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Psychology of Women Quarterly 2011 35: 227 originally published online 10 March 2011

DOI: 10.1177/0361684310397509

The online version of this article can be found at: http://pwq.sagepub.com/content/35/2/227

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# Seeing the Unseen: Attention to Daily Encounters With Sexism as Way to Reduce Sexist Beliefs

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#### **Abstract**

Three experiments were conducted in the United States and Germany to test whether women and men endorse sexist beliefs because they are unaware of the prevalence of different types of sexism in their personal lives. Study I (N = 120) and Study 2 (N = 83) used daily diaries as a method to encourage individuals "to see the unseen." Results revealed that encouraging women to pay attention to sexism, in comparison to attention to other social interactions, led to a stronger rejection of Modern Sexist, Neosexist, and Benevolent Sexist beliefs (Studies I and 2) and to negative evaluations of Modern and Benevolent Sexist men described in profiles as well as to more engagement in collective action on behalf of women (Study 2). In contrast, for men, paying attention to sexism did not have these effects. Results from Study 2 suggest, and from Study 3 (N = 141) confirm, that men's endorsement of Modern and Neosexist beliefs can be reduced if attention to sexism and emotional empathy for the target of discrimination is encouraged. Finally, a follow-up survey indicated that the attitude change in women and men was stable over time. The implications of these findings for interventions to reduce women's versus men's endorsement of sexist beliefs are discussed.

#### **Keywords**

sexism, prejudice, stereotyped attitudes, intervention, attitude change, empathy, activism

Many research studies have examined ways to reduce racism and ethnic prejudice, yet relatively few have addressed ways to reduce sexism and sexist prejudice. For instance, Pettigrew and Tropp's (2006) meta-analysis reviewed 515 studies regarding the role played by intergroup contact on the reduction of prejudice, and whereas half of these studies addressed ethnic or racial prejudice, none addressed prejudice against women. Indeed, Jackman (1994) concluded that intergroup contact as a means for reducing prejudice is not applicable to gender relations. Still, research evidence continues to demonstrate the prevalence and harm of sexism, especially in its subtle forms (for overviews see Barreto, Ryan, & Schmitt, 2009; Friedman & Leaper, 2010; Rudman & Glick, 2008; Swim & Hyers, 2009), underscoring the need for effective interventions to reduce sexism. The purpose of the present research is to explore how attending to sexism that emerges in everyday interactions can reduce contemporary subtle sexist beliefs in the forms of Modern Sexist, Neosexist, and Benevolent Sexist beliefs. In order to derive hypotheses about how to reduce these three types of sexist beliefs, we first need to examine the reasons for their endorsement.

#### Not Noticing Sexist Incidents Supports Sexism

Modern Sexist (Swim, Aikin, Hall, & Hunter, 1995) and Neosexist beliefs (Tougas, Brown, Beaton, & Joly, 1995) both originate from the same concept of Modern Racism (McConahay, 1983) and have been developed to measure "hidden" prejudice against women. Theoretically, both are indicated by (a) beliefs in the rarity of discrimination against women, (b) antagonism toward women's demands, and (c) resentment of efforts to address gender inequality. Methodologically, however, the scales' contents differ: The Modern Sexism scale focuses on the first aspect, whereas the Neosexism scale primarily refers to the latter (cf. Swim, Becker, & DeCoster, 2010).

We propose that women and men endorse Modern Sexist and Neosexist beliefs to some extent because they are not aware of the overall prevalence and extent of sexism in their personal lives. Individual sexist incidents may be discounted for many reasons (Crosby, 1984; Fischer & Bolton Holz, 2010; Foster, 2009; Stangor et al., 2003), such as lack of knowledge about a perpetrator's intent (Swim, Scott,

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Sechrist, Campbell, & Stangor, 2003). One result of discounting individual incidents of discrimination is that the aggregate amount of sexism in people's everyday lives is not likely to be noticed. Consistent with this argument, women who attended to sexist behaviors because of their participation in a diary study reported becoming more aware of sexism (Swim, Hyers, Cohen, & Ferguson, 2001). We propose that the cumulative impact of discounting can result in the denial of discrimination (the core element of Modern Sexist beliefs) and resistance toward efforts to reduce sexism (the core element of Neosexist beliefs).

#### The Subtlety of Benevolent Sexist Beliefs

Benevolent Sexist beliefs represent a particular type of sexism that might be disregarded because of its ostensibly positive qualities (Glick & Fiske, 1996). It portrays women as "pure," the "better" sex, and as idealized caregivers. Moreover, it reinforces the idea that women should be protected and financially provided for by men. Although these beliefs can be perceived as being subjectively affectionate, they are condescending because women are perceived as weak and incompetent. Consequently, Benevolent Sexist ideology reinforces power differences between women and men. For instance, Benevolent Sexist justifications heighten women's acceptance of discriminatory acts (Moya, Glick, Expósito, de Lemus, & Hart, 2007). Moreover, relative to blatantly Hostile Sexism, exposure to Benevolent Sexism increases women's satisfaction with the societal system (Jost & Kay, 2005) and undermines women's participation in collective action to counter gender discrimination (Becker & Wright, in press). Further, patronizing behavior, which represents one aspect of Benevolent Sexism, diminishes women's cognitive performance (Dardenne, Dumont, & Bollier, 2007; Vescio, Gervais, Snyder, & Hoover, 2005). Despite its negative implications and consequences, Benevolent Sexism is not recognized as a type of sexist prejudice among many women and men (e.g., Barreto & Ellemers, 2005; Bohner, Ahlborn, & Steiner, 2010; Glick et al., 2000; Swim, Mallett, Russo-Devosa, & Stangor, 2005). We argue that the seemingly positive and flattering qualities, embedded within normative and therefore unnoticed or unacknowledged unequal gender relations, hides the harm Benevolent Sexism can promote and encourages its endorsement.

#### The Present Research

The aim of the following series of three studies is to reduce endorsement of Modern Sexist, Neosexist, and Benevolent Sexist beliefs by encouraging individuals "to see the unseen." We extend previous work on situations that increase awareness and detection of sexism (Crosby, Clayton, Alksnis, & Hemker, 1986; Swim et al., 2001) by illustrating that attention to particular incidents of sexism in one's everyday life will reduce endorsement of sexist beliefs. We predict that not

only will attention increase awareness of sexism, as found in previous research, but it also will (a) increase sensitivity to the overall prevalence of sexism and therefore decrease endorsement of Modern Sexist beliefs and (b) enhance understanding for women's demands and efforts to fight sexism and thus reduce endorsement of Neosexist beliefs. Finally, we have argued that individuals endorse Benevolent Sexist beliefs because they do not define these beliefs as sexist (Barreto & Ellemers, 2005; Swim et al., 2005). If Benevolent Sexist behaviors are seen within the context of an enhanced alertness to other sexist behaviors, these behaviors and corresponding supportive beliefs may be interpreted as being problematic. Therefore, we predict that attending to incidents of Benevolent Sexism in this context will also reduce endorsement of Benevolent Sexist beliefs.

Paying attention to sexism in one's own life might influence women and men differently. Men's higher status could support desires to maintain current gender inequality (Schmitt, Branscombe, & Kappen, 2003). In addition, men may wish to believe that their higher status is justly obtained, which could prevent them from acknowledging sexism (Jost & Kay, 2005). In contrast, when women, as the disadvantaged group, realize the prevalence of sexism, they should be interested in changing the current gender hegemony and reject sexist beliefs. Therefore, we expect that increased awareness of sexism may effectively reduce women's, more than men's, endorsement of sexist beliefs.

One way to counter men's possible resistance to the impact of attention to sexism on their sexist beliefs may be to encourage empathetic responses to women's experiences. Empathy, encouraged by taking another's perspective, is an effective method for reducing racial and ethnic prejudice (Shih, Wang, Trahan Bucher, & Stotzer, 2009; Vescio, Sechrist, & Paolucci, 2003). Further, sympathetic responses to descriptions of gender discrimination are associated with intending to engage in collective action to address gender inequality, and women are more likely to report such emotions (Iyer & Ryan, 2009). Thus, whereas simply attending to sexism may be sufficient to reduce women's endorsement of sexist beliefs, men may need to be encouraged to take an empathic perspective.

