

Sexism and Racism: Old-Fashioned and Modern Prejudices

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Prejudice and discrimination against women has become increasingly subtle and covert (N. V. Benokraitis & J. R. Feagin, 1986). Unlike research on racism, little research about prejudice and discrimination against women has explicitly examined beliefs underlying this more modern form of sexism. Support was found for a distinction between old-fashioned and modern beliefs about women similar to results that have been presented for racism (J. B. McConahay, 1986; D. O. Sears, 1988). The former is characterized by endorsement of traditional gender roles, differential treatment of women and men, and stereotypes about lesser female competence. Like modern racism, modern sexism is characterized by the denial of continued discrimination, antagonism toward women's demands, and lack of support for policies designed to help women (for example, in education and work). Research that compares factor structures of old-fashioned and modern sexism and racism and that validates our modern sexism scale is presented.

Racism and sexism have a long history of association. The political origins of this connection in the United States began with the first abolition movement in the 1830s (Doyle & Paludi, 1991; Hole & Levine, 1971). Female abolitionists, incited by their inability to work as equals with the male abolitionists, began speaking out against the subjugation of African-Americans and women. Later, Hacker (1951) delineated many parallels between the experiences of women and African-Americans, which she attributed to their minority status in the United States. Though noting differences in the statuses of women and African-Americans (see also Comas-Diaz, 1991; Reid, 1988; Smith & Stewart, 1983), she argued that sufficient parallels existed to generalize findings from one group to the other group.

Parallel perceptions of women and minorities also have been described in recent research concerning the role of cognitive processes in stereotyping and prejudice. For instance, perceptual and memory processes, such as confirmation biases and selective encoding and retrieval, are used to maintain stereotypical beliefs and prejudices about both women and African-Americans (Fiske & Taylor, 1991). Furthermore, Black-White relations and female-male relations have been described as instances of intergroup relations (Ashmore & Delboca, 1986; for other parallels, as well as some distinctions, see Smith & Stewart, 1983).

A further similarity between racism and sexism resides in the measurement of prejudicial beliefs, which has become an increasingly elusive task. One explanation for the difficulty of this

task may be the presence of strong normative pressures not to endorse blatantly prejudicial remarks (McConahay, 1986). However, attitudinal research on current expressions of prejudice has dealt primarily with racism (directed at African-Americans), not sexism. Researchers examining racism have generally agreed that its expression is more subtle in modern society than in the past. Individuals appearing nonracist on the surface may secretly harbor negative affect or beliefs about African-Americans. These in turn serve to support discriminatory treatment. Recent research on prejudice against African-Americans has explored the content of contemporary racial stereotypes (e.g., Dovidio, Evans, & Tyler, 1986; Gaertner & McLaughlin, 1983), examined the circumstances under which discriminatory behavior occurs (McConahay, 1983), and has investigated the underlying causes of modern racist beliefs (e.g., Bobo, 1983; Katz & Hass, 1988; Sears, 1988). Researchers differ in their labels for this newer form of racism directed at African-Americans (e.g., *symbolic racism* [Sears, 1988], *aversive racism* [Dovidio, Mann, & Gaertner, 1989; Gaertner & Dovidio, 1986], *racial ambivalence* [Katz, Wackenhut, & Hass, 1986], and *modern racism* [McConahay, 1986; Pettigrew, 1988]), and in the specific characteristics and causes identified for this form of racism (e.g., Bobo, 1988; Dovidio, Mann, & Gaertner, 1989; Gaertner & Dovidio, 1986; Pettigrew, 1988; Sears, 1988). For simplicity, we use the term *modern racism* to refer to these newer forms of racist beliefs.

Some researchers have suggested connections between modern racism and modern sexism (e.g., Benokraitis & Feagin, 1986; Butler & Geis, 1990; Dovidio & Gaertner, 1983; Frable, 1989; Rowe, 1990). For instance, in their discussion of affirmative action, Dovidio et al. (1989) stated, "While our discussion focuses on racism, our discussion also concerns sexism. We believe that many of the critical elements of modern racism relate to sexism" (p. 86). However, although there has been ample and ongoing research on modern racism, there has been no comparable systematic analysis of the underlying beliefs supporting modern sexism.

