deleterious consequences for women's self-body relations. That is, because benevolent sexism praises women for their warmth and purity but simultaneously implies that they are inferior to men and dependent upon them for protection, women may direct their attention to areas that bring them the most immediate social rewards and validation to counteract the implications of incompetence and vulnerability.

In particular, the value assigned to women's physical beauty is linked to tangible social rewards for women (Davis, 1990; Eagly, Ashmore, Makhijani, & Longo, 1991; Fiske, Bersoff, Borgida, Deaux, & Heilman, 1991). Both women and men associate women's attractiveness with a variety of rewarding life outcomes (Dellinger & Williams, 1997; Dion, Berscheid, & Walster, 1972; Engeln-Maddox, 2006; Evans, 2003), underscoring the assertion that physical attractiveness functions as a form of currency for women (Fredrickson & Roberts, 1997; Unger, 1979). Although directing attention to appearance domains and away from competence domains thwarts women's self-determination (Breines, Crocker, & Garcia, 2008) and reinforces their disadvantaged status in the social hierarchy relative to men (Eagly, 1987; Glick, Diebold, Bailey-Werner, & Zhu, 1997; Jackman, 1994; Jost & Kay, 2005; cf., Jost, Pelham, & Carvallo, 2002; Prentice & Carranza, 2002), women place more importance on appearance than men, and they engage in more appearance management to conform to beauty ideals (Dion, Dion, & Keelan, 1990).

We submit that benevolently sexist ideology may serve a dual function of legitimizing gender inequality and eliciting gendered behavior by increasing women's self-objectification and appearance management. This line of reasoning is consistent with Glick and Fiske's (2001) argument that sexist ideologies "represent a system of rewards and punishments that provide incentive for women to remain in conventional gender roles" (p. 116), thereby encouraging them to attain success only in distinctly feminine domains (Eagly & Steffen, 1984; Jackman, 1994). Correlational evidence for this proposition exists: Greater endorsement of benevolent sexism on the part of women has been associated with more appearance-related beliefs and behaviors, such as cosmetic use (Forbes, Doroszewicz, Card, & Adams-Curtis, 2004; Franzoi, 2001) and greater internalization of the thin ideal (Forbes, Collinsworth, Jobe, Braun, & Wise, 2007). Thus, women may engage in self-objectification following exposure to benevolent sexism as an indirect way of bringing themselves into line with socially valued feminine ideals.

Benevolent and Complementary Expressions of Sexism

Although hostile and benevolent sexism are different in their evaluative implications for women, they share some common assumptions about women's inferiority (Glick & Fiske, 1996, 2001). For that reason, exposure to one type of sexism versus another should serve as a relatively unambiguous reminder of culturally prevalent sexism. However, because hostile sexism is more easily identified and rejected, we expected women's self-objectification to increase following exposure to benevolent sexism but not to hostile sexism alone.

Drawing on prior work on complementary stereotypes (Bem, & Bem, 1970; Glick & Fiske, 2001; Jost & Kay, 2005; Kay & Jost, 2003), we also hypothesized that women's self-objectification would increase following exposure to complementary sexist content (i.e., a combination of the two types of sexist beliefs). According to system justification theory, complementary stereotypical representations "depict low- and high-status groups as possessing their own unique strengths and weaknesses (or benefits and burdens)," communicating the sense that "no one groups has it all" and that "every group has something going for it" (Kay et al., 2007, p. 313). In this way, complementary stereotypes rationalize inequality among social groups (see also Napier et al., 2010).

From a system justification perspective, the combination of hostile and benevolent sexism is a potent ideological force that should function as insidiously as benevolent sexism when it comes to women's self-objectification. Complementary (or perhaps complimentary) sexism reminds people of the reasons why women are both "revered and reviled"-characterizing them as socially valued but also burdensome. By reframing traditional gender roles and the division of labor within the family as a reflection of women's and men's inherent strengths and weaknesses, gender differences in society appear more legitimate, fair, natural, and balanced (Jost & Kay, 2005; Kay et al., 2007). In a series of studies, Jost and Kay found that simply reminding individuals of benevolent and complementary (i.e., a combination of hostile and benevolent) sexist beliefs increased women's (but not men's) support for traditional gender arrangements and the social system as a whole. Exposure to purely hostile beliefs and assignment to a nonsexist control condition did not bring about these effects. We build on this prior research by investigating the connection between those system-justifying ideologies that preserve gender inequality and women's behavioral support for the status quo, in this case, self-objectification.

To the extent that encounters with benevolent and complementary sexism make favorable portrayals of women in traditional gender roles more cognitively accessible, we predicted that women would report more self-objectification than would men when these ideologies are made salient. We examined three specific outcomes that characterize self-objectification (Calogero, 2010; Fredrickson et al., 1998; McKinley & Hyde, 1996). Specifically, in response to benevolent and complementary sexism, we expected that women would value observable appearance-based attributes more highly than competence-based attributes (i.e., self-objectification), engage in more vigilant body monitoring (i.e., self-surveillance), and experience more shame about their appearance (i.e., body shame), in comparison with men. While these self-perceptions would not seem to benefit individual women or women as a group, these self-perceptions do serve a system-justifying function insofar as they rationalize the structure of gender relations and reinforce culturally prescribed gender roles (Jost & Kay, 2005).

Need to Avoid Closure as a Buffer Against the Effects of Sexism

As well as testing the critical effect of benevolent and complementary forms of sexism on women's self-objectification, we were interested in whether individual differences in how people generally respond to ideological content would moderate this effect.

According to Kruglanski's (1989, 2006) lay epistemic theory, needs to avoid or attain cognitive closure are fairly fundamental epistemic motives that underlie how people approach and process information they encounter in the social world (e.g., Saroglou & Dupuis, 2006). Individual differences on a bipolar need for cognitive closure (NfCC) dimension reflect dispositional variability in epistemic motivation, so that one pole captures the motivation to avoid cognitive closure (lower NfCC) and the other captures the motivation to attain cognitive closure (higher NfCC).

People who score low on Webster and Kruglanski's (1994) NfCC scale are open to prolonging uncertainty, engage in more deliberative decision-making and flexibility of thought, and exhibit a higher tolerance for ambiguity and nonconformity. By contrast, people who score high on NfCC generally prefer predictability and quick decision-making; they exhibit rigidity of thought and a greater preference for conformity (Kruglanski & Webster, 1996). Such motivational tendencies to avoid or attain closure influence the ways in which people interpret and respond to information in their social environments and even whether they tend to anchor on (and perpetuate) the status quo (e.g., cognitive conservatism) or question and criticize it (e.g., Jost, Kruglanski, & Simon, 1999).

Consistent with these motivational tendencies, the need to avoid cognitive closure is associated with less reliance on stereotypical information to render decisions and social judgments (Dijksterhuis, van Knippenberg, Kruglanski, & Schaper, 1996; Ford & Kruglanski, 1996), less consensus-seeking and decreased support for conventional social norms (De Grada, Kruglanski, Mannetti, & Pierro, 1999; Fu et al., 2007; Jost et al., 1999), and more autonomy, self-direction, and openness to change (Calogero, Bardi, & Sutton, 2009; Mannetti, Pierro, & Kruglanski, 2007). Moreover, prior work suggests a reasonably strong connection between cognitive conservatism and political conservatism (Jost, Glaser, Kruglanski, & Sulloway, 2003), as predicted by system justification theory (Jost & Banaji, 1994; Jost, Nosek, & Gosling, 2008). Thus, studies reveal significant positive relations between NfCC and politically conservative opinions (Jost et al., 1999, 2003), social dominance orientation and right-wing authoritarianism (Van Hiel, Pandelaere, & Duriez, 2004), and the endorsement of sexist attitudes in particular (Doherty, 1998; Pek & Leong, 2003). These findings indicate that high NfCC individuals are motivated to hold enduring, traditional beliefs about authority and hierarchy and are less likely to engage in counternormative behaviors, compared with those who are lower in NfCC. To the extent that benevolent and complementary sexism are system-justifying ideologies (Glick & Fiske, 2001; Jost & Kay, 2005) and that system-justifying ideologies serve epistemic functions of reducing uncertainty and providing structure (Jost & Hunyady, 2005; Kay, Gaucher, Napier, Callan, & Laurin, 2008; Stapel & Noordewier, in press), we hypothesized that higher NfCC individuals would be most strongly influenced by exposure to benevolent and complementary sexism, and low scorers might even be protected from its effects.