We conducted three experiments to investigate whether attending to everyday manifestations of sexism results in rejection of Modern Sexist, Neosexist, and Benevolent Sexist beliefs. In order to facilitate attention to sexism and to personalize these real-life experiences, we asked women and men in Studies 1 and 2 to complete daily diaries in which they kept track of whether or not they experienced or observed several specified forms of everyday sexism. For comparison, other participants completed diaries asking them to keep track of nondiscrimination-related everyday stressors (Study 1) or the gender composition of their interpersonal interactions (Study 2). At the end of the week-long diary period, participants indicated their endorsement of Modern Sexist, Neosexist, and Benevolent Sexist beliefs. Participants in Study 2 completed

additional dependent measures, including subtle indicators of endorsement of Modern and Benevolent Sexist beliefs. In Study 3, we modified the diary method and focused specifically on the role of empathy in the reduction of sexist beliefs.

We predict an interaction between gender and attention to sexist incidents (Hypothesis 1). We expect that women will be less likely to endorse Modern Sexist, Neosexist, and Benevolent Sexist beliefs after having completed diaries asking them to attend to sexism in comparison to women who were asked to attend to nondiscriminatory events. In contrast, we posit that men's endorsement of Modern Sexist, Neosexist, and Benevolent Sexist beliefs will be affected to a lesser degree or not at all by attending to the prevalence of sexism. Instead, we predict that men's beliefs will be affected only when attention is paired with empathy for the target of sexism (Hypothesis 2). For women and men, we predict that these effects will also affect subtle indicators of endorsement of sexism (Hypothesis 3). Study 1 addresses Hypothesis 1. Studies 2 and 3 test the effects of empathy regarding these outcomes (Hypothesis 2). Study 2 assesses subtle indicators of sexist beliefs (Hypothesis 3).

We conducted Study 1 in the United States, and Studies 2 and 3 in Germany. We do not expect differences between the two countries because both are "Western" societies, have comparable scores on the gender empowerment measure and gender development index (United Nations, 2008), and exhibited similar factor structures for Hostile and Benevolent Sexism (Glick et al., 2000). Also, research on Modern Sexism, Neosexism, and Benevolent Sexism has been conducted in both U.S. (Swim et al., 1995; Tougas et al., 1995) and European contexts (e.g., Barreto & Ellemers, 2005; Eckes & Six-Materna, 1998, 1999).

#### Study I

#### **Method**

#### **Participants**

Students at the Pennsylvania State University participated in an online study in exchange for partial course credit for their Introductory Psychology class. Of the original 160 participants, 40 students failed to complete the diaries correctly. Analyses were conducted with the remaining 120 participants (82 women and 38 men). The sample consisted of 95 (79%) White Americans, 16 (13%) Asian Americans, and 5% others (with 3% missing). Participants' ages ranged from 18 to 26 years, with a mean age of 19 years.

#### Design and procedure

The study was a 2 (Diary Condition: Sexism, Control)  $\times$  2 (Gender of Participant) between-participant design. Participants were told that the purpose of the study was to investigate how many and what kind of daily hassles students

experience in their everyday life. They were randomly assigned to either a sexism diary or a control diary, and they were required to complete the diary materials online for seven consecutive days. In the sexism diary condition, participants were asked to keep track of different types of sexism in their everyday lives. In the control diary condition, they were asked to keep a daily record of different types of stressors they may experience on campus. After the week, participants answered post-diary measures, including questions about awareness of sexism and stress, the feelings they experienced during the week, and measures of their Modern Sexist, Neosexist, and Benevolent Sexist beliefs. We also asked participants about the number of racist incidents they may had experienced and whether the study made them more aware of racism; additionally, they were asked to complete the Modern Racism and System Justification scale at the end of the survey. We included these ratings to make it less obvious that we were particularly interested in sexism.

#### **Diaries**

For the structured sexism diary, participants were asked to indicate whether they observed 24 incidents which represented various types of sexism (see Table 1 for a list of these incidents). We stressed that they should focus on interpersonal relationships and ignore incidents found in the media. Diaries were adapted and modified from diary forms used by Swim et al. (2001). We altered the diaries to include a broader range of incidents. This allowed the inclusion of subtle forms of sexism, specifically behaviors that would represent Benevolent Sexism. For the structured control diary, we specified 19 stress-inducing incidents which represented typical student experiences: roommate problems and conflicts (e.g., disagreement about noise), problems with friends (e.g., friend takes advantage of you), problems with school (e.g., too much homework), and romantic relationship problems (e.g., romantic partner pays too much attention to someone else).

Participants in both diary conditions were asked to indicate if they had personally experienced or witnessed each of the specified incidents in their interpersonal relationships and to enter how often the corresponding incidents occurred during the day. The incidents in the diaries were not labeled as sexist or stressful. Instead, after indicating an incident, students in the sexism diary condition were asked to estimate how sexist they perceived the reported incident to be on a rating scale ranging from 1 (definitely not sexist), 2 (might be sexist), 3 (probably sexist) to 4 (definitely sexist). These ratings were averaged across all single incidents reported during the 7 days to determine the extent to which participants perceived their daily experiences to be sexist. On a parallel 4-point scale, students in the control diary condition rated how stressful they perceived their reported incidents to be. Pretesting indicated that completion of the

 $\textbf{Table I.} \ \, \text{Average Number of Sexist Incidents Participants Observed During I Week, Study I and Study 2}$ 

	Study I		Study 2	
	М	SD	М	SD
Stereotypes about women				
Heard traditional negative beliefs that women were not as able	2.47	1.98	1.57	1.74
to do things as well as men (e.g., low ability with math, sports,				
cars, or leadership).	1.40	. 70	1.40	
Heard hostile beliefs about women (e.g., women are too easily	1.69	1.79	1.48	1.52
offended or exaggerate problems at work).	2.34	2.62	1.62	1.92
Heard traditional positive stereotypes about women (e.g., women are better at certain things than men like cooking,	2.34	2.02	1.02	1.72
shopping, and child care).				
Heard paternalistic stereotypes about women (e.g., women should	1.07	1.59	1.26	1.70
be cherished and protected by men).			0	•
Heard traditional beliefs about relationships (e.g., men are	.93	1.45	.79	1.18
incomplete without women and that every man ought to have a				
woman whom he adores).				
Heard complementary beliefs about women and men (e.g., men and	.48	1.01		_
women are different but complement each other).				
Treatment based on gender				
Hostile treatment: Excluding a person because of her or his gender	1.81	2.68	.60	1.08
(e.g., being ignored in a conversation or had someone use degrading				
nonverbal expressions—rolling eyes, looking down nose with				
disdain—because of the person's gender).		2.42	2.4	40
Traditional treatment: Selected for a gender stereotypical job or	1.81	2.42	.24	.48
assignment or not selected for a gender counterstereotypical job or				
assignment (e.g., a woman picked for a feminine job and not for a				
masculine job). Paternalistic treatment (e.g., experienced or observed a woman	1.09	1.43		
being cherished or protected by men because of her gender).	1.07	1.73	_	_
Complaining				
Heard people say that women push themselves where they are not	.76	1.44		_
wanted.				
Heard negative things about feminists.	1.72	2.38	_	_
Heard people say that discrimination is a thing of the past and	.84	1.72	_	_
women should stop complaining.				
Not being taken seriously when complained about a sexist incident.	1.05	1.55	_	_
Heard that women are not able to have a fair competition because	.64	1.33	_	_
when they lose, they typically complain about being discriminated				
against.				
Heard that women interpret innocent remarks as sexist.	1.19	1.80	_	_
Heard negative attitudes about gender equality.	1.72	2.11	_	_
Unwanted sexual attention	2.74	3.05	1.42	1 77
Heard comments about parts of your or someone's body or	2.74	3.05	1.43	1.77
clothing.  Experienced staring, ogling, unwanted touching.	3.78	3.17	2.24	2.52
Heard comments about sexual behavior someone would like to	2.12	2.41	Z.Z¬	2.52
engage in with you or another person.	2.12	2.11		
Unwanted flirting.	2.29	2.60		_
Heard catcalls.	1.66	2.07		_
Verbal sexist behavior				
Use of derogatory terms to refer to women or men (e.g., bitch,	4.90	4.37	1.98	2.19
chick, bastard, faggot).				
Heard sexist jokes.	1.90	2.59	1.14	1.80
Use of sexist language (e.g., referring to all people as "men," a	1.14	1.87	.93	1.40
person of an unknown gender as "he," or using nonparallel struc-				
ture such as refer to women as "girls" while not calling men "boys").				