National surveys and research on women's equality support the possibility of structural similarities between modern racism

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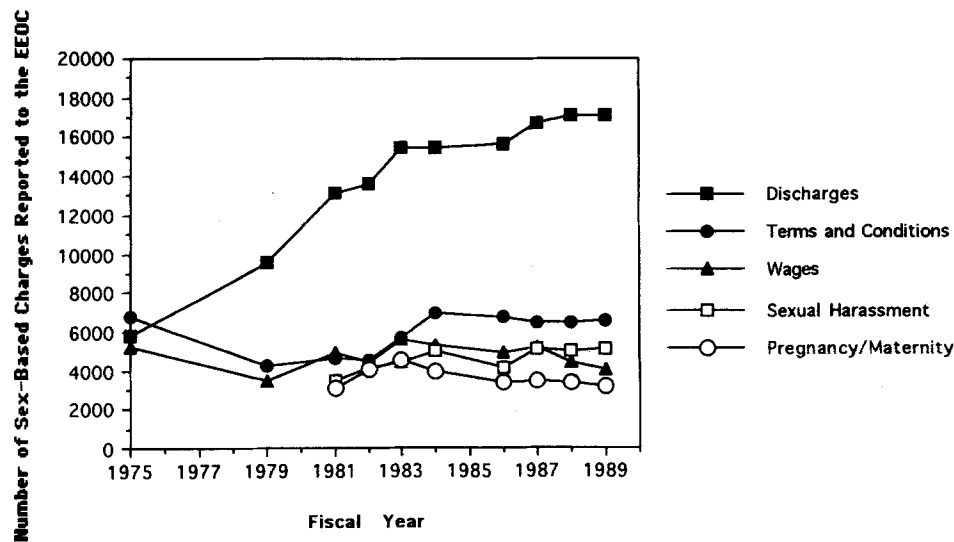


Figure 1. Number of complaints reported to the Equal Employment Opportunity Commission from 1975 to 1989 for five frequently reported gender-based issues.

and modern sexism. Data from national opinion polls suggest that fewer people endorse old-fashioned prejudicial beliefs such as unequal treatment of African-Americans as compared with European-Americans (McConahay, 1986) and suggest that fewer people disapprove of nontraditional roles for women (Myers, 1993). From 1937 to 1988, approval of married women's employment increased steadily, from approximately 20% to 80% (Myers, 1993). Yet the depth of the endorsement of gender equality is open to question.

There is evidence of behaviors inconsistent with these more liberal attitudes toward women's roles (Benokraitis & Feagin, 1986; Rowe, 1990). For example, family roles are still inequitably divided, even for women with professional jobs (Biernat & Wortman, 1991). Inequity also can still be found in the workforce. In a 1990 Gallup poll, 43% of the male respondents and 54% of the female respondents indicated that they preferred a man as a boss, whereas only 12% of the women and 15% of the men indicated that they preferred a woman as a boss. Furthermore, as illustrated by Figure 1, the five most frequent sex-based complaints to the Equal Employment Opportunity Commission (EEOC; 1977, 1981, 1983, 1984, 1990, 1993) either have changed little from 1975 to 1989 or have risen sharply.¹ Although it is impossible to know how much these statistics depend on women's willingness to report discriminatory treatment, complaints to the EEOC indicate that women are still facing difficulties on the job. The impact of discriminatory treatment also can be found in differential salary levels. For instance, Stroh, Brett, and Reilly (1992) found differential increases in salary levels in their sample of recently transferred Fortune 500 male and female managers who had similar educational and work experiences and equivalent qualifications and dedication. Thus, the endorsement of gender equality does not appear to parallel changes in behaviors indicative of equality.