We predicted, in other words, that NfCC would moderate the effect of sexist ideology on self-objectification—and that the patterns would be different for women and men. Because benevolent (and complementary) sexism is a culturally accessible system-justifying ideology that may be rewarding to women who accept conventional stereotypes, we hypothesized that higher NfCC women would be more likely than lower NfCC women to engage in self-objectification and appearance management following ex-

posure to such ideological content. In this way, lower NfCC individuals (or those who tend to prolong closure) might actually afford some degree of protection against environmental sexism, insofar as women who are inclined to think longer and harder (i.e., more critically) about gender inequality are less likely to follow the more typical, culturally prevalent paths of system justification and self-subjugation.

By contrast, we expected less variability in self-objectification between the sexist exposure conditions as a function of NfCC for men. However, because higher NfCC men would also tend to anchor on the status quo and follow prescriptive cultural norms, we considered the possibility that higher NfCC men would report less self-objectification in response to benevolent sexism, insofar as these appearance-related behaviors are inconsistent with the culturally prescribed norms for masculinity implicit in sexist ideology (McCreary, 1994; Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986; Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008). Because hostile sexism is generally attributed to overt discrimination and is less likely to be internalized by women in Western societies (Glick & Fiske, 2001; Jost & Kay, 2005; cf. Napier et al., 2010), we did not expect NfCC to moderate women's or men's responses to hostile sexism.

Overview of Research

In three experiments, we exposed participants to sexist ideologies and measured the effect on self-objectification and appearance management. Specifically, we hypothesized that exposure to benevolent and complementary sexism would trigger more selfobjectification, self-surveillance, and body shame among women, compared to men, whereas exposure to hostile sexism would not trigger such increases. In all three experiments, we used a proofreading task to manipulate sexism exposure by reminding participants about culturally prevalent sexist beliefs while varying the specific contents that were activated (see Jost & Kay, 2005). We then measured the impact of sexism exposure on selfobjectification and related outcomes. In Experiment 1, we tested the hypothesis that benevolent and complementary sexism would increase self-objectification, self-surveillance, and body shame among women but not men. The inclusion of a control condition with nonsexist favorable evaluations of women allowed us to examine which types of sexism increased or decreased selfobjectification. Experiment 2 tested whether the effect of sexism exposure on self-surveillance and body shame may carry over to more general types of self-focus, such as public self-consciousness or self-esteem. Experiment 2 also tested whether sexism exposure would increase women's intentions to engage in appearancemanagement behaviors over the next week and whether experiences of self-surveillance and body shame would mediate the effect of sexism exposure on such intentions. Finally, Experiment 3 investigated the buffering role of the need to avoid cognitive closure on women's (vs. men's) self-objectification after sexism exposure.

Experiment 1

Method

Participants and procedure. A total of 200 English-speaking participants (100 men and 100 women) from a southeast-

ern British university were recruited through advertisements on campus and the psychology department website. All of the participants were undergraduate students, with 39.29% in their first year and 60.71% in their second year. Mean age of participants was 20.38 years (SD=1.22). The majority of the participants identified as British (94.8%), and the rest of the sample identified as Nigerian (5.1%). Participants received either course credit or £3 (U.S.\$5) for participation.

Female experimenters conducted all of the sessions with 2 to 5 participants who were individually seated at desks positioned in different locations around the room to ensure privacy. Once seated, participants faced a wall and therefore could not see (or be seen by) other participants in the room. All of the materials and measures were administered by paper-and-pencil. Informed consent was obtained from all participants before they began the study.

In order to minimize participants' knowledge about the research hypotheses, we presented the experiment as two separate studies (e.g., Higgins, Rholes, & Jones, 1977). Adapting procedures used by Jost and Kay (2005), participants were first asked to perform a two-part proofreading task, ostensibly to develop items for a new attitude scale. We asked participants to first read and respond to a set of four items that were presented to them in written format. We then asked participants to read each of the items again, but this time to carefully evaluate each statement for clarity and grammar. After the proofreading task, we asked participants to complete a set of questions from the personal well-being section of an ostensibly larger study about college student health. This final set of questionnaires included the relevant dependent measures. When this set of questionnaires was completed, we fully debriefed participants and thanked them for their participation.

Manipulation of sexism exposure. Under the guise of the proofreading task, participants were randomly assigned to read one of four possible sets of statements that were intended to remind them about culturally prevalent sexist ideologies while controlling the specific sexist content that was activated. The four sets of stimuli represented one of four types of sexist ideology: benevolent sexism, hostile sexism, a combination of benevolent and hostile sexism (complementary sexism), or no sexism. In their first view of the statements, participants indicated the extent to which they agreed with each of the four statements using a 6-point scale ranging from 0 (strongly disagree) to 5 (strongly agree). In their second view of the statements, participants indicated the extent to which each of the four statements was written clearly and without ambiguity using a 6-point scale ranging from 0 (extremely unclear) to 5 (extremely clear).

Statements that presented the benevolent and hostile beliefs were based on items from Glick and Fiske's (1996) Ambivalent Sexism Inventory. Items presented in the benevolent sexism condition included (a) "Many women have a quality of purity that few men possess," (b) "Men are incomplete without women," (c) "Women, compared to men, tend to have a superior moral sensibility," and (d) "Women should be cherished and protected by men." Items presented in the hostile sexism condition included (a) "Women are too easily offended," (b) "Most women do not fully appreciate all that men do for them," (c) "Women exaggerate problems that they have at work," and (d) "Women seek to gain power by getting control over men." We combined two items from each of these scales to present complementary sexist beliefs: (a) "Women, compared to men, tend to have a superior moral sensi-

bility," (b) "Most women do not fully appreciate all that men do for them," (c) "Women should be cherished and protected by men," and (d) "Women seek to gain power by getting control over men." Following Jost and Kay (2005), items presented in the nonsexist control condition were worded similarly to the benevolent items and contained gender-neutral traits drawn from Hoffman and Hurst (1990): (a) "Many women have a quality of resourcefulness that few men possess," (b) "Men are less creative than women," (c) "Women tend to be more tactful than men," and (d) "Women, compared to men, tend to be more realistic."

Measures

State self-objectification. A modified version of the Self-Objectification Questionnaire (Noll & Fredrickson, 1998) was used to measure state self-objectification—the extent to which individuals consider five observable appearance-based attributes (i.e., physical attractiveness, weight, sex appeal, measurements, firm/sculpted muscles) to be more important than five nonobservable competence-based attributes (i.e., health, strength, energy level, physical coordination, physical fitness). Respondents were instructed to rank all 10 attributes in the order of their impact on their physical self-concept "right now" from "least impact on my physical self-concept" (rank = 0) to "greatest impact on my physical self-concept" (rank = 9). The same rank could not to be assigned to more than one attribute. Difference scores were computed by subtracting the sum of the five competence-based attributes from the sum of the five appearance-based attributes to reflect the relative emphasis given to these two dimensions. The possible range of scores was -25 to 25, with higher scores indicating greater self-objectification. Because of the initial rank ordering of the attributes, reliability is determined by correlating the sum of the appearance ranks and the sum of the competence ranks (Hill & Fischer, 2008). If respondents rank the appearance-based attributes as more important then the competence-based attributes must be ranked as less important, and therefore, a negative correlation would be expected between the two sets of attributes. In the present study, a strong negative correlation was demonstrated between appearance and competence rankings, indicating good reliability (r = -.88).

Self-surveillance. The Surveillance scale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996; $\alpha=.81$) was used to measure the degree to which individuals monitor their bodies as an outside observer would. Participants rated eight items from 1 (*strongly disagree*) to 7 (*strongly agree*), such as "I rarely worry about how I look to other people" (reverse scored). Mean item scores were calculated to provide an index of self-surveillance, with higher scores indicating more body monitoring.