 $\textit{Note:} \ \text{Includes only those incidents evaluated as ``might be, probably, or definitively sexist."}$ 

control diary would take about the same amount of time as the completion of the sexism diary.

Manipulation checks and dependent measures

The first question in the post measure asked participants to specify the number of stressful and sexist incidents they had experienced during the week. Next, they rated the degree to which the study made them more aware of stress and sexism in their life on a 7-point scale ranging from 1 (not at all) to 7 (very much). All dependent variables were measured on 6-point rating scales ranging from 1 (disagree strongly) to 6 (agree strongly). After completing the manipulation checks, participants completed measures in the following order.

#### Modern and Neosexism

We assessed Modern Sexism using the 8 items of the Modern Sexism scale (e.g., "Over the past few years, the government and news media have been showing more concern about the treatment of women than is warranted by women's actual experiences") and Neosexism with the 11 items of the Neosexism scale (e.g., "Due to social pressures, firms frequently have to hire underqualified women"). We excluded two items from the Neosexism scale ("Discrimination against women in the labor force is no longer a problem in the United States" and "Women shouldn't push themselves where they are not wanted") and one item from the Modern Sexism scale ("Discrimination against women is no longer a problem in the United States") because the diary incidents asked participants whether they had heard comments similar to these statements (see Table 1). We conducted an exploratory factor analysis with promax rotation with the remaining 16 items. Based on the scree-plot criterion, this analysis yielded a two-factor solution that separated the Modern Sexism items from the Neosexism items. Only one item from the Neosexism scale ("I consider the present employment system to be unfair to women") loaded on the Modern Sexism factor. We excluded this item and averaged the seven Modern Sexism items into a Modern Sexism composite ( $\alpha = .75$ ) and the eight Neosexism items to an overall Neosexism score ( $\alpha$  = .82) such that higher scores indicated endorsement of more sexist beliefs.

#### Benevolent Sexism

We measured Benevolent Sexism using the 11 items of the Ambivalent Sexism Inventory (e.g., "In a disaster, women ought to be rescued before men"; Glick et al., 2000). We excluded three items because we had asked participants whether they had heard comments similar to these statements ("Women should be cherished and protected by men," "Every man ought to have a woman who he adores," and "Men are incomplete without women"). The remaining eight

items were averaged such that higher scores indicate greater endorsement of benevolent sexism ( $\alpha = .84$ ).

#### **Results and Discussion**

#### Preliminary analyses

In the sexism diary condition, we expected participants to report in the post measures that they had experienced more sexist incidents during the week and also to report a heightened awareness of sexism relative to those who completed the control stress diary. An analysis of variance (ANOVA) revealed that the number of recalled sexist incidents in the post measure was higher in the sexism diary condition (M = 6.30, SD = 6.34) than in the control diary condition (M = .41, SD = .89), F(1, 109) = 36.87, p < .001,  $\eta^2 = .25$ . A second ANOVA with awareness of sexism as the dependent variable indicated that participants in the sexism diary condition (M = 4.26, SD = 1.19) reported more awareness than those in the control condition (M = 2.16, SD = 1.09), F(1,116) = 78.00, p < .001,  $\eta^2 = .40$ . This effect was significant for men as well as for women, but was slightly stronger for women,  $F(1, 116) = 11.08, p = .01, \eta^2 = .09$ . The diary condition did not have an effect on the number of stressful incidents experienced and the awareness of stressful incidents.

We tested whether women and men differed in the actual number of incidents they perceived during the week and in the degree they defined the reported incidents to be sexist. We averaged all reported incidents across the seven diaries completed during 1 week that were evaluated as "might be, probably, or definitively sexist." A multivariate analysis of variance (MANOVA) with 24 incidents as dependent variables and gender as the independent variable revealed that women and men did not differ in the number of reported incidents, F(24, 33) = 1.46, p = .16. Table 1 documents how often each sexist incident was observed during the week. Second, we tested whether men evaluated observed incidents as less sexist than women did. An ANOVA of the average of the sexism ratings for each incident participants recorded showed that women (M = 2.48, SD = .48) perceived their observed incidents to be more sexist than men did (M =1.93, SD = .55), F(1, 56) = 16.20, p < .001,  $\eta^2 = .22$ . Taken together, women and men reported the same number of incidents, but men defined the reported incidents as less sexist.

#### Endorsement of sexist beliefs

The three sexism scales were moderately intercorrelated (rs = .20-.45, p < .05). Consistent with Hypothesis 1, a 2 (Diary Condition: Sexism, Control)  $\times$  2 (Gender of Participant) MANOVA with Modern Sexism, Neosexism, and Benevolent Sexism as dependent variables revealed a significant two-way interaction of diary condition by gender, F(3, 113) = 3.52, p = .02,  $\eta^2 = .09$ . On the univariate level, the interaction was significant for all three measures of sexist beliefs.

	Women				Men			
	Sexism Diary		Control Diary		Sexism Diary		Control Diary	
	М	SD	М	SD	М	SD	М	SD
Modern Sexism Neosexism Benevolent Sexism	2.79 <sup>a</sup> 2.06 <sup>a</sup> 2.68 <sup>a</sup>	.57 .52 .82	3.17 <sup>b</sup> 2.46 <sup>b</sup> 3.42 <sup>b</sup>	.60 .76 .79	3.59 <sup>a</sup> 2.90 <sup>a</sup> 3.39 <sup>a</sup>	.73 .61 .74	3.41 <sup>a</sup> 2.81 <sup>a</sup> 3.35 <sup>a</sup>	.61 .60 1.03

Table 2. Modern Sexism, Neosexism, and Benevolent Sexism as a Function of Diary Condition and Gender, Study I

Note: Means for women and for men that do not share subscripts across a row differ at p < .05.

Therefore, we computed separate analyses for women and men.

For women, a MANOVA revealed a main effect for the diary condition, F(3,77)=7.33, p<.001,  $\eta^2=.22$ . On the univariate level, as expected, participants in the sexism diary condition were less likely to endorse Modern Sexist, F(1,79)=8.30, p=.01,  $\eta^2=.10$ , Neosexist, F(1,79)=7.38, p=.01,  $\eta^2=.09$ , and Benevolent Sexist beliefs, F(1,79)=16.99, p<.001,  $\eta^2=.18$ , than participants in the control diary condition (see Table 2). Thus, supporting Hypothesis 1, women who completed the sexism diary had significantly lower scores on the Modern Sexism, Neosexism, and Benevolent Sexism scales than women who completed the control diary.

A second MANOVA indicated that the type of diary was not significant for men, F(3, 34) = 0.22, p = .88. Men in the sexism diary condition and the control diary condition had similar scores on Modern Sexism, Neosexism, and Benevolent Sexism (see Table 2). Hence, supporting Hypothesis 1, completing the sexism diary did not have prejudice-reducing effects for male participants. However, as reported above, women and men did not differ in the number of reported sexist incidents. This similarity suggests that attending to sexism alone is not sufficient to reduce men's endorsement of sexist beliefs. Instead, it might be important to change men's perception of everyday discrimination as being serious and problematic and not to just direct their attention to the occurrence of sexism. We examine this explanation in Study 2.

We also address other alternative explanations for our findings in the next study. First, the lack of effect of the diaries on men may be because men may have reported more incidents directed at men than women did. Thus, although previous diary studies indicated that the target of most of the incidents women and men reported were women (Swim et al., 2001), it may be important to confirm that men and women reported similar proportions of incidents directed at women versus men. Second, women but not men may have responded to demand characteristics. Compared to men, women might have been more concerned about appearing nonsexist. To be more certain that our results were not based on demand characteristics, we used more subtle measures of sexism in Study 2 and reassessed beliefs a week later after the study was presumably finished.

#### Study 2

Study 2 extended the findings of Study 1 in four ways. First, we argued that men's tendency to perceive incidents as being less sexist may be because they did not consider the negative impact the incidents may have on women. Being aware of the negative impact can be stimulated by imagining in which ways the target may be affected by her or his plight, that is, by inducing empathy (Batson & Ahmad, 2009; Batson et al., 1997). Thus, we included a measure of empathy for the target in Study 2 in order to increase the likelihood that men would change their perception of everyday discrimination as being sexist and potentially increase the impact of attending to sexist incidents on men (Hypothesis 2). Second, we asked participants to identify the target within their reported incidents to ensure that our nonsignificant finding for men in Study 1 was not driven by men observing more sexist incidents directed at men.