The specific beliefs that underlie modern racism and modern sexism also may be similar. Sears (1988) described the beliefs underlying modern racism against African-Americans as being a) denial of continuing discrimination; b) antagonism toward

African-Americans' demands; and c) resentment about special favors for African-Americans (see also McConahay, 1986). These same beliefs may be applied to women. There are social pressures to suppress old-fashioned prejudicial and stereotypical statements about women. Furthermore, people may resent women and African-Americans because these groups have both pushed for greater economic and political power and for the passage of anti-discrimination laws. Thus people, while rejecting old-fashioned discrimination and stereotypes, may believe that discrimination against women is a thing of the past, feel antagonistic toward women who are making political and economic demands, and feel resentment about special favors for women, such as policies designed to help women in academics or work.

Thus, qualitatively, current beliefs about women can be described as modern sexist, in a manner similar to modern racist beliefs about African-Americans. The purpose of the present research is to test quantitatively the construct validity of this characterization of beliefs about women. Construct validity tests examined in the first study are described below. Additional tests are presented in Study 2.

Study 1

Confirmatory Factor Analyses

We devised a set of statements concerning beliefs about women based on the three basic tenets described above. We de-

¹ Initial EEOC reports indicated the number of sex-based charges made by women and men. Later reports referred to sex-based charges with no indication of the sex of the complainant. Approximately 80% of the charges for the fiscal years of 1968 to 1974 in the areas of discharges and terms and conditions of employment were made by women (EEOC; 1969, 1970, 1971, 1972, 1973, 1974, 1975). The percentages for women versus men were relatively stable across this 7-year period. The other three categories noted in Figure 1 were not reported by these early publications.

signed an additional set of statements to measure old-fashioned prejudices. These were characterized by items endorsing traditional gender roles, differential treatment of women and men, and stereotypes about lower female competence. Like previous research that has compared modern racism and old-fashioned racism (McConahay, 1986), we predicted that responses to these sets of statements, though correlated, could be characterized by a two-factor structure with one factor representing Old-Fashioned Sexism and the other representing Modern Sexism. This analysis is the first test of the construct validity of our scales.

Sex Differences

Most tests of the construct validity of sexism scales seek to determine whether women and men respond differently to these scales (DelBoca, Ashmore, & McManus, 1986). Therefore, examining sex differences is our second test of the construct validity of our scales. We predicted that women would give less sexist responses to both old-fashioned and modern sexist statements because of the less favorable implications of these beliefs for women. Women may not only disagree with blatant discriminatory statements but also may be less likely than men to believe that equality has been obtained. This latter belief may result from greater personal experience with sex discrimination or identification with others who have experienced the effects of prejudice. These factors should lead women to support other women's demands and to adopt favorable perceptions of programs designed to help women.

In contrast to the evidence for sex differences in mean levels of sexism, research on sex differences in the structure of political beliefs is sparse (Shapiro & Mahajan, 1986), and two studies that examined these structures suggested that there are few sex differences. Goertzel (1983) reported that women's and men's attitude structures about various social and political issues were very similar. Additionally, Sears, Huddie, and Schaffer (1986) found similar factor structures for men's versus women's responses to specific gender, racial, and partisan issues. Thus, we did not predict significant sex differences in factor structure.

Values Underlying Racism and Sexism

Our third test of construct validity examined the relevance of individualistic and egalitarian values to modern sexism. Sears (1988) and Katz and colleagues (e.g., Katz & Hass, 1988; Katz et al., 1986) argued that the values of individualism and egalitarianism are related to racism against African-Americans. People who hold individualistic values emphasize personal freedom, self-reliance, devotion to work, and achievement (Katz & Hass, 1988). Individualistic values are related to traditional protestant values that similarly emphasize devotion to work, individual achievement, and discipline. These latter values relate to racism by supporting internal attributions (e.g., lack of drive or discipline) rather than external attributions (e.g., poor job opportunities) for social and economic problems faced by African-Americans. Egalitarian values, however, emphasize helping others so that no one has special advantages. Thus, these values yield more sympathetic responses to, and more support for, the rights of African-Americans.