Body shame. The Shame scale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996; $\alpha=.81$) was used to measure the degree to which individuals feel shame about how their bodies look. Participants rated eight items from 1 (*strongly disagree*) to 7 (*strongly agree*), such as, "When I'm not the size I think I should be, I feel ashamed." Mean item scores were calculated to provide an index of body shame, with higher scores indicating more body shame.

Results

All dependent variables were analyzed using a two-way, fourlevel analysis of variance (ANOVA) with sexism exposure (benevolent vs. hostile vs. complementary vs. neutral) and participant sex (male vs. female) as the between-subjects variables. Follow-up t tests were used to determine group differences. Partial etasquared (η_p^2) values are reported to estimate effect size. Means and standard deviations for the dependent variables are presented in Table 1, separated by gender. A series of zero-order correlations were conducted to investigate the relations among the selfobjectification variables. For women, state self-objectification was significantly correlated with self-surveillance, r(98) = .45, p <.001, and body shame, r(98) = .25, p < .05; and self-surveillance was significantly correlated with body shame, r(98) = .63, p <.001. For men, significant, positive correlations were observed between state self-objectification and self-surveillance, r(98) =.60, p < .001, and self-surveillance and body shame, r(98) = .28, p < .01; however, state-self-objectification and body shame were not significantly correlated, r(98) = -.16, p = .11.

State self-objectification. As expected, there was a significant effect of participant sex on state self-objectification, F(1,192) = 81.46, p < .001, $\eta_p^2 = .30$, such that women (M = 6.86, SD = 11.62) reported higher scores than did men (M = -8.04, SD = 13.59). Sexism exposure also exerted a significant main effect, F(3, 192) = 9.35, p < .001, $\eta_p^2 = .13$. Of greatest interest to the present research, however, was the interaction between participant sex and exposure to sexism, F(3, 192) = 4.06, p < .01, $\eta_p^2 = .06$. As predicted, women who were exposed to benevolent sexism exhibited more state self-objectification (M = 14.36) than did women who were exposed to hostile sexism (M = 1.44), t(48) = 6.99, p < .001, $\eta_p^2 = .50$, or those assigned to the no sexism control condition (M = -1.72), t(48) = 4.68, p < .001, $\eta_p^2 = .31$. Also as predicted, women exposed to complementary sexism exhibited more state self-objectification (M = 13.36) than did women exposed to hostile, t(48) = 8.23, p < .001, $\eta_p^2 = .59$, or no sexism, t(48) = 4.66, p < .001, $\eta_p^2 = .31$. There were no other significant differences between conditions for women: benevolent versus complementary, t(48) = 0.46, p = .65; hostile versus no sexism, t(48) = 1.05, p = .30. As expected, men's state self-objectification did not significantly vary across type of sexism exposure, with p values ranging from .13 to .99.

Self-surveillance. As expected, there was a significant main effect of participant sex on self-surveillance, F(1, 192) = 30.29, p < .001, $\eta_p^2 = .16$, such that women (M = 4.57, SD = 1.40) exhibited higher scores than did men (M = 3.76, SD = 1.18).

Sexism exposure also had a significant main effect, F(3, 192) = 18.85, p < .001, $\eta_p^2 = .29$; however, of greatest interest was the interaction between participant sex and type of sexism exposure, F(3, 192) = 19.76, p < .001, $\eta_p^2 = .31$. As hypothesized, women who were exposed to benevolent sexism reported significantly more self-surveillance (M = 5.85) than did women exposed to hostile sexism (M = 3.36), t(48) = 9.64, p < .001, $\eta_p^2 = .66$, or no sexism (M = 4.05), t(48) = 5.63, p < .001, $\eta_p^2 = .40$. Also as predicted, women exposed to complementary sexism reported more self-surveillance (M = 5.04) than did women exposed to hostile, t(48) = 6.25, p < .001, $\eta_p^2 = .45$, or no sexism, t(48) = 3.01, p < .01, $\eta_p^2 = .16$.

Two additional findings were noteworthy. First, women who were exposed to benevolent sexism alone reported significantly more self-surveillance than did women exposed to complementary sexism, t(48) = 2.71, p < .01, $\eta_p^2 = .13$. Second, women who were exposed to hostile sexism reported less self-surveillance than did women exposed to no sexism, t(48) = -2.39, p < .03, $\eta_p^2 = .11$. As expected, men's self-surveillance did not significantly vary across the sexism exposure conditions (p-values ranged from .10 to .44), with one exception: Men who were exposed to complementary sexism (M = 2.76) reported less self-surveillance than did men exposed to benevolent (M = 4.32), t(48) = -5.04, p < .001, $\eta_p^2 = .35$, hostile (M = 3.87), t(48) = -2.95, p < .01, $\eta_p^2 = .15$, or no sexism (M = 4.09), t(48) = -4.08, p < .001, $\eta_p^2 = .26$.

Body shame. As expected, participant sex exerted a significant main effect on body shame, F(1, 192) = 173.88, p < .001, $\eta_p^2 = .91$, such that women (M = 3.93, SD = 1.22) reported more shame than men (M = 2.55, SD = 0.43). Sexism exposure exerted a significant main effect as well, F(3, 192) = 24.95, p < .001, $\eta_p^2 = .38$. Once again, the analysis yielded an interaction between participant sex and type of sexism exposure, F(3, 192) = 24.57, p < .001, $\eta_p^2 = .38$. As predicted, women who were exposed to benevolent sexism reported more body shame (M = 4.70) than did women exposed to hostile sexism (M = 2.99), t(48) = 5.80, p <.001, $\eta^2 = .41$, or no sexism (M = 3.08), t(48) = 6.87, p < .001, $\eta_p^2 = .50$. Also as predicted, women who were exposed to complementary sexism reported more body shame (M = 4.95) than did women exposed to hostile sexism, t(48) = 6.55, p < .001, $\eta_p^2 =$.47, or no sexism, t(48) = 7.75, p < .001, $\eta_p^2 = .56$. There were no other significant differences between conditions for women: benevolent versus complementary, t(48) = -0.78, p =.44; hostile versus no sexism, t(48) = -0.50, p = .62. Men's body shame did not vary significantly across type of sexism exposure, with p values ranging from .60 to .92.

Table 1
Mean Scores (and Standard Deviations) for State Self-Objectification, Self-Surveillance, and Body Shame in Experiment 1

	Women				Men				
Variable	No sexism	Benevolent sexism	Complementary sexism	Hostile sexism	No sexism	Benevolent sexism	Complementary sexism	Hostile sexism	
Self-objectification Self-surveillance Body shame	-1.72 _a (14.79) 4.05 _a (1.22) 3.08 _a (1.24)	14.36 _b (8.71) 5.85 _b (1.03) 4.70 _b (1.15)	13.36 _b (6.57) 5.04 _c (1.09) 4.95 _b (1.18)	1.44 _a (3.06) 3.36 _d (0.78) 2.99 _a (0.92)	-8.04 _c (13.59) 4.09 _a (1.18) 2.54 _c (0.58)	-4.48 _c (14.81) 4.32 _a (0.51) 2.53 _c (0.40)	-8.80 _c (12.77) 2.78 _e (1.44) 2.58 _c (0.25)	-8.84 _c (15.81) 3.87 _a (1.19) 2.57 _c (0.45)	

Note. Means with different subscripts within rows differ significantly at p < .05.

Discussion

Our first experiment demonstrated that exposure to benevolent and complementary sexism increased women's self-objectification, self-surveillance, and body shame, whereas men's scores were consistently low and generally unaffected by sexism exposure. To our knowledge, this is the first experiment to reveal a causal link between environmental exposure to culturally prevalent, system-justifying sexist beliefs and self-objectification. The fact that the contents of these sexist beliefs communicated stereotypical information about women's perceived warmth and competence without mentioning their bodies or appearance suggests that benevolent sexism is a relatively powerful but inconspicuous environmental trigger of women's self-objectification. Experiment 2 built on these results in several ways.