Third, the results found in Study 1 may have been driven by focusing attention on gender but not specifically on sexism. Thus, we altered our control condition so that participants would attend to gender but not gender discrimination by asking participants to report the gender of their interaction partners. Fourth, we included more subtle measures of sexism to decrease the likelihood that effects of keeping a diary on sexism were due to demand characteristics. Specifically, we added an evaluation of a Modern and Benevolent Sexist man described in a short profile as part of an ostensibly different study (cf. Kilianski & Rudman, 1998). Furthermore, 3 days after the study was finished, participants received an opportunity to participate in collective action against sexism. This collective action measure was allegedly not connected to the present study. Finally, we tested for the stability of the effects by conducting a follow-up measure 1 week after the study was finished.

#### Method

#### **Participants**

Students at the University of Marburg (Germany) participated in this online study either in exchange for partial credit for their introductory psychology research requirement or for eligibility in a drawing to win one of three 50 Euro cash

prizes. Of the original 90 participants, 6 did not complete the diaries correctly and 1 person had more than 10% missing data in the dependent measures. Analyses were conducted with the remaining 83 participants (40 women and 43 men). The sample consisted of 94% Germans. The remaining 6% came from other European countries or Brazil. Participants' ages ranged from 19 to 38 years; their mean age was 21.2 years.

#### Design and procedure

We used the same design, procedure, and cover story as in Study 1 with the following changes. First, instead of keeping track of stress, participants in the control condition were asked to keep a daily record of their communication with women and men for 7 days. Second, we provided a different introduction to the measures of sexist beliefs: After the week of diary completion, we asked participants about their experiences with keeping the diaries (the same manipulation check as in Study 1). Then, participants were additionally invited to record their thoughts and criticisms of the diary study. The actual dependent measures were introduced as a second part of the study. Participants were told that the researchers were allegedly interested in interpersonal relationships. To be in line with this story, participants were first asked whether they were currently involved in a relationship (if yes, how long have they been in the relationship; if no, since when have they been single), about their attachment styles (using 10 of the 89 items of the attachment style questionnaire; Grau, 1994), about their gender identification, and finally about their endorsement of Modern Sexist, Neosexist, and Benevolent Sexist and System Justification beliefs. Thus, the sexism scales were presented as part of the relationship information and not as a follow-up to the diary study.

Third, we added a dependent measure that was also embedded in the alleged study about relationships: We told participants they would be randomly assigned to evaluate either three women or three men based upon profiles written by a psychologist. In truth, all were assigned to read descriptions of a Modern Sexist, a Benevolent Sexist, and a nonsexist male profile. The Benevolent Sexist and the nonsexist profiles were adapted from Kilianski and Rudman (1998). The Modern Sexist profile was developed using belief statements corresponding to the items of the Modern Sexism scale (see Appendix A).

Finally, participants completed two separate dependent measures after participating in the study. Three days later, participants received a link to an online petition for antisexism programs in schools and were invited to sign the petition. To ensure that participants were not suspicious of this petition being yet another part of the diary study, this link was sent from an independent e-mail address and was announced as initiated by an independent organization. Also, the webpage for the petition was designed using a completely different style than the diary and dependent variables webpages.

Finally, 1 week later, participants were asked, via an online survey e-mailed to them, to indicate the number of sexist incidents they had experienced or observed during the last week and were asked about their agreement with Modern Sexist, Neosexist, and Benevolent Sexist beliefs.

#### **Diaries**

We reduced the number of incidents from the 24 used in Study 1 to 12 incidents (see Table 1) because we added additional questions. For this list, we selected only those incidents that Study 1 participants frequently observed in their everyday lives. Regarding the structured sexism diary, we added questions asking about the target's gender, participant's perceived emotions during the incident, and the target's emotions. After each incident, participants were asked "How many times did you experience or observe this incident today?" who was the target (me, a woman/women, or a man/men), the likelihood of the incident being sexist, and the most profound emotion they experienced during the incident (with the response options: joy, anger, fear, disgust, pity, envy, guilt, sorrow, happiness, contempt, surprise, hate, resignation, fury, satisfaction, schadenfreude [i.e., pleasure derived from the misfortunes of others], no emotion). If they themselves were not the target, they also indicated their assumptions about the strongest emotion experienced by the actual target of the incident (from the same list of emotions as reported above).

As part of the structured *control diary*, we specified 12 incidents which focused on communication between women and men. For each day, participants were asked how many times they had phone conversations with women (1) and men (2); how many text messages they wrote to women (3) and men (4); how many direct conversations they had with closely related women (5), men (6), and women and men together (7); how many conversations per video chat they had with women (8), men (9), and women and men together (10); and how many e-mails they wrote to women (11) and men (12). After each communication encounter, participants were asked the following three yes/no questions: "Was the conversation/text message/E-mail primarily about you?" "... primarily about a woman/women?" and "... primarily about a man/men?" Then, they were asked about their strongest emotion during the communication and to state their assumption regarding which emotion their communication partner might have felt the strongest (using the same list of emotions above for both). Pretesting indicated that completion of the control diary would take about the same amount of time as the completion of the sexism diary.

#### Manipulation checks and dependent measures

First, in the post measure, participants indicated the number of sexist incidents they had experienced during the week. Then, they indicated whether the study made them more aware of sexism and different types of sexism in their lives. These items were highly correlated (r=.90, p<.001) and, thus, were averaged. Next, we used German translations of the Modern Sexism, Neosexism, and Benevolent Sexism scales (Eckes & Six-Materna, 1998, 1999) and created exactly the same scales as in Study 1 for the Time 1 ( $\alpha$ s = .85, .84, and .76, respectively) and Time 2 ( $\alpha$ s = .86, .86, and .79, respectively) administrations.

#### Favorability and sexism ratings of male dating profiles

To assess the favorability of the men described in the profiles, female participants were asked six questions on a 7-point rating scale ranging from 1 (not at all) to 7 (very much). Sample questions were "How much would you like to get to know this man?" and "How much would you like to have him as a friend?" Male participants were asked to think about a female friend and to imagine how they would evaluate her using the same items. To assess the extent to which the men were sexist, all participants were asked how discriminatory, sexist, and harmful they perceived this man to be for women on a 7-point rating scale ranging from 1 (not discriminatory/not sexist/not harmful at all) to 7 (very discriminatory/sexist/harmful). We varied the order of the three profiles. The non-sexist profile was used as filler.

Two separate factor analyses with all nine items (principal axis analysis with promax rotation) indicated two-factor solutions for both the Modern and Benevolent sexist profiles. The first factor represented their ratings of how favorable they perceived the men described in the profiles to be (averaging across six items,  $\alpha = .88$  for Modern Sexism and  $\alpha = .93$  for Benevolent Sexism). The second factor captured ratings of how sexist they perceived these men to be (averaging across three items  $\alpha = .83$  for Modern Sexism and  $\alpha = .90$  for Benevolent Sexism).

#### Petition

The petition was described as a "petition for the introduction of antisexism programs in schools" for the county of "Marburg-Biedenkopf" (the county where the students were living). The translated verbatim statement was as follows:

Scientific studies reveal that on average women are confronted with sexism twice a week. Sexism can be expressed in different ways. Typical examples of sexism in everyday life are unwanted staring, cat calls and sexist jokes, as well as exclusion of women in social activities, discrimination in work life, and the gender pay gap. In order to provide a lifelong effective program to reduce sexism, it is important to start very early in people's lives with information campaigns. Therefore, schools are appropriate settings for such campaigns. Up until now, schools have only had programs against racism and violence in schools. However, recently a debate started about whether or not programs against sexism should be introduced in schools. With this petition, you

can participate in the political discourse about the introduction of antisexism programs in schools. Such a program could encompass the following modules: sensitization to sexism, information about expressions of sexism, as well as practical training on how to react if a person encounters sexism. All signatures from the county "Marburg-Biedenkopf" will be transferred to the federal ministry of family, senior citizens, women, and youth. We demand the government to introduce long lasting and effective programs in schools to prevent sexism.

Then, the reader of the petition was invited to sign for the introduction of antisexism programs in schools using their full name. We created a fake name, e-mail address, and mailing address belonging to the director of the Centre of Gender Studies in the county of Marburg-Biedenkopf. Participants received the link from a member of the University of Marburg, who had visibly forwarded the link from the Centre.