Sears (1988) provisionally concluded that not endorsing egal-

itarian beliefs is a stronger predictor of symbolic racism than is endorsing individualism. If the same value structure underlies racism and sexism, then egalitarian values should correlate negatively with Modern Sexism, and individualist values should be uncorrelated or positively correlated with Modern Sexism. The correlation between individualism and Modern Sexism should be smaller in magnitude than that between egalitarianism and Modern Sexism.

Katz and colleagues (Katz & Hass, 1988; Katz et al., 1986) have argued that current attitudes regarding African-Americans are characterized by ambivalence (i.e., simultaneously having both pro- and anti-African-American sentiments). They have shown that negative attitudes are more consistently related to individualism than to egalitarianism; conversely, positive attitudes are more strongly related to egalitarianism than to individualism. To the extent that the Modern Racism and Modern Sexism scales measure negative beliefs about African-Americans and women, respectively, these results suggest—contrary to Sears (1988)—that we should observe stronger correlations between these beliefs and individualistic values than between these beliefs and humanitarian values.

Job Segregation

Our fourth test of construct validity involved perceptions of sex segregation in the workforce. Despite advances in women's employment status, most women still hold lower paying, lower status jobs than men do (Unger & Crawford, 1992). It has been argued that discrimination against women is one reason that one can find fewer women than men in male-dominated jobs (England & McCreary, 1987; Nieva & Gutek, 1981; Ragins & Sundstrom, 1989). Furthermore, segregation in the workforce leads to less direct opportunity for advancement and fewer economic resources to improve job status.

McCauley, Thangavelu, and Rozin (1988) found that people underestimated the extent of job market segregation by sex. We predicted that Modern Sexism would be related to people's perceptions of sex segregation in the workforce. Those who believe that discrimination is no longer a problem, one component of the Modern Sexism scale, should perceive fewer barriers to women in male-dominated fields. Furthermore, misperceptions of equality should be related to less perceived need and support for assistance for women. Thus, we predicted that higher scores on the Modern Sexism scale would be related to greater overestimation of women in male-dominated jobs. Perceiving decreased job segregation in male-dominated jobs may yield overestimation of men in female-dominated jobs, and the degree of overestimation may be predicted by scores on the Modern Sexism scale.

Method

Sample

Respondents were 418 women and 265 men from an introductory psychology course who received extra credit for their participation. Nearly all respondents were European-American.

Questionnaire

Respondents were given a questionnaire packet containing several surveys as part of a mass screening for introductory psychology stu-

dents. Responses to all items relevant to the present study were on 5-point Likert-type scales with 1 indicating *strongly agree* and 5 indicating *strongly disagree*. Item responses were averaged. Respondents first completed Katz and Hass's (1988) Humanitarian-Egalitarian scale and Katz and Hass's (1988) shortened version of Mirels and Garrett's (1971) Protestant Work Ethic scale. Items from the first scale were alternated with items from the second scale. Respondents then completed sexism items designed as potential measures of Old-Fashioned Sexism and Modern Sexism (see below). The Old-Fashioned Sexism items were interspersed with the Modern Sexism items. These items were followed by McConahay's (1986) racism items; items from the Modern Racism scale were interspersed with items from the Old-Fashioned Racism scale.

Finally, respondents estimated the percentage of women and men in the United States who occupy 12 occupations (registered nurses, physicians, bank tellers, police officers and detectives, lawyers, legal assistants, engineers, waiters and waitresses, child care workers, architects, secretaries, and airplane pilots and navigators). They were told that the percentages of men and women in each occupation should sum to 100. Respondents took the packets home and returned their completed forms during one of their next two class periods. They were instructed to fill out the forms privately.