First, we considered the possibility that the effects of benevolent and complementary sexism exposure may carry over to more general types of self-focus and self-esteem. Because benevolent and complementary forms of sexism implicitly suggest that women lack ability and competence, it is possible that exposure to these particular beliefs activates more general public selfconsciousness and/or diminishes overall self-esteem, in which case it would not be unique to self-objectification. To investigate this possibility, in Experiment 2 we examined the effect of sexism exposure on public self-consciousness and general self-esteem, along with self-surveillance and body shame. We expected women's, but not men's, self-surveillance and body shame to increase in response to benevolent and complementary sexism, but we did not necessarily expect public self-consciousness or general selfesteem to be similarly affected. Based on prior research, we expected that public self-consciousness would be higher and general self-esteem would be lower among women, compared with men, across conditions (Calogero & Watson, 2009; Kling, Hyde, Showers, & Buswell, 1999).

Second, we sought to test whether a single instance of sexism exposure could affect women's appearance-management intentions over the next week. If benevolent forms of sexism motivate women to focus more on traditionally feminine qualities, then following reminders of benevolent and complementary sexism we expected that more thoughts about appearance-management would be activated (e.g., exercise, dieting, makeup use, hair styling, tanning, clothes shopping) when women considered their daily plans and intentions for the next week. In predicting that only women would report more appearance-management intentions after sexism exposure, we sought to highlight how environmental sexism is differentially experienced by men and women. Presumably, sexism elicits gendered behavior that may bring a variety of social rewards to women but may also interfere with actual change in women's social status and power. In considering the mechanisms by which sexism exposure may trigger more appearancemanagement intentions, we predicted that the experience of selfsurveillance and body shame would play a critical role. Specifically, we tested whether the experience of self-surveillance and/or body shame would mediate the effect of sexism exposure on women's appearance-management intentions.

Finally, we sought to revisit the finding from Experiment 1 that men's self-surveillance was significantly lower under conditions of complementary sexism exposure, compared with the other conditions. Although this pattern of results was only observed with respect to self-surveillance, we considered the possibility that the system-justifying nature of complementary sexist stereotypes would lead men to care even less than usual about how their bodies appear to others, insofar as most body concerns are inconsistent with stereotypical masculine gender roles (Hargreaves & Tiggemann, 2006). Thus, we sought to replicate and extend these findings for self-surveillance in a new sample of men.

Experiment 2

Method

A total of 200 English-speaking participants (100 men and 100 women) from a southeastern British university were recruited through advertisements on campus and the psychology departmental website. Approximately half the participants were undergraduate students (53.5%), whereas 46.5% were university staff members. Mean age of participants was 33.85 years (SD = 9.89). The majority of participants identified as White British (82%), but 18.0% identified some other ethnicity. Participants received either course credit or £5 (U.S.\$7) for their participation.

Materials and procedure were virtually identical to Experiment 1, except that we added three scales. In addition to completing measures of self-surveillance and body shame, participants completed the seven-item Public Self-Consciousness subscale (Fenigstein, Scheier, & Buss, 1975; $\alpha=.93$; e.g., "I'm concerned about what other people think of me"), using a scale ranging from 1 (not at all true of me) to 7 (very true of me), and the 10-item Self-Esteem Scale (Rosenberg, 1986; $\alpha=.89$; e.g., "On the whole, I am satisfied with myself"), using a scale ranging from 1 (strongly agree) to 4 (strongly disagree). Means were calculated to provide an index for each of the dependent variables.

Participants were also given 2.5 minutes to perform a free writing task. Using a modified version of Lane and Wegner's (1995) thought task instructions, participants were asked to think about the week ahead and to describe any information pertaining to their daily plans and personal intentions for the week. This could include "plans, behaviors, images, feelings, ideas, efforts to solve problems, observations, tasks, travel. . . . Please include whatever comes to mind about your personal intentions for the coming week." Two independent judges who were unaware of the research hypotheses or the sex of the participants coded the responses. Responses were coded 1 if they were related to appearance and 0' if they were unrelated to appearance. Examples of the types of appearance-management thoughts and intentions reported by participants included references to exercise, dieting/weight loss, tanning, makeup use, clothes shopping, hair styling/hair color, nail appointments, or body feelings. Interrater agreement for the coding of responses was high ($\kappa = .92$). The responses were summed to create a total appearance-management score, such that higher scores indicated a greater frequency of thoughts and intentions related to appearance-management.

Results

All dependent variables were analyzed using a two-way, fourlevel ANOVA with sexism exposure (benevolent vs. hostile vs. complementary vs. neutral) and gender (male vs. female) as the between-subjects variables (see Table 2). Follow-up t tests were used to determine group differences. Partial eta-squared (η_p^2) values are reported to estimate effect size. Because of the higher mean age of participants in this sample, we inspected correlations between age and each of the dependent variables to check for possible age effects. Age was not significantly correlated with self-surveillance, r(198) = -.07, p = .31, body shame, r(198) = -.09, p = .30, appearance-management intentions, r(198) = -.06, p = .36, public self-consciousness, r(198) = -.04, p = .59, or global self-esteem, r(198) = .01, p = .94.

A series of zero-order correlations were conducted to test the relations among the self-objectification variables. For women, self-surveillance was positively correlated with body shame, r(98) = .62, p < .001, and appearance-management intentions, r(98) = .51, p < .001; body shame was positively correlated with appearance-management intentions, r(98) = .52, p < .001. For men, self-surveillance was significantly correlated with body shame, r(98) = .37, p < .001, but unrelated to appearance-management intentions, r(98) = .05, p = .63, and body shame was unrelated to appearance-management intentions, r(98) = .10, p = .31.

Self-surveillance. As predicted, participant sex exerted a significant effect on self-surveillance, F(1, 192) = 82.67, p <.001, $\eta_p^2 = .30$, such that women (M = 4.28, SD = 1.27) exhibited higher scores than men (M = 3.09, SD = 0.65). In addition, we observed a significant effect for sexism exposure on selfsurveillance, F(3, 192) = 5.11, p < .01, $\eta_p^2 = .07$. These effects were qualified by the significant interaction between participant sex and type of sexism exposure, F(3, 192) = 7.34, p < .001, $\eta_p^2 = .10$. As predicted, women who were exposed to benevolent sexism reported more self-surveillance (M = 4.93) than did women exposed to hostile sexism (M = 3.76), t(48) = 3.26, p <.01, $\eta_p^2 = .18$, or no sexism (M = 3.75), t(48) = 3.27, p < .01, $\eta_p^2 = .18$. Also as predicted, women who were exposed to complementary sexism reported more self-surveillance (M = 4.69) than did women exposed to hostile sexism, t(48) = 3.22, p < .01, $\eta^2 = .17$, or no sexism, t(48) = 3.23, p < .01, $\eta^2 = .17$. There were no other significant differences between conditions for women: benevolent versus complementary, t(48) = 0.70, p = .49, and hostile versus no sexism, t(48) = 0.02, p = .98.

As in Experiment 1, men who were exposed to complementary sexism (M=2.75) reported less self-surveillance than did men exposed to benevolent sexism (M=3.25), t(48)=-2.58, p<.02, $\eta^2=.12$, hostile sexism (M=3.17), t(48)=-2.24, p<.03,

 $\eta_p^2 = .10$, or no sexism (M = 3.16), t(48) = -2.30, p < .03, $\eta_p^2 = .09$. There were no other significant differences between conditions for men (p values ranged from .62 to .98).