#### **Results and Discussion**

#### Preliminary analyses

Replicating findings of Study 1, results of an ANOVA with gender and condition as independent variables revealed that participants who completed the sexism diary (M = 8.43, SD= 9.75) reported in the post measure that they had experienced more sexist incidents during the week than those who completed the control diary (M = 1.65, SD = 4.24), F(1, 77) =15.50, p < .001,  $\eta^2 = .17$ . Again, women and men did not differ in the estimated number of sexist incidents reported in the post measure. A similar ANOVA with awareness of sexism as the dependent variable indicated that when women and men were asked to attend to sexist events, they were more aware of sexism in their lives (M = 3.84, SD = 1.56) than the participants in the control diary condition were (M = 1.37, SD = .77),  $F(1, 77) = 89.11, p < .001, \eta^2 = .54$ . A main effect of gender showed that the study made women more aware of sexism (M =2.87, SD = 1.89) than men (M = 2.34, SD = 1.58), F(1, 77) =5.61, p = .02,  $\eta^2 = .07$ . No interaction with gender occurred, suggesting that the effect of the manipulation was equivalent for women and men.

Incidents which were evaluated as "might be, probably, and definitively sexist" were counted and averaged. Table 1 illustrates how often each sexist incident was observed during the week. A MANOVA with the 12 sexist incidents as the dependent variables and gender as the independent variable indicated that women and men did not differ in the number of reported incidents, F(12, 29) = 1.55, p = .16. Within the sexism diary condition, women reported that 29.95% (SD = 19.16) of the sexist incidents were directed at themselves, 57.33% (SD = 21.23) at other women, and 12.72% (SD = 15.62) at men. Men reported that 22.68% (SD = 14.83) of the sexist incidents were directed at themselves, 53.07% (SD = 15.08) at women, and 24.25% (SD = 13.57) at other men. Thus, men

**Table 3.** Modern Sexism, Neosexism, and Benevolent Sexism, Favorability, and Sexism Ratings of the Modern and Benevolent Sexist Profiles as a Function of Diary Condition and Gender, Study 2

	Women				Men				
	Sexism Diary		Control Diary		Sexism Diary		Control Diary		
	М	SD	М	SD	М	SD	М	SD	
MS	3.21 <sup>a</sup>	.63	3.89 <sup>b</sup>	1.06	3.57 <sup>a</sup>	.88	4.65 <sup>b</sup>	1.08	
NS	1.73 <sup>a</sup>	.53	2.41 <sup>b</sup>	.91	2.72 <sup>a</sup>	.75	3.31 <sup>b</sup>	.93	
BS	2.69 <sup>a</sup>	1.43	4.07 <sup>b</sup>	1.19	3.87 <sup>a</sup>	1.00	3.80 <sup>a</sup>	1.11	
MS follow-up	3.02 <sup>a</sup>	.87	3.99 <sup>b</sup>	1.12	3.83 <sup>a</sup>	.87	4.54 <sup>b</sup>	1.02	
NS follow-up	1.94 <sup>a</sup>	.68	2.50 <sup>b</sup>	.75	2.98 <sup>a</sup>	.77	3.53 <sup>b</sup>	.85	
BS follow-up	2.58 <sup>a</sup>	1.29	3.80 <sup>b</sup>	1.12	4.03 <sup>a</sup>	1.06	3.69 <sup>a</sup>	1.10	
MS favorability	2.30 <sup>a</sup>	.94	2.71 <sup>b</sup>	1.35	2.83 <sup>a</sup>	1.17	3.63 <sup>b</sup>	1.27	
MS sexist	5.38 <sup>a</sup>	1.08	4.15 <sup>b</sup>	1.70	4.41 <sup>a</sup>	1.37	3.43 <sup>b</sup>	1.20	
BS favorability	4.11 <sup>a</sup>	1.31	4.97 <sup>b</sup>	1.35	4.23 <sup>a</sup>	1.32	4.45 <sup>a</sup>	1.17	
BS sexist	4.60 <sup>a</sup>	1.59	2.28 <sup>b</sup>	1.05	3.18 <sup>a</sup>	1.51	2.56 <sup>a</sup>	1.60	

Note: MS = Modern Sexism, NS = Neosexism, BS = Benevolent Sexism, MS/BS favorability = favorability of the Modern/Benevolent Sexist man profile, MS/BS sexist = perceived sexism of the Modern/Benevolent Sexist man profile. Means for women and for men that do not share subscripts across a row differ at p < .05.

were more likely to report sexist incidents directed at men compared to women,  $\chi^2(1) = 27.96$ , p < .001.

As an index for perceived empathy, we added the respondent's presumed negative emotions that the target might have felt while experiencing a sexist incident. We included the unambiguously negative emotions of anger, fear, disgust, sorrow, contempt, hate, resignation, and fury. There were no differences in empathy (i.e., presumed negative emotions of the target) between women (M = 4.5, SD = 3.55) and men (M = 6.85, SD = 5.81), F(1, 38) = 2.39, p = .13. Moreover, unlike Study 1, there was no difference between women and men in the average of their sexism ratings of the incidents they reported in the sexism diary condition, F(1, 40) =2.55, p = .12, indicating that women and men perceived the reported incidents as similarly sexist. However, focusing only on the ratings of the Benevolent Sexist incidents, an ANOVA revealed that women (M = 2.22, SD = .80) perceived their observed benevolent incidents to be more sexist than men did  $(M = 1.68, SD = .67), F(1, 36) = 5.16, p = .03, \eta^2 = .13.$ Finally, we used the follow-up manipulation check and tested whether participants in the sexism diary condition continued to observe more sexism in their lives 1 week after the diary portion of the study was completed. An ANOVA with gender and condition as independent variables revealed that participants who completed the sexism diary (M = 7.05, SD = 7.80)reported they had observed more sexist incidents in the second week than those who completed the control diary  $(M = 2.13 SD = 2.98), F(1, 75) = 13.81, p < .001, \eta^2 = .16.$ Women and men did not differ in the estimated number of sexist incidents.

#### Endorsement of sexist beliefs

A 2 (Diary Condition: Sexism, Control)  $\times$  2 (Gender of Participant) MANOVA with Modern Sexism, Neosexism, and

Benevolent Sexism as dependent variables yielded a significant main effect for the diary condition, F(3, 77) = 9.01, p <.001,  $\eta^2 = .26$ , a main effect for gender, F(3, 77) = 10.42, p < .001.001,  $\eta^2 = .29$ , and a significant interaction of diary condition with gender, F(3, 77) = 2.95, p = .04,  $\eta^2 = .10$ . On the univariate level, this interaction was only significant for Benevolent Sexism,  $F(1, 79) = 7.62, p = .01, \eta^2 = .09$ . As in Study 1, women in the sexism diary condition had lower scores on Benevolent Sexism than women in the control diary condition,  $F(1, 79) = 13.40, p < .001, \eta^2 = .15$ , but there was no difference in men's endorsement of Benevolent Sexist beliefs between the sexism diary and the control diary condition, F(1, 79) = .03, p = .86 (see Table 3). Unlike Study 1, univariate analyses indicated that both women and men in the sexism diary condition had lower scores on Modern Sexism, F(1, 79)= 18.32, p < .001,  $\eta^2 = .19$ , and Neosexism scales, F(1, 79)= 15.31, p < .001,  $\eta^2 = .16$ , compared to the control diary condition (see Table 3).

In sum, we replicated our findings for women from Study 1 by showing that women in the sexism diary condition had lower scores on all measures of sexism compared to women in the control diary condition, even when the control condition also had participants attend to gender. Unlike Study 1, results of Study 2 yielded a significant reduction of men's endorsement of Modern and Neosexist beliefs. This finding supports Hypothesis 2 and is likely due to our empathy manipulation. It is also consistent with the research that indicates other moral emotions (i.e., collective guilt) can increase men's supportive responses to anti-sexism efforts (i.e., support for affirmative action; Boeckmann & Feather, 2007).

In Study 3, we systematically manipulated empathy to test this hypothesis more carefully. Further, we did not find an effect of the sexism diary experience on men's endorsement of Benevolent Sexist beliefs. This nonfinding may be because the Benevolent Sexist behaviors were interpreted as nice and kindhearted. Thus, although men observed Benevolent Sexist behavior, they may not have realized that these behaviors can potentially be harmful for women.