Scale Development

As described previously, Sears (1988) classified survey items used to measure symbolic racism against African-Americans into three categories. Many of these same symbolic racism items were also incorporated into McConahay's Modern Racism scale (see Appendix A). We used McConahay's (1986) items and Sears' classification system as guides in constructing potential items for our Modern Sexism scale. First, all seven items measuring modern racism from McConahay's Modern Racism scale were altered to apply to women. Second, we constructed additional items consistent with the three categories described by Sears. Only one of McConahay's Old-Fashioned Racism items (Item 1) could be meaningfully altered to measure old-fashioned sexism. Hence, in addition to altering this one item, we developed several items that were related to traditional beliefs about women. These emphasized **negative** stereotypes about women's competence and obvious unequal treatment of women and men.

We conducted a preliminary exploratory principal component factor analysis of the sexism items. A two-factor solution resulted from these analyses. All of the old-fashioned items loaded on one factor, and most of the modern items loaded on the second factor. However, one modern item loaded on the Old-Fashioned factor, and several of the modern items loaded equally on both factors. We eliminated these items. The items kept for the present study are listed in Appendix B, and the loadings for the final exploratory factor analysis are listed in Appendix D. Of the modern items, five represent the first component of the scale (denial of continuing sexism), two represent the second component (antagonism toward women's demands), and one represents the last component (resentment of special favors for women). All eliminated items came from the second and third components of the scale.

LISREL Analysis

Confirmatory analyses were conducted with LISREL 7 (Jöreskog & Sörbom, 1989). Covariance matrices were used. The parameters estimated are the values of the factor loadings given a defined pattern of loadings, the error variances associated with the loadings, and the correlations between the factors. We conducted separate analyses on the racism and sexism scales to ascertain whether a one-factor or a two-factor model fit best in each case.

Chi-square difference tests were used to assess whether two-factor solutions fit significantly better than one-factor solutions. However, because χ^2 values are influenced by sample sizes, we also used five addi-

tional fit indices to assess and compare the goodness of fit of the one- and two-factor solutions. For all five fit indices, larger numbers indicate better fits. The first fit index, the goodness-of-fit index (GFI), measures the relative amount of variance and covariance jointly accounted for by the model; the more variance accounted for by the model, the better the fit. The fit can range from 0 to 1, with a value of .90 generally indicating a good fit (Bollen, 1989; Jöreskog & Sörbom, 1989).

The next three fit indices compare the fit of a proposed model with the fit of a null model (Bentler & Bonett, 1980; Bollen, 1989; Mulaik et al., 1989). In our analyses, the null model assumes no relationship between the measured variables. Hence, the indices indicate the extent to which the proposed model of relationships between the variables is better than proposing no relationship between the variables. We used χ^2 values to indicate the fit of the proposed and null models in the calculations of the three fit indices described next.

We used two versions of Bentler and Bonnett's (1980) fit index (Bollen, 1989; Mulaik et al., 1989). One incremental fit index (IFI1) was calculated by taking the difference between the fit of the null model and the fit of the proposed model and dividing by the fit of the null model. The other (IFI2) lessens the degree of influence of the sample size by subtracting the expected value of the fit of the proposed model (the degrees of freedom for that model) from the fit of the null model in the denominator (Bollen, 1989; Mulaik et al., 1989). Although the latter normed fit index should be less related to sample size (Bollen, 1989) than the former, it is still influenced by sample size. Hence, a third incremental fit index (Tucker & Lewis, 1973), less influenced by sample size, was also used (Bollen, 1989). Like the GFI, fit indices around .90 indicate good fits (Bentler & Bonnet, 1980; Bollen, 1989; Mulaik et al., 1989).

The sizes of these three fit indices are influenced by the number of parameters estimated in the tested models (Mulaik et al., 1989). Artificially better fit can be obtained by freeing more parameters. Hence, the fourth fit index used, the parsimonious goodness-of-fit index (PGFI), adjusts for the number of parameters in the model and increases the clarity of cross-model comparisons (Mulaik et al., 1989). The .90 criterion value used to assess the other fit indices does not apply to the PGFI. Rather, if one model has a larger PGFI than another model, one can conclude that it has a better fit.