Body shame. As hypothesized, participant sex had a significant effect on body shame, $F(1, 192) = 97.07, p < .001, \eta_p^2 = .34$, such that women (M = 4.21, SD = 1.33) reported more shame than did men (M = 2.87, SD = 0.62). There was also a significant main effect for sexism exposure, F(3, 192) = 6.90, p < .001, $\eta_p^2 = .10$. Again, these effects were qualified by the significant interaction between participant sex and type of sexism exposure, $F(3, 192) = 5.86, p < .001, \eta_p^2 = .08$. As predicted, women who were exposed to benevolent sexism reported more body shame (M = 4.87) than did women exposed to hostile sexism (M = 3.67), $t(48) = 3.86, p < .001, \eta_p^2 = .24, \text{ or no sexism } (M = 3.60),$ $t(48) = 3.74, p < .001, \eta_p^2 = .23$. Also as predicted, women who were exposed to complementary sexism reported more body shame (M = 4.72) than did women who were exposed to hostile sexism, t(48) = 3.03, p < .01, $\eta_p^2 = .16$, or no sexism, t(48) =3.00, p < .01, $\eta_p^2 = .16$. There were no other significant differences between conditions for women: benevolent versus complementary, t(48) = 0.45, p = .66, and hostile versus no sexism, t(48) = 0.19, p = .85. As in Experiment 1, men's body shame did not significantly vary across type of sexism exposure (ps = .14

Public self-consciousness and general self-esteem. As expected, participant sex exerted significant effects on public self-consciousness, F(1, 192) = 37.66, p < .001, $\eta_p^2 = .16$, and general self-esteem, F(1, 192) = 37.67, p < .001, $\eta_p^2 = .16$, such that women (M = 5.40, SD = 0.67) exhibited more public self-consciousness than did men (M = 4.83, SD = 0.64), but lower self-esteem (M = 3.18, SD = 0.51) than did men (M = 3.60, SD = 0.45) across the sexism exposure conditions. There was no significant main effect of type of sexism exposure on public self-consciousness, F(3, 192) = 1.55, p = .20, or global self-esteem, F(3, 192) = 0.99, p = .40. Participant sex did not significantly interact with sexism exposure to predict public self-consciousness, F(3, 192) = 1.89, p = .13, or global self-esteem, F(3, 192) = 1.31, p = .27.

Appearance-management intentions. A total of 209 responses were identified as appearance-management thoughts and intentions, with 67.5% of the sample expressing at least one appearance-related intention for the week ahead. Table 3 displays the type and frequency of appearance-management intentions as a function of gender. The most frequently cited appearance-related

Table 2
Mean Scores (and Standard Deviations) for All Dependent Variables in Experiment 2

		W	omen		Men				
Variable	No sexism	Benevolent sexism	Complementary sexism	Hostile sexism	No sexism	Benevolent sexism	Complementary sexism	Hostile sexism	
Self-surveillance	3.75, (1.12)	4.93 _b (1.40)	4.69 _b (0.93)	3.76, (1.12)	3.16, (0.55)	3.25 _c (0.65)	$2.75_{d}(0.70)$	3.17, (0.60)	
Body shame	$3.60_a(1.33)$	$4.87_{\rm b}$ (1.05)	$4.72_{\rm b}(1.31)$	3.67 _a (1.15)	$2.73_{c}(0.68)$	$3.00_{c}(0.71)$	$2.77_{c}(0.54)$	$2.99_{c}(0.56)$	
Public self-consciousness	5.56, (0.57)	5.48, (0.71)	5.53, (0.74)	5.55, (0.65)	$4.85_{\rm h}(0.56)$	$4.84_{\rm h}(0.70)$	$4.73_{\rm h}(0.75)$	$4.91_{\rm h}(0.56)$	
General self-esteem	$3.15_a(0.56)$	$3.26_a(0.52)$	$3.19_{a}^{a}(0.52)$	3.11 (0.46)	$3.79_{\rm b}(0.43)$	$3.54_{\rm b}(0.52)$	$3.57_{\rm b}(0.52)$	$3.56_{\rm b}(0.40)$	
Appearance management	$0.76_{a,d}(0.72)$	$2.20_{\rm b}$ (1.53)	$2.00_{\rm b}$ (1.32)	0.88_a (0.73)	$0.72_{c,d}(0.65)$	$0.64_{c}(0.64)$	$0.60_{c}(0.61)$	$0.56_{c} (0.65)$	

Note. Means with different subscripts across columns (within gender group) differ significantly at p < .05.

Table 3

Type and Frequency of Appearance-Management Intentions by Participant Sex in Study 2

Intention	Women	Men		
None	20	45		
Exercise	50	46		
Dieting/weight loss	55	8		
Tanning	11	0		
Haircut/color hair	10	4		
Nail grooming	6	0		
Clothes shopping	5	1		
Makeup use	2	0		
Hair removal	4	3		
Negative body feelings	3	2		

Note. Exercise included any reference to intentional physical activity (e.g., exercising, working out, lifting weights, running, going to the gym, attending sports practice, or engaging in recreational sports activities). Dieting/weight loss included any reference to monitoring food intake and/or weight and weight loss attempts. Negative body feelings included evaluations of appearance (e.g., worrying about weight, disliking specific body parts) but not behavioral intentions.

concerns were the desire to engage in physical exercise (for men and women both) and the intention to diet or attempt to lose weight (for women only).

As hypothesized, participant sex exerted a significant effect on the number of appearance-management intentions that came to mind during the thought-writing task, F(1, 192) = 40.78, p < .001, $\eta_p^2 = .18$, such that women (M = 1.46, SD = 1.29) mentioned more intentions related to appearance management than did men (M = 0.63, SD = 0.63). Sexism exposure exerted a significant effect on appearance-management intentions, F(3, 192) = 9.49, p < .001, $\eta_p^2 = .13$. The analysis also revealed a statistical interaction between participant sex and type of sexism exposure, $F(3, 192) = 7.08, p < .001, \eta_p^2 = .10$. As predicted, women who were exposed to benevolent sexism wrote more about appearancemanagement intentions (M = 2.20) than did women exposed to hostile sexism (M = 0.88), t(48) = 3.90, p < .001, $\eta_p^2 = .23$, or no sexism (M = 0.76), t(48) = 4.26, p < .001, $\eta_p^2 = .27$. Women who were exposed to complementary sexism also wrote more about appearance-management intentions (M = 2.00) than did women exposed to hostile sexism, t(48) = 3.71, p < .001, $\eta_p^2 =$.21, or no sexism, t(48) = 4.11, p < .001, $\eta_p^2 = .25$. There were no other significant differences between conditions for women: benevolent versus complementary, t(48) = 0.50, p = .62, and hostile versus no sexism, t(48) = 0.59, p = .56. As expected, men's appearance-management intentions did not significantly differ across type of sexism exposure (ps = .36 to .83).

To further investigate why sexism exposure might lead to more appearance-management intentions in women, we conducted a series of regression analyses to test whether self-surveillance and body shame mediated the effect of sexism exposure on such intentions. Because women's intentions to manage their appearance did not statistically differ between the benevolent and complementary sexism conditions, we combined these conditions to form a single system-justifying sexism exposure condition (see Jost & Kay, 2005). Similarly, because women's appearance-management intentions in the hostile sexism and no sexism conditions were not significantly different, we combined these condi-

tions to form a single contrast condition (system justification condition = 1; nonbenevolent condition = -1). We followed the criteria and recommendations established by several authors to test the hypothesis that self-surveillance and body shame would mediate the effect of sexism exposure on appearance-management intentions (see Baron & Kenny, 1986; Holmbeck, 1997). We used a Monte Carlo resampling simulation to test the significance of the indirect effects for self-surveillance and body shame (MacKinnon, Lockwood, & Williams, 2004) using the interactive calculator created by Selig and Preacher (2008, June). In the present study, 20,000 Monte Carlo samples were generated to estimate 95% confidence intervals for the hypothesized indirect effects based on the distributions of the observed estimates. Indirect effects are significant when the lower limits of the confidence intervals are greater than zero.

In the first step, we regressed appearance-management intentions on system justification (i.e., benevolent and complementary sexism) exposure, demonstrating a significant effect of system justification exposure ($\beta = .50, p < .001$). In the second step, we regressed the hypothesized mediators, self-surveillance and body shame, on system justification exposure in separate equations. This analysis also revealed significant effects of system justification exposure on self-surveillance ($\beta = .42, p < .001$) and body shame ($\beta = .44, p < .001$). In the third step, appearance-management intentions were regressed onto the proposed mediators simultaneously. These analyses revealed that self-surveillance ($\beta = .30, p < .01$) and body shame ($\beta = .33, p < .01$) both predicted appearance-management intentions. Finally, in the last step, appearance-management intentions were regressed onto system justification exposure and the proposed mediators simultaneously.