#### One-week follow-up

As described above, the same analyses of the follow-up data revealed that the difference between respondents in the sexism diary condition and the control diary condition remained stable: Both women and men in the sexism diary condition had lower scores on measures of Modern Sexism, F(3, 74)= 14.84, p < .001,  $\eta^2 = .16$ , and Neosexism scales,  $F(3, \frac{1}{2})$ 74) = 10.35, p = .002,  $\eta^2 = .12$ , than participants in the control diary condition (see Table 3). Again, there was a significant interaction between condition and gender for Benevolent Sexist beliefs F(3, 74) = 9.38, p = .003,  $\eta^2 =$ .11. Women in the sexism diary condition had lower scores on Benevolent Sexism compared to women in the control diary condition,  $F(1, 76) = 11.20, p = .003, \eta^2 = .13,$ whereas there was no difference in men's endorsement of Benevolent Sexist beliefs between the two experimental conditions, F(1, 76) = .92, p = .34. Thus, we can be confident that our manipulation was not limited to changes that occurred immediately after completing the diaries.

#### Evaluation of the men's profiles

A 2 (Diary Condition: Sexism, Control)  $\times$  2 (Gender of Participant) MANOVA with favorability ratings for the Modern and Benevolent Sexist profiles and sexism ratings of the profiles describing Modern and Benevolent Sexist men revealed a significant main effect for the diary condition, F(4, 76) = 8.60, p < .001,  $\eta^2 = .31$ , and a main effect for gender, F(4, 76) = 3.98, p = .01,  $\eta^2 = .17$ . The multivariate interaction was not significant, F(4, 76) = 1.92, p = .12.

Univariate analyses indicated that both women and men in the sexism diary condition evaluated the Modern Sexist man less favorably and more sexist than participants in the control condition, F(1, 79) = 5.39, p = .02,  $\eta^2 = .06$  and  $F(1, 79) = 13.87, p < .001, \eta^2 = .15$ , respectively (see Table 3). Similarly, women and men in the sexism diary condition evaluated the Benevolent Sexist man less sexist,  $F(1, 79) = 21.12, p < .001, \eta^2 = .21$ . This effect approached significance for the favorability ratings of the Benevolent Sexist man,  $F(1, 79) = 3.59, p = .06, \eta^2 = .04$  (see Table 3). However, separate analyses for women and men indicated that there was neither a difference in men's favorability ratings of the Benevolent Sexist profile between the sexism and control diary conditions nor a difference in their ratings of how sexist they perceived the man to be. In sum, we demonstrated that participants who observed sexism in their everyday life for 1 week evaluated the Modern Sexist men described in the profile less favorably and more sexist compared to participants in the control condition. However, only women (but not men) in the sexism diary condition evaluated the Benevolent Sexist man to be less favorable and more sexist than women in the control diary condition (see Table 3).

#### Petition

We employed a chi-square test to investigate whether participants in the sexism diary condition would sign the petition for antisexism programs in schools more often than participants in the control diary condition. This analysis supported the assumption of significant differences between the conditions,  $\chi^2(1) = 11.13$ , p = .001. As predicted, of the 42 participants in the sexism diary condition, 16 (38%) signed the petition compared to 3 (7%) of 41 participants in the control diary condition. Separate tests for women and men revealed that this finding was supported for women,  $\chi^2(1) = 5.58$ , p =.02, as well as for men,  $\chi^2(1) = 6.66$ , p = .01. In sum, the effects found in Study 1 not only were replicated using more subtle indicators of rejection of sexism but also were demonstrated even beyond the setting of our study, appearing 3 days after the study was allegedly completed. Moreover, although we cannot completely rule out the possibility of experimental demand, results of Study 2 provide stronger evidence that the effects are not based on demand characteristics because the petition was presented completely independent from the main study and because we were able to demonstrate an effect in a 1week follow-up survey.

#### Study 3

In Study 1, we did not find effects of paying attention to sexism on men's endorsement of sexist beliefs. We argued that for a change in men to occur, it is necessary to increase their empathy for the target of gender discrimination. In line with our predictions, results of Study 2 demonstrated a reduction in men's endorsement of Modern Sexist and Neosexist beliefs that we attribute to the empathy induction we added in Study 2. However, we cannot exclude the possibility that this difference was affected by the variation of the cultural context between Study 1 (United States) and Study 2 (Germany). Therefore, the purpose of Study 3 is to examine the role of empathy in the reduction of endorsement of sexist beliefs using an experimental manipulation of empathy in Germany. In this third study, we also intend to increase participants' awareness of the prevalence of sexism, which would control for possible qualitative differences in the types of incidents women and men observed in Studies 1 and 2. We predict that men will change their sexist beliefs only if they become more aware of the prevalence of sexism and if their empathy toward the female target of sexism is heightened (Hypothesis 2). In contrast for women, we expected that heightening their sensitivity to the prevalence of sexism in their own lives will be sufficient to alter their own endorsement of sexist beliefs (Hypothesis 1).

#### **Method**

#### **Participants**

A total of 141 students (84, 60% female) at the University of Marburg (Germany) participated in this online study in exchange for course credits. The sample consisted of 98% Germans. Participants' ages ranged from 19 to 39 years, with a mean age of 23.13 years.

#### Design, procedure, and materials

This study was a 2 (Type of Awareness: Sexism, Gender Interactions) × 2 (Empathy, No Empathy) × 2 (Gender of Participant) between-participant design. Participants received a description of nine incidents they might have observed and were asked to report how often they observed them during the last month. Participants in the sexism awareness condition read six sexist incidents. Participants in the gender interaction awareness condition read six parallel gender-related but nonsexist incidents. In addition to these six incidents, participants in both conditions read three identical neutral filler incidents to reduce participant's suspicion.

In order to increase the perceived prevalence of these incidents in participants' personal lives, after indicating the "monthly number," all participants were asked to multiply this number by 12 and to write down the product term in a box as an estimator of how often they experienced this incident during the last year. For instance, if they reported that they had observed an incident 10 times a month, they would report 120 incidents. We did not ask them directly how often they experienced these incidents in a year, because we reasoned they would underestimate the actual prevalence (Swim, Cohen, & Hyers, 1998; Swim et al., 2001). Instead, contemplating a large number of incidents should increase participants' awareness of the prevalence of sexism in their lives. To create the empathy conditions, half the participants were randomly assigned to remember the last incident they observed for all the nine incidents and to indicate which emotions the female target/female interaction partner might have felt (empathy condition); this task was not included for participants in the no empathy control. After responding to the nine incidents, participants were told that researchers were also interested in their opinion about social relationships and were asked to complete the Modern Sexism, Neosexism, and Benevolent Sexism scales. Finally, they were given the opportunity to comment on the survey and, afterward, were thanked and debriefed.

#### Awareness of sexism

We selected three Benevolent Sexist incidents that were not part of the Benevolent Sexism scale (e.g., "Observed a man helping a woman with a task because he assumed that, as a woman, she should not have to grapple with it [e.g., long drive, selection of a new laptop, carrying shopping bags], see Appendix B)" and three "blatant" sexist incidents that

participants in Study 2 frequently observed (e.g., "Heard derogatory terms used to refer to women [e.g., bitch, chick]," see Appendix B).

#### Awareness of gender interactions

Participants in the control group were asked to indicate their observation of six gender-related interactions that were similar to the six sexist incidents, but they were described in such a manner that they would be unlikely to be perceived as sexist. Three were positive and had a similar wording as the Benevolent Sexist incidents (e.g., "Observed a man helping a woman on a task because they were under time pressure [e.g., they had to go to important appointment and were late]," see Appendix B). Three were negative, similar to the blatant incidents, and involved a man but were not sexist (e.g., "Heard derogatory terms used about a woman because of her social status or affiliation with a political party [e.g., insulting her by calling her snobbish, ignorant, or selfish]," see Appendix B).

#### Neutral incidents

For all participants, three neutral, nonsexist but genderrelated filler incidents were included (e.g., "Observed a woman and a man play a sport together, for instance, running, playing tennis, hiking," see Appendix B).

#### **Empathy**

Participants in the empathy condition were asked to specify how strongly the female target/the female interaction partner felt four negative emotions (angry, bad, demeaned, and insulted) and five positive emotions (happy, satisfied, good, flattered, and cherished) on a 7-point rating scale ranging from 1 (not at all) to 7 (very much). The order of items was mixed. We created an average score of all negative emotions as an indicator for empathy ( $\alpha = .94$  for the Benevolent Sexist,  $\alpha = .78$  for the blatant, and  $\alpha = .89$  for the filler incidents).