Results

Confirmatory Factor Analyses

The first set of analyses tested whether confirmatory analyses of the racism items would yield support for a two-factor solution similar to that found previously with exploratory factor analyses (McConahay, 1986). These results serve as a comparison for the confirmatory analyses that follow with the sexism scale. Analyses that tested the possibility that the sexism scale fits differently for women and men are included among these latter confirmatory analyses.

Racism items. In the confirmatory analyses, the χ^2 difference tests indicated that the two-factor solution fit significantly better than the one-factor solution, $\chi^2(1, N = 605) = 56$ (see Table 1). Furthermore, fit indices also indicated that the two-factor solutions fit relatively well. The loadings were all significantly different from 0 (see Appendix C). Finally, the internal reliabilities were adequate for the Old-Fashioned Racism ($\alpha = .67$) and Modern Racism scales ($\alpha = .85$). Although these results point to the two-factor model, the difference between the fit for the one- and two-factor solutions was small, and the high correlation between the two factors ($\phi = .83$) indicates a one-factor solution.

Sexism items. Like the racism items, the two-factor solu-

Table 1
Fit Indices for Null, One-, and Two-Factor Confirmatory Factor Analyses on Racism and Sexism (Study 1)

Model	χ^2	df	GFI	IFI1	IFI2	Tucker-Lewis	PGFI
Racism							
Null	2,459	91	.43				
One-factor	297	77	.92	.87	.91	.89	.67
Two-factor	241	76	.94	.93	.93	.92	.68
Sexism							
Null	2,153	78	.48				
One-factor	394	65	.89	.74	.77	.81	.64
Two-factor	174	64	.96	.88	.88	.94	.67

Note. IFI1 and IFI2 are two versions of Bentler and Bonett's (1980) incremental fit indices. IFI2 takes into account the number of degrees of freedom in the model (Bollen, 1989). GFI = goodness-of-fit index; PGFI = parsimonious goodness-of-fit index.

tion fit better than the one-factor solution, $\chi^2(1, N = 615) = 220$ (see Table 1). The fit indices also indicate that the two-factor solution fit better than the one-factor solution. All of the loadings differed significantly from 0 (see Appendix D). The internal reliabilities were adequate for both the Old-Fashioned Sexism ($\alpha = .66$) and Modern Sexism scales ($\alpha = .84$). Finally, the correlation between the factors was not nearly as high as the correlation for the racism factors ($\phi = .54$).

As predicted, men's Old-Fashioned Sexism ($M = 2.08$) and Modern Sexism ($M = 2.63$) scores were higher than women's Old-Fashioned Sexism ($M = 1.52$) and Modern Sexism ($M = 2.14$) scores, $t(628) = 11.80, p < .001$ and $t(628) = 8.55, p < .001$, for Old-Fashioned Sexism and Modern Sexism, respectively. An examination of the fit indices indicates that the two-factor solution fit better than the one-factor solution for both men, $\chi^2(1, N = 236) = 118$, and women, $\chi^2(1, N = 377) = 37$ (see Table 2). However, there is a greater difference between the fit of the one- and two-factor fit indices for men than for women. The fit index that adjusts for the number of parameters in the model (PGFI) indicates no difference in fit for women but does indicate a difference for men.

Table 2
Fit Indices for Null, One-, and Two-Factor Confirmatory Factor Analyses on Sexism Items for Men and Women (Study 1)

Model	χ^2	df	GFI	IFI1	IFI2	Tucker-Lewis	PGFI
Men							
Null	858	78	.49				
One-factor	214	65	.86	.66	.74	.77	.62
Two-factor	96	64	.94	.72	.80	.95	.66
Women							
Null	973	78	.50				
One-factor	194	65	.92	.75	.83	.83	.66
Two-factor	157	64	.94	.76	.84	.87	.66

Note. IFI1 and IFI2 are two versions of Bentler and Bonnett's (1980) incremental fit indices. IFI2 takes into account the number of degrees of freedom in the model (Bollen, 1989). GFI = goodness-of-fit index; PGFI = parsimonious goodness-of-fit index.