As shown in Figure 1, type of sexism exposure, self-surveillance, and body shame remained significant predictors of appearance-management intentions in the full model, but the effects were smaller. Results from the Monte Carlo simulation demonstrated that self-surveillance (95% CI: .08, .34) and body shame (95% CI: .09, .35) significantly mediated the relation between system justification exposure and appearance-management intentions. The full model accounted for 39% of the variance in women's intentions to engage in appearance-management behaviors over the next week ($R^2 = .39$), F(3, 96) = 20.57, p < .001. Thus, the greater activation of appearance-management intentions among women after exposure to either benevolent or complementary sexism could be explained, at least partially, by the experience of self-surveillance and body shame.



Figure 1. Self-surveillance and body shame as mediators of women's appearance-management intentions in response to benevolent sexism (Experiment 2). Coefficients in parentheses represent parameter estimates for the regression model containing sexism exposure and both mediators as predictor variables. * p < .05. ** p < .01. *** p < .001.

Discussion

Experiment 2 provided further evidence that merely reminding women of system-justifying sexist stereotypes directly increases their body monitoring and appearance-related concerns. Again, we demonstrated that exposure to benevolent and complementary sexism, and not other favorable (or unfavorable) descriptions of women, triggered more self-objectification (cf. Jost & Kay, 2005). We also found that public self-consciousness and general self-esteem were unmoved by exposure to benevolent or complementary sexism, indicating that these stereotypes increase women's focus on the self as an object of (presumably male) evaluation but do not necessarily affect other forms of self-focus.

In contrast to the first experiment, we did not observe specific reactance from women in response to hostile sexism. However, we did once again observe markedly lower levels of self-surveillance among men who were exposed to complementary sexism. Although it was unpredicted, this serendipitous finding is theoretically interpretable. Whereas the benevolent component of complementary sexism would have reminded men that some women should be protected and cherished, the hostile component would have reminded them that some women challenge men's power. Thus, men were simultaneously reminded of their protector role as well as their greater power. These two aspects may have led men to be even freer than usual from appearance-related constraints or prescriptions (cf. Vandello et al., 2008; Ybarra, 2002).

Experiment 2 also revealed that women were thinking more about appearance management following exposure to benevolent and complementary sexism, as indicated by the contents of their daily plans and personal intentions for the week ahead. When we investigated possible mediating mechanisms for this effect, we found that self-surveillance and body shame both served to partially mediate the effect of sexism exposure on appearancemanagement intentions. These findings suggest that women direct more attention and energy toward their appearance as a result of their daily encounters with seemingly positive forms of sexism because of the experience of self-surveillance and body shame that is triggered by such sexism exposure. Based on these results, we conclude that subtle reminders of benevolent sexism encourage women to anticipate being evaluated based on their appearance; as a result, they invest more time and energy than men in planning future activities that allow them to manage and control how they appear to others.

In Experiment 3, we investigated a potential buffer or protective mechanism against increased self-objectification in response to sexism exposure, namely the need to avoid closure. Because individual differences in NfCC are associated with acceptance versus rejection of stereotypical information and cultural norms, as well as preferences for predictable and stable social structures (Fu et al., 2007; Kruglanski, 2006; Webster & Kruglanski, 1994), and the endorsement of more conservative, system-justifying attitudes in general (Jost et al., 2003; Jost & Hunyady, 2005; Jost et al., 1999), we predicted that lower NfCC women would report less self-objectification, self-surveillance, and body shame in response to benevolent and complementary sexism compared to higher NfCC women. Conversely, we expected higher NfCC men to report less self-objectification, self-surveillance, and body shame overall compared to lower NfCC men. Finally, we modified the manipulation of sexism exposure to more directly test the effect of mere (or incidental) sexism exposure on self-objectification processes

Experiment 3

Method

A total of 200 English-speaking participants (100 men and 100 women) from a southeastern British university were recruited from the psychology department website and received course credit for participation. All participants were undergraduate students, with 35.9% in their first year and 64.1% in their second year. Mean age of participants was 19.99 years (SD = 1.24). Participants identified as White British (74.3%), Asian (11.8%), or Black African (7.9%).

Materials and procedures were virtually identical to Experiment 1. Participants performed the proofreading task as a manipulation of sexism but only received instructions on how to evaluate each statement for clarity. Afterward, they completed measures of state self-objectification (r=-.92), self-surveillance ($\alpha=.89$), and body shame ($\alpha=.85$). Mean scores were calculated to provide an index for each of the dependent variables.

We also tested the moderating role of NfCC on responses to sexism exposure. Participants completed the 41-item Need for Cognitive Closure Questionnaire (Roets & van Heil, 2007) earlier in the academic term as part of a mass-testing session by rating the extent to which they agreed with each of the items, using a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), such as, "I don't like situations that are uncertain," and "I do not usually consult many different opinions before forming my own view." Higher scores indicated a stronger need to attain cognitive closure ($\alpha = .88$).

Results

All dependent variables were analyzed with multiple regression analyses, with dummy variables for three of the four sexism exposure conditions (benevolent, hostile, and complementary), mean-centered NfCC ($M=3.60,\,SD=0.34$), and the interaction between each sexism exposure dummy variable and NfCC as independent predictors. Follow-up simple slope analyses were used to determine group differences. To illustrate potential interactions, we plotted the dependent variables at low (one standard deviation below the mean) and high (one standard deviation above the mean) values of NfCC (Aiken & West, 1991). A one-way ANOVA confirmed that there were no differences in NfCC, F(3, 196) = 0.67, p = .57, across experimental conditions. To simplify analyses, women's and men's scores were examined separately. Means and standard deviations for all study variables are presented in Table 4, separated by gender.

A series of zero-order correlations were conducted to test the relations among the self-objectification variables. For women, state self-objectification was significantly correlated with self-surveillance, r(98) = .37, p < .001, and body shame, r(98) = .31, p < .01; self-surveillance was significantly correlated with body shame, r(98) = .60, p < .001. For men, state self-objectification was positively correlated with self-surveillance, r(98) = .58, p < .001, and negatively correlated with body shame, r(98) = -.23,

Table 4

Mean Scores (and Standard Deviations) for State Self-Objectification, Self-Surveillance, and Body Shame in Experiment 3

	Women				Men			
Variable	No sexism	Benevolent sexism	Complementary sexism	Hostile sexism	No sexism	Benevolent sexism	Complementary sexism	Hostile sexism
Self-objectification Self-surveillance Body shame Need for cognitive closure	3.77 _a (0.45) 3.43 _a (0.42)	14.32 _b (6.95) 4.58 _b (1.29) 4.22 _b (1.05) 3.56 (0.39)	4.36 _b (0.99) 4.38 _b (0.93)	4.68 _a (6.58) 3.68 _{a,c} (0.44) 3.24 _a (0.55) 3.65 (0.33)	-11.44 _c (8.93) 3.39 _d (0.58) 3.11 _{a,c} (0.57) 3.69 (0.27)	-11.96 _c (7.20) 3.57 _{a,c,d} (0.65) 2.94 _c (0.51) 3.76 (0.48)	2.86 _e (0.89) 2.81 _c (0.63)	-12.80 _c (10.42) 3.41 _{c,d} (0.84) 3.00 _{a,c} (0.64) 3.64 (0.37)

Note. Means with different subscripts within rows differ significantly at p < .05.

p < .05; self-surveillance was positively correlated with body shame, r(98) = .39, p < .001.

Hypothesis testing: State self-objectification.

Women. As expected, exposure to benevolent sexism ($\beta = .53$, p < .001) and complementary sexism ($\beta = .40$, p < .001) predicted higher state self-objectification, whereas hostile sexism did not ($\beta = -.08$, p = .43). Neither NfCC ($\beta = -.05$, p = .80) nor the interaction terms (β s ranged from -.03 to .21, ps = .10 to .81) were significant predictors of women's state self-objectification.

Men. Neither sexism exposure (β s ranged from -.06 to .02, ps = .64-.95, NfCC, $\beta = .22$, p = .45) nor the interaction terms (β s ranged from -.33 to -.02, ps = .12-.90) predicted men's state self-objectification.

Hypothesis testing: Self-surveillance.