#### Measures

We used the same Modern Sexism ( $\alpha = .82$ ), Neosexism ( $\alpha = .80$ ), and Benevolent Sexism scales ( $\alpha = .83$ ) as in Studies 1 and 2, but this time we did not remove the six items excluded in Study 1, because none of the sexist incidents in the stimulus materials overlapped with the content of the items in the scales.

#### **Results and Discussion**

#### Preliminary analyses

A  $2 \times 2$  MANOVA with the nine incidents as dependent variables and the empathy manipulation and gender as the

Empathy Condition Measure of Sexism	Women				Men			
	Sexism Diary		Control Diary		Sexism Diary		Control Diary	
	М	SD	М	SD	М	SD	М	SD
Empathy								
Modern Sexism	3.27 <sup>a</sup>	.77	3.78 <sup>b</sup>	.81	3.17 <sup>a</sup>	1.24	4.14 <sup>b</sup>	1.42
Neosexism	2.01 <sup>a</sup>	.79	2.27 <sup>b</sup>	.87	2.30 <sup>a</sup>	.85	3.68 <sup>b</sup>	1.30
Benevolent Sexism	3.60 <sup>a</sup>	.93	3.90 <sup>b</sup>	1.22	3.94 <sup>a</sup>	.56	4.33 <sup>a</sup>	1.21
No empathy								
Modern Sexism	3.29 <sup>a</sup>	.71	3.98 <sup>b</sup>	.95	4.40 <sup>a</sup>	1.07	4.13 <sup>a</sup>	.82
Neosexism	1.97 <sup>a</sup>	.57	2.58 <sup>b</sup>	.82	3.06 <sup>a</sup>	.87	2.99 <sup>a</sup>	.92
Benevolent Sexism	3.22 <sup>a</sup>	1.03	4.14 <sup>b</sup>	.89	4.27 <sup>a</sup>	.96	4.06 <sup>a</sup>	1.21

Table 4. Modern Sexism, Neosexism, and Benevolent Sexism as a Function of Diary Condition, Gender, and Empathy, Study 3

Note: Means for women and for men that do not share subscripts across a row differ at p < .05.

independent variables revealed no differences in the number of incidents participants reported having observed during the last month (all Fs < 1). A second 2  $\times$  2 MANOVA with the nine scores measuring negative emotions for each incident as dependent variables showed no multivariate effect of the empathy condition or gender (Fs < 1.22), but univariate analyses yielded gender differences for all three Benevolent Sexist incidents, all Fs > 4.74, ps < .05,  $\eta^2 s > .13$ , indicating that women reported that the target experienced more negative emotions than men reported (M = 3.13, SD = 1.16 vs. M= 2.29, SD = .97 for the first Benevolent Sexist incident; M = 2.83, SD = .97 vs. M = 1.98, SD = .98 for the second Benevolent incident; and M = 3.67, SD = 1.15 vs. M = 2.69, SD = 1.20 for the third Benevolent Sexist incident). The univariate analyses for the six negative emotions concerning the blatant and filler incidents were not significant.

#### Endorsement of sexist beliefs

A 2 (Type of Awareness)  $\times$  2 (Empathy, No Empathy)  $\times$  2 (Gender of Participant) MANOVA with Modern Sexism, Neosexism, and Benevolent Sexism as the dependent variables revealed a significant three-way interaction, F(3, 131) = 3.78, p = .01,  $\eta^2 = .08$ . Accordingly, we computed separate analyses for women and men.

For women, a MANOVA showed a main effect of Type of Awareness, F(3,78) = 5.91, p = .001,  $\eta^2 = .19$ . As expected, on the univariate level, participants in the sexism condition were less likely to endorse Modern Sexist, F(1,80) = 10.66, p = .002,  $\eta^2 = .12$ , Neosexist, F(1,80) = 6.22, p = .02,  $\eta^2 = .07$ , and Benevolent Sexist beliefs, F(1,80) = 7.12, p = .01,  $\eta^2 = .08$ , than participants in the control condition (see Table 4). Thus, replicating results of Study 1 and Study 2 and supporting Hypothesis 1, women who paid attention to the prevalence of sexism in their own lives had significantly lower scores on the Modern Sexism, Neosexism, and Benevolent Sexism scales than women who paid attention to nonsexism-related interactions between women and men. No

other main effects or interactions occurred (all Fs < 1.80, ps > .18), indicating that the change in women's endorsement of sexist beliefs did not depend on empathy.

For men, a MANOVA indicated a significant interaction between type of prevalence and empathy, F(3, 51) = 2.97, p = .04,  $\eta^2 = .15$  (see Table 4). On the univariate level, this interaction was marginally significant for Modern Sexism,  $F(1, 53) = 4.07, p = .05, \eta^2 = .07$ , significant for Neosexism,  $F(1, 53) = 7.60, p = .01, \eta^2 = .13$ , but not significant for Benevolent Sexism, F(1, 53) = 1.22, p = .28. Subsequent analyses indicated that empathy did not change men's scores on Modern Sexism, Neosexism, and Benevolent Sexism in the awareness of gender-related interactions condition (Fs < 3.26, ps > .08; see Table 4). Crucially, however, and supporting Hypothesis 2, in the sexism condition, the empathy manipulation decreased men's endorsement of Modern Sexist, F(1, 53) = 8.53, p = .01,  $\eta^2 = .14$  and Neosexist beliefs,  $F(1, 53) = 4.42, p = .04, \eta^2 = .08$ , compared to the control groups. Again, neither the sexism manipulation nor the empathy manipulation affected men's endorsement of Benevolent Sexist beliefs (see Table 4).

Taken together, we found a decrease in women's endorsement of Modern Sexist, Neosexist, and Benevolent Sexist beliefs if they attended to sexism, whereas a decrease in men's endorsement of Modern and Neosexist beliefs additionally depended on the empathy manipulation. Changes of Modern and Neosexist beliefs in men emerged if they paid attention to sexism and to the emotions of the target. Finally, we did not find an effect on men's endorsement of Benevolent Sexist beliefs. Above, we reported that men were less likely than women to think that a target of Benevolent Sexism might experience negative emotions. We argue that this might be one reason why men did not change their Benevolent Sexist beliefs: Although they perceived Benevolent Sexism in their everyday lives and although they took the perspective of the target, compared to women, they were less likely to perceive that the target's emotions might be negative. Although the possibility of demand characteristics cannot be completely eliminated, finding that both

awareness and empathy are required to reduce Modern and Neosexist beliefs suggests that demand is a less likely account for our findings.

#### **General Discussion**

The present research investigated ways to reduce endorsement of sexist beliefs. Across three studies and two countries, women who kept track of sexist incidents in their personal lives were more likely to reject Modern Sexist, Neosexist, and Benevolent Sexist beliefs. Moreover, the results of Study 2 demonstrated a wide range of effects of the intervention by illustrating effects on women's evaluations of a Benevolent and a Modern Sexist man and on women's engagement in collective action by signing a petition for antisexism programs. The latter effect is particularly impressive, given that it is a measure of participating in collective action, which was assessed 3 days after the study and which occurred beyond the context of the study. We also provided evidence that changes in endorsement of sexist beliefs remained stable for a 1-week period. These results suggest that women endorse sexist beliefs because they lack recognition of subtle forms of sexism, discount sexist incidents, and do not notice the aggregate amount of sexism in their daily lives.

Increased attention to sexist information alone was insufficient to reduce men's sexist beliefs. We expected this outcome because of men's higher status in society and their corresponding greater interest in maintaining this status. Our results point out the crucial role of empathy and perspective taking in changing their attitudes toward gender relations: Those men who attended to the frequency of everyday sexism and took the target's perspective reduced their endorsement of Modern Sexist and Neosexist beliefs, evaluated the man who was described as a Modern Sexist less favorably, and were more likely to sign an antisexism petition. However, men maintained their endorsement of Benevolent Sexist beliefs. Men's ratings of Benevolent Sexist incidents as being sexist (Study 2) and ratings of perceived negative emotions a target of Benevolent Sexism might experience (Study 3) support our assertion that men are less likely to perceive the harmful implications of Benevolent Sexism, suggesting that the positive tone of such incidents covers up their fundamental sexism.