Correlation With Values

We conducted correlations of scores on the sexism and racism scales with Protestant-Work-Ethic and Humanitarian-Egalitarian values to test whether values that purportedly support racism also support sexism (see Table 3). Correlations were done separately within female and male respondents because of sex differences in mean endorsement. Differences between the absolute values of the correlations were tested using Z tests for a comparison of nonindependent Pearson correlation coefficients (Meng, Rosenthal, & Rubin, 1992).

The data partially supported Sears' (1988) conclusion that modern prejudice is more strongly related to nonegalitarian beliefs than to highly individualistic beliefs. This was true for old-fashioned and modern prejudices for women but only for old-fashioned prejudices for men. For women, the pattern of differences was the same for Old-Fashioned Sexism, Old-Fashioned Racism, Modern Sexism, and Modern Racism. The Humanitarian-Egalitarian scale was more predictive than the Protestant Work Ethic scale of Old-Fashioned Racism, $Z = 5.60, p < .001$; Modern Sexism, $Z = 2.86, p < .01$; and Modern Racism, $Z = 1.97, p < .05$. Although there were no significant differences for correlations with Old-Fashioned Sexism, the correlation between Old-Fashioned Sexism and the Protestant Work Ethic scale was not significant, and the correlation between Old-Fashioned Sexism and the Humanitarian-Egalitarian scale was significant. For men, the pattern was true only for Old-Fashioned Sexism, $Z = 3.36, p < .001$; and Old-Fashioned Racism, $Z = 3.23, p < .001$; and not for Modern Sexism and Modern Racism. Modern Sexism and Modern Racism were significantly correlated with Protestant-Work-Ethic and Humanitarian-Egalitarian values, and the correlations did not differ from each other.

Job Segregation

We predicted that respondents who were high in Modern Sexism would be more likely than those who were low in Modern

Table 3
Correlations Between Racism and Sexism Scales and Endorsement of Protestant Work Ethic and Humanitarian Values

Scale	Women ($N = 354$)	Men ($N = 232$)
Old-Fashioned Sexism with:		
PWE	.09 _a	-.01 _a
HE	-.16 _a *	-.29 _b *
Modern Sexism with:		
PWE	.08 _a	.19 _a *
HE	-.29 _a *	-.16 _a *
Old-Fashioned Racism with:		
PWE	.14 _a *	.16 _a *
HE	-.28 _b *	-.31 _b *
Modern Racism with:		
PWE	.21 _a *	.29 _a *
HE	-.35 _b *	-.26 _a *

Note. Higher scores indicate more old-fashioned and modern racism and sexism and more endorsement of protestant work ethic (PWE) and humanitarian-egalitarian (HE) values. The absolute value of the correlations within sex and each prejudice scale with different subscripts differ at $p \leq .05$.

* Correlation differs significantly from zero at $p \leq .05$.

Table 4
Means of the Percentage Estimates of Women in Female- and Male-Dominated Occupations by Respondents Who Scored Low and High on the Modern Sexism and Old-Fashioned Sexism Scales

Occupation	Actual percentage ^a	Modern Sexism				Old-Fashioned Sexism			
		Low (N = 290)	High (N = 297)	F ^b	p	Low (N = 262)	High (N = 335)	F ^b	p
Physician	20	29.80	32.54	5.26	.02	31.86	30.48	1.35	.24
Police officer	11	23.08	24.83	1.67	.20	24.76	23.14	1.43	.23
Lawyer	21	35.80	37.76	2.89	.09	38.46	35.10	8.51	.004
Engineer	8	23.10	27.03	7.97	.001	26.08	24.05	2.12	.21
Architect	15	27.43	30.62	4.08	.04	30.88	27.48	5.65	.02
Airplane pilot	2	15.65	18.70	4.35	.04	18.91	15.43	5.66	.02

^a U.S. Bureau of the Census (1993).