Women. As in the previous studies, exposure to benevolent ($\beta=.43,\ p<.001$) and complementary sexism ($\beta=.21,\ p<.001$) predicted higher self-surveillance, whereas exposure to hostile sexism did not ($\beta=-.05,\ p=.39$). NfCC did not predict self-surveillance ($\beta=0.20,\ p=.86$), but NfCC did interact with benevolent ($\beta=.64,\ p<.001$) and complementary sexism exposure ($\beta=.47,\ p<.001$) to moderate the effects of sexism exposure on self-surveillance scores. As illustrated in Figure 2a, lower NfCC women experienced markedly less self-surveillance than did higher NfCC women following exposure to benevolent sexism ($\beta=.96,\ p<.001$) or complementary sexism ($\beta=.92,\ p<.001$). NfCC did not moderate self-surveillance in response to hostile sexism ($\beta=.09,\ p=.66$) or no sexism ($\beta=.03,\ p=.87$).

Men. Exposure to complementary sexism ($\beta = -.28$, p < .01) predicted lower self-surveillance in men, whereas benevolent ($\beta = .10$, p = .32) and hostile sexism ($\beta = -.01$, p = .97), were unrelated to self-surveillance. NfCC was also unrelated to self-surveillance ($\beta = -.16$, p = .50); however, the analysis revealed a significant interaction between complementary sexism exposure and NfCC ($\beta = -.41$, p < .01). As can be seen in Figure 2b, higher NfCC men experienced markedly less self-surveillance than did lower NfCC men following exposure to complementary sexism ($\beta = -.89$, p < .001). NfCC did not moderate men's responses to benevolent ($\beta = .01$, $\beta = .99$), hostile ($\beta = -.23$, $\beta = .26$), or nonsexist exposure ($\beta = -.15$, $\beta = .47$).

Hypothesis resting: Body shame.

Women. As expected, exposure to benevolent (β = .43, p < .001) and complementary sexism (β = .40, p < .001) predicted women's body shame, whereas hostile sexism did not (β = -.08, p = .16). NfCC did not predict body shame, β = -.07, p = .52, but these effects were qualified by interactions with sexism expo-

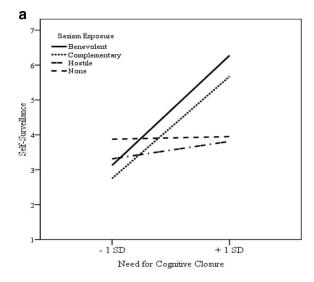
sure, such that NfCC moderated the effects of benevolent ($\beta = .58$, p < .001), and complementary sexism ($\beta = .51$, p < .001) on body shame. As illustrated in Figure 3a, lower NfCC women experienced markedly less body shame than did higher NfCC women after exposure to benevolent ($\beta = .95$, p < .001) and complementary sexism ($\beta = .94$, p < .001). NfCC did not moderate body shame in response to hostile sexism ($\beta = -.12$, p = .56) or in the no sexism control condition ($\beta = -.13$, p = .53).

Men. Exposure to complementary sexism ($\beta = -.46$, p < .001), but not hostile ($\beta = -.10$, p = .32) or benevolent sexism ($\beta = -.13$, p = .20), predicted significantly less body shame. Again, NfCC did not predict body shame ($\beta = -.38$, p = .11), but it did interact with exposure to complementary sexism ($\beta = -.37$, p < .03) to moderate men's body shame scores. As seen in Figure 3b, higher NfCC men experienced less body shame than did lower NfCC men after exposure to complementary sexism ($\beta = -.84$, p < .001). NfCC did not moderate responses in the other conditions: benevolent sexism ($\beta = .34$, p = .10), hostile sexism ($\beta = -.35$, p = .08), or no sexism ($\beta = -.29$, p = .15).

Discussion

In Experiment 3, we found that individual differences in NfCC moderated the effects of sexism. That is, a greater need to avoid cognitive closure was associated with significantly less self-surveillance and body shame for women who were exposed to benevolent or complementary forms of sexism. Among men, a greater need to attain cognitive closure was associated with less self-surveillance and body shame following exposure to complementary stereotypes only. Consistent with the primary epistemic motive assumed to underlie system justification (Jost et al., 2003; Jost & Hunyady, 2005; Kay et al., 2008; Stapel & Noordewier, in press), higher NfCC participants appear to respond to the content of sexist stereotypes in ways that ultimately reinforce and maintain gender inequality in society.

However, NfCC was not found to moderate state self-objectification. One possible explanation for this null result is that NfCC influences the extent to which women commit personal feelings and resources to fulfilling sexist beliefs, but it may not change the influence of these beliefs on the self-concept as a whole. That state self-objectification increased in response to benevolent and complementary forms of sexism, however, is more evidence that these sexist cues represent powerful environmental stimuli that produce system-maintaining outcomes (see also Jost & Kay, 2005). In sum, Experiment 3 provides new evidence to



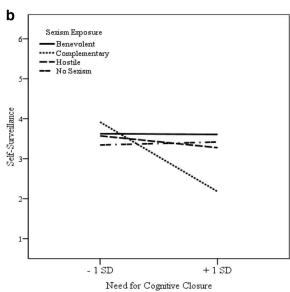


Figure 2. Relation between self-surveillance and body shame with need for cognitive closure as a function of type of sexism exposure in (a) women and (b) men in Experiment 3.

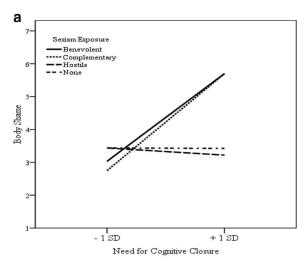
suggest that lower NfCC may afford women some protection against self-surveillance and body shame in response to sexist content that serves to justify the status quo and satisfy epistemic needs for certainty and structure.

General Discussion

Ambivalent, complementary forms of sexism are particularly insidious because of their dichotomized views of women. On one hand, women are viewed extremely positively and cherished as the keepers of purity, goodness, and nurturance. On the other hand,

these seemingly flattering views of women also cast them as weak, inferior creatures in need of men's protection and support. We proposed that exposure to benevolent (and complementary) forms of sexism would motivate women, but not men, to focus more attention on their appearance in an effort to gain male approval and conform to traditional sex roles and, in so doing, to maintain the status quo (cf. Jost & Kay, 2005; Kilianski & Rudman, 1998; Lau et al., 2008; Prentice & Carranza, 2002). In three experiments, we found that incidental exposure to ideological content that legitimizes existing gender relations (i.e., through benevolent and complementary sexism) encourages women to adopt stereotypically feminine self-perspectives while discouraging men from taking the same self-perspectives (cf. Bem & Lenney, 1976).

The results from Experiment 2 also demonstrated that women's intentions, at least in the short-term, involved more plans and



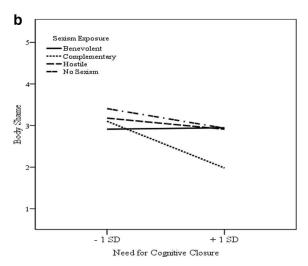


Figure 3. Relation between self-surveillance and body shame with need for cognitive closure as a function of type of sexism exposure in (a) women and (b) men in Experiment 3.

behaviors related to their appearance following exposure to benevolent and complementary forms of sexism. This was not the case when women were exposed to hostile sexism or no sexism, or for men overall. These findings are stunning given the nature of stereotype activation (Wegner & Smart, 1997). That such a subtle and inconspicuous reminder of prevalent sexist beliefs was sufficient to activate planning with respect to the management of one's physical appearance reveals the depth of the system-justifying effects of benevolent sexism.

This research provides the first experimental evidence that mere reminders of benevolent sexism increase women's intentions to engage in a variety of appearance-management behaviors in the immediate future. Because the purpose of this program of research was to investigate the deleterious impact of sexist ideology on self-objectification, we did not include dependent measures of positive appearance-related emotions in these studies. It is possible that exposure to system-justifying stereotypes may also trigger certain positive appearance-related emotions, such as more body appreciation or greater body esteem; this should be investigated in future research before concluding that benevolent sexism triggers only negative appearance-related outcomes. In addition, although men's self-objectification did not increase in response to our manipulations, there are probably other consequences for men who are exposed to benevolent sexism and other ideas that justify traditional gender arrangements. For example, rather than focusing on appearance, it is conceivable that men might focus on their careers and on attaining financial security (or even prosperity), in line with their societal role as primary breadwinner. Thus, future studies in this area might address the effects of environmental sexism on men's concerns in other domains.