#### **Implications for Interventions**

Relative to extensive research on the reduction of endorsement of racist beliefs and ethnic prejudice (e.g., Oskamp, 2000; Pettigrew & Tropp, 2006; Stephan & Vogt, 2004), little is known about how to reduce the endorsement of subtly sexist beliefs. Our research succeeds in identifying processes that would be useful to highlight when attempting to reduce endorsement of sexist beliefs. Practically, interventions to reduce women's endorsement of sexism can be effective simply by heightening their sensitivity to different aspects

of sexism in their personal lives, whereas for men, effective interventions must also aim to increase empathy. Previous research has shown the importance of empathy in the reduction of racial and ethnic prejudices directed at out-group members (e.g., Vescio et al., 2003). In these types of studies, participants were also exposed to a salient personal description of another's experience with discrimination. Thus, these studies probably combine both awareness of the prevalence of discrimination and perspective taking so that it might be important to demonstrate in future research that it is the combination of these factors that lead to decreased prejudice.

However, our results also underscore that interventions additionally need to directly highlight the individual and societal harm that comes from Benevolent Sexism because perspective taking alone is not sufficient to increase this awareness. Future research can address other ways to increase empathetic responses to women's experience with Benevolent Sexism, by including perhaps the lack of positive effects of sexism (and not just the presence of negative effects) or by more specifically targeting types of negative effects elicited by Benevolent Sexism that undermine women's academic performance (Dardenne et al., 2007; Vescio et al., 2005).

#### **Limitations and Future Research**

Depending on situational norms, it takes active effort for individuals to regulate their prejudice. For instance, if individuals want to appear nonprejudiced to avoid social sanctions, they can regulate their prejudice in public, but not necessarily in private, contexts (Plant & Devine, 1998). Researchers also have argued that nonprejudiced self-reports should be perceived with suspicion because people can be externally or internally motivated to respond without prejudice (Plant & Devine, 1998). Externally motivated individuals regulate their prejudice in order to hide it, whereas internally motivated individuals have the intention to be free of prejudice. Referring to the present research, an important extension would be to examine whether participants reduced their endorsement of sexist beliefs because they did not want to appear sexist (external motivation) or whether a real attitude change occurred and the results reflect personally held nonsexist beliefs (internal motivation, e.g., Klonis, Plant, & Devine, 2005). We are encouraged that our results are based on increased internal motivation to respond without sexism because in a follow-up survey, we found that prejudice reduction was stable over a short time period and that individuals who completed a sexism diary as part of our study were more likely to sign a petition for antisexism programs in schools presented seemingly outside our study. Furthermore, signing the petition, sent privately via e-mail, was voluntary and did not entail social sanctions for not signing, and therefore reduced the likelihood that signing was externally motivated. However, future research is needed to confirm whether individuals' initial internal and external motivations to respond without sexism moderate the process of prejudice reduction.

Moreover, although we used subtle measures of sexism, all our measures assessed explicit self-reported beliefs or participation in collective action so that we cannot fully rule out the possible influence of demand characteristics. Implicit measures are less susceptible to experimental demand (e.g., Devine, 1989), but they are limited because they do not directly differentiate between different forms of subtle sexist beliefs. Further, it is meaningful to understand changes in explicit beliefs because these beliefs may be important for predicting planned, rationally chosen behaviors (Dovidio, Kawakami, & Gaertner, 2002). However, future researchers may wish to include implicit measures to more directly address the possibility of experimental demand (e.g., Devine, 1989).

A further limitation of the present research is that all participants paid attention to many different types of sexism. Therefore, we do not know whether paying attention to a certain type of sexism can reduce endorsement of another type of sexism; for example, whether attending to unwanted sexual attention can decrease endorsement of Benevolent Sexist beliefs. Therefore, it would be interesting to heighten participants' attention to only one type of sexism and to examine the consequences of this specific awareness regarding different types of sexist beliefs. It also would be important to extend this research to other forms of prejudice. We expect that our results are not confined to the reduction of sexist beliefs. Awareness of the prevalence of discrimination against one's in-group could be relevant for other groups that endorse prejudices against their own groups (e.g., heavy women and their endorsement of antifat beliefs; Crandall, 1994).

Finally, a particular strength of this research is that we found comparable effects in the United States and in Germany, albeit specifically for college students. Thus, we were more convinced that our results and implications for interventions might apply to other "Western" countries as well. However, the development of other strategies for prejudice reduction may be necessary in less egalitarian societies (Swim, Becker, Lee, & Pruitt, 2009).

#### Conclusion

The present research fills an important gap by demonstrating ways to reduce endorsement of subtle sexist beliefs and illustrates ways to increase participation in collective action against gender inequality. It also provides a better understanding of why women and men endorse sexist beliefs. Women endorse sexist beliefs, at least in part, because they do not attend to subtle, aggregate forms of sexism in their personal lives. Many men not only lack attention to such incidents but also are less likely to perceive sexist incidents as being discriminatory and potentially harmful for women. Thus, for women it is important to "see the unseen," whereas for men, it is additionally important to be encouraged to feel empathy for others.

### Appendix A. Modern Sexism Profile, Study 2

M is an adult male, who firmly believes that discrimination against women in the labor force is no longer a problem in Germany. From his point of view, women have been discriminated against, 100 years ago, but nowadays, they have the same opportunities for achievement as men. He is convinced that when applying for a job, women and men are treated equally. Therefore, he also believes that women's requests in terms of equality between the sexes are simply exaggerated and that women's group overstate the problem of sexism. He does not understand why women's groups are still concerned about societal limitations of women's opportunities. In contrast, he holds the view that during the last years, women have gotten more from the government than they deserve.

#### **Appendix B. Incidents Study 3**

Incidents: Awareness of Sexism Condition

#### Benevolent Sexist Incidents

- 1. Observed a man helping a woman with a task because he assumed that, as a woman, she should not have to grapple with it (e.g., long drive, selection of a new laptop, carrying shopping bags).
- Heard someone compliment a woman, because she exhibited behavior he or she assumed was an ability particularly well suited and appropriate for women (e.g., compliment how skillful she cared for her child as a woman or how well she cooked dinner for her family as a woman).
- 3. Observed a man acting chivalrous toward a woman because he thought that women needed special attention although she said she didn't need this special treatment (e.g., by insisting on paying for her dinner, by insisting on bringing her home).

#### **Blatant Sexist Incidents**

- Observed a man sexually harassing a woman (e.g., staring, ogling, unwanted touching, unwanted flirting, catcalling).
- 2. Heard derogatory terms used to refer to women (e.g., bitch, chick).
- 3. Heard beliefs that women were not as able to do things traditionally associated with men (e.g., bad at math, sports, cars, leadership).

#### Incidents: Awareness of Gender Interactions Condition

#### Positive Incidents

- Observed a man helping a woman on a task because they were under time pressure (e.g., they had to go to an important appointment and were late).
- 2. Heard someone compliment a woman, because she did something interesting (e.g., presenting new music, bought an interesting DVD, traveled someplace new, met someone interesting).

3. Observed a man acting nice toward a female friend because she had a bad day (e.g., she failed an exam, she received a sad message, she got physically injured).

#### **Negative Incidents**

- Observed a man unintentionally hurting a woman (e.g., by accidentally barging into her or by accidentally bumping into her car).
- Heard derogatory terms used about a woman because of her social status or affiliation with a political party (e.g., insulting her by calling her snobbish, ignorant, or selfish).
- 3. Heard a man and a woman disagree about an issue (e.g., where to go to dinner).

#### Incidents: Neutral Filler (for Participants in Both Conditions)

- 1. Observed a woman and a man holding hands.
- Observed a woman and a man play a sport together (run, play tennis, hike).
- 3. Heard a man and a woman talking about current social issues (e.g., climate change, health care, taxes).

#### **Acknowledgments**

We thank Maia Höding for her help with data collection, Lana Boteler for programming the diaries, and Lucy Willmann for helpful comments on an earlier version of this article.

#### **Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

#### **Funding**

The author(s) disclosed receipt of the following financial support for the research and/or authorship of this article: This research was partly conducted in the context of the DFG Research Training Group "Group-focused enmity" (GRK 884).

#### Note

1. We attempted to examine the effect of gender identification in Studies 1 and 2 and the effect of identification with different female and male subtypes in Study 3, but we found no evidence that it moderated the effects and no evidence that increasing awareness of sexism increased the extent to which participants identified with their gender. To simplify the presentation of our results, we excluded these data from the article. Interested readers can obtain these results from the first author.

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