^b $df = 1, 579$.

Sexism to overestimate the percentage of women in male-dominated occupations. We conducted a 2 (sex of respondent) \times 2 (high or low on Old-Fashioned Sexism: $Mdn = 1.50$) \times 2 (high or low on Modern Sexism: $Mdn = 2.33$) Multivariate analysis of variance (MANOVA) on the percentage estimates of women in male-dominated jobs and a second identical MANOVA for the percentage estimates of women in female-dominated occupations. Like McCauley et al. (1988), our results indicated that, on average, all respondents overestimated the percentage of women in male-dominated occupations.² As predicted, individuals with higher Modern Sexism scores tended to overestimate the percentage of women in these jobs more so than individuals with lower scores on Modern Sexism (see Table 4). The difference was significant for physicians, engineers, architects, and airplane pilots, and was marginally significant for lawyers, multivariate $F(6, 574) = 2.11, p = .05$.

There were also unexpected main effects for the Old-Fashioned Sexism scale, multivariate $F(6, 574) = 2.35, p = .03$, which were the opposite of findings for Modern Sexism. Individuals low in Old-Fashioned Sexism were more likely than those high in Old-Fashioned Sexism to overestimate the percentage of women who work as lawyers, architects, and airplane pilots. Finally, there was a main effects for sex, multivariate $F(6, 574) = 1.32, p = .04$. Two univariate effects were significant. Women were more likely to overestimate the percentage of women who were physicians ($M = 32.45$) and airplane pilots ($M = 18.77$) than men ($M_s = 29.88$ and 15.58), $F_s(1, 790) = 4.64$ and $4.94, p_s = .03$, respectively. No multivariate main effects were significant for the percentage of women in female-dominated jobs, and no multivariate interactions were significant for the percentage of women in female- and male-dominated jobs.

Discussion

The results from the first study support the distinction between Old-Fashioned and Modern Sexism. Confirmatory factor analyses indicate that the two-factor solution, representing old-fashioned and modern prejudices, fit significantly better than the one-factor solutions for both racism and sexism. Furthermore, all of the loadings differed significantly from 0 for both two-factor solutions.

However, the present results indicate weaker support for a

two-factor solution for the racism than the sexism items. The correlation between the factors was high, and the fit indices for the one- and two-factor solutions did not differ much for the racism analysis. Additionally, we found sex differences in factor structure for the sexism items. Although the χ^2 tests indicate that the two-factor solution fit better than the one-factor solution for both men and women, the fit indices suggest a greater advantage of the two-factor solution for men than for women.

The patterns of correlations with individualistic and egalitarian values indicate a similarity between the racism and sexism scales. Endorsement of individualistic beliefs and failure to endorse egalitarian beliefs were associated with higher racism and sexism scores. The relative strength of these correlations depended on the respondents' sex and on whether the prejudice scales tapped modern or old-fashioned beliefs. For women, racism and sexism were more strongly related to egalitarianism than to individualism for both old-fashioned and modern prejudices. Perhaps the lack of different patterns of correlations for old-fashioned and modern beliefs for women is related to the factor analytic results suggesting that there is less of a distinction between old-fashioned and modern prejudices for women than for men. For men, Humanitarian-Egalitarian values were more predictive than Protestant-Work-Ethic of Old-Fashioned Racism and Old-Fashioned Sexism, but both values were equally and significantly correlated with Modern Racism and Modern Sexism. This pattern suggests greater relative importance of individualistic values for modern prejudice than for old-fashioned prejudice.

² It is possible that students' overestimation of the percentage of women in male-dominated occupations and of men in female-dominated occupations reflects greater gender equality in related fields among the student population at their university. However, this is not supported by data from their university registrar on three majors that correspond to these occupations; the percentage of women majoring in engineering, architecture, and nursing are