The richness of the ideological content examined in this research also warrants further consideration. The benevolent sexism items of the Ambivalent Sexism Inventory comprise three distinct aspects: complementary gender differentiation, heterosexual intimacy, and paternalism. The four items we used to manipulate benevolent sexism exposure in this research covered all three dimensions. That is, our first and third items represented complementary gender differentiation, the second item represented heterosexual intimacy, and the fourth item represented paternalism. Having established the impact of sexist ideology on women's self-objectification across three studies, some obvious next steps would be to investigate the effects of more specific messages embedded within the sexist content. For example, Cikara, Lee, Fiske, and Glick (2009) have suggested that paternalism—the belief that men must protect and provide for women—may be essential to gaining women's support for traditional gender arrangements. Thus, in future research, investigators would do well to isolate paternalistic messages from other contents to determine which specific beliefs are necessary and sufficient for increasing women's degree of self-objectification.

In Experiment 3, we found that individual differences in NfCC affected how participants responded to sexist cues. Consistent with past theorizing (e.g., Kruglanski, 2006), higher NfCC was positively associated with the tendency to respond to the sexist content in stereotype-confirming (i.e., system-justifying) ways for both women and men (see Jost & Hunyady, 2005; Kruglanski & Webster, 1996). Complementary sexist cues, which are especially effective at representing the existing system of gender relations as fair and legitimate, led higher NfCC men to engage in less body

monitoring, thereby actively distancing themselves from the prescriptive stereotypes associated with women. A different pattern emerged for women: Self-surveillance and body shame were greatest among higher NfCC women and weakest among lower NfCC women following exposure to benevolent or complementary sexism. These findings provide new evidence that lower NfCC, which reflects a motivation to withhold judgment and avoid cognitive closure, may protect women against the negative consequences of benevolent sexism, which are otherwise difficult to resist (see Dardenne et al., 2007; Jost & Kay, 2005).

It is possible that the processing of benevolent sexism may require more cognitive effort from women, insofar as it cannot be dismissed as readily as hostile sexism. In accordance with the literature on stereotype threat (e.g., Schmader & Johns, 2003; Steele & Aronson, 1995), benevolent sexism has been found to reduce cognitive capacity among women by triggering mental intrusions that reflect self-doubt and preoccupation (Dardenne et al., 2007). Recent work suggests that people who are lower in NfCC may be better able to attend to and process highly variable social information (Kossowska, 2007). Thus, under conditions of diminished cognitive capacity (e.g., following stereotype threat or benevolent sexism exposure), it may be that the tendency to prolong closure may help women to process and reconcile potentially threatening but ambiguous social information, such as that contained in benevolent and complementary sexism. Future studies are needed to investigate the precise mechanisms by which NfCC may perpetuate or protect against benevolent sexism and selfobjectification.

Our findings in the three experiments may be partially explained by the notion that reminders of benevolent sexism threaten aspects of women's self-concepts (Dardenne et al., 2007; Davies, Spencer, Quinn, & Gerhardstein, 2002). Drawing on research concerning stereotype activation, stereotype threat, and minority disidentification (Major, Spencer, Schmader, Wolfe, & Crocker, 1998; Nosek, Banaji, & Greenwald, 2002; Steele, 1997), we suggest that rather than inducing short-term disengagement and long-term disidentification from a stereotyped domain, subtly reminding women of their inferior social status may foster short-term engagement and long-term identification with socially valued aspects of femininity as traditionally defined (Eagly, Wood, & Johannesen-Schmidt, 2004; Fredrickson & Roberts, 1997; Pratto & Walker, 2004).

According to Nosek, Banaji, and Greenwald (2002), the social learning of gender roles influences individual preferences, abilities, and behaviors:

For now, we can suggest that a fundamental categorization at birth into the groups male or female produces identification with one's social group and that such identification shapes and is shaped by experiences that are expected of that social group. From such experiences flow preferences and performance that can be enhancing or limiting insofar as they interfere with free access to modes of thinking and choices that make for a fulfilling and productive life. (p. 57)

Insofar as appearance-management is a socially valued domain for women, self-objectification might become temporarily (or chronically) engaged in response to benevolent sexism because women "perceive good prospects in the domain, that is, that one has the interests, skills, resources, and opportunities to prosper there, as well as that one belongs there, in the sense of being accepted and valued in the domain" (Steele, 1997, p. 613).

The present findings are also congruent with research on social power. That is, by reminding women of their subordinate role to men, the activation of benevolent and complementary sexism may have primed women to feel more powerless and men to feel more powerful. Galinsky, Magee, Inesi, and Gruenfeld (2006) found that individuals who were primed to think about being powerless were more likely to adopt other-focused perspectives, whereas individuals who were primed to think about being powerful were more likely to adopt more egocentric perspectives. Furthermore, Van der Toorn et al. (2010) demonstrated in a series of experimental and field studies that a sense of powerlessness increases system justification tendencies. Insofar as sexist ideology communicates information about gender differences in power, greater selfobjectification among women may be due in part to women taking the male perspective and justifying the system more when feeling powerless. Lower self-objectification among men may reflect that they care even less about what other people think of them when they are feeling powerful. Thus, power would appear to be a critical variable to consider in future investigations of selfobjectification (e.g., Gruenfeld, Inesi, Magee, & Galinsky, 2008).

This program of research builds on and extends objectification theory (Calogero, Tantleff-Dunn, & Thompson, 2010; Fredrickson & Roberts, 1997; Moradi & Huang, 2008) by providing the first experimental evidence demonstrating that benevolent and complementary forms of sexism are potent environmental triggers of self-objectification among women. We take this program of research a step further by locating this work within a system justification framework. Self-objectification may be conceived of as one consequence of dominant sexist ideologies that justify and preserve the societal status quo by gaining the compliance of women, despite the fact that gender inequality inflicts significant costs upon girls and women as individuals and as a group (Jost & Banaji, 1994; Jost & Kay, 2005; Jost et al., 2004). A chronic focus on appearance could limit women from developing the skills and competencies needed to improve their social status and occupy better positions in society. Even when physical appearance is not the most highly valued attribute, investment in appearance management competes for finite psychological and physical resources that are required for academic and professional achievement and healthy social interaction; it also requires a considerable financial investment that can drain the average woman's economic resources (Tiggeman & Rothblum, 1997; Zones, 2000).

In many cases, then, self-surveillance and body shame can be thought of as consequences of "system justification" or "internalized oppression" that pressure women to assimilate to restricted social roles and societal demands that are disproportionately thrust upon women (see also Jost, 1995, 1997; Jost & Banaji, 1994; Zones, 2000). In other words, the phenomenon we have identified seems to be one in which "members of disadvantaged groups not only pretend to accept their station in life, but actually do see themselves through the dominant cultural lens" (Jost et al., 2002, p. 589; see also Allport, 1954). By subtly triggering self-objectification and related processes, benevolent sexism seems to possess distinct ideological advantages over hostile sexism when it comes to system maintenance (see also Bem & Bem, 1970; Glick & Fiske, 2001; Jackman, 1994; Jost & Kay, 2005).

Consistent with Mary Wollstonecraft's observation over two centuries ago, we have provided new and direct evidence to suggest that self-objectification is part and parcel of a broader ideological network that maintains women's subordinated status. By incorporating theories of epistemic motivation (Kruglanksi, 2006) and system justification (Jost & Banaji, 1994), we have highlighted both the psychological mechanisms and overarching societal implications of self-objectification and its relation to sexist stereotyping in general. In conclusion, although our data may not definitively establish that self-objectification occurs as a direct consequence of the need to justify and support the system of gender inequality, it is clear from this set of findings that by increasing self-objectification, encounters with benevolent and complementary (i.e., system-justifying) forms of sexist stereotypes do indeed encourage women's active participation in their own self-subjugation.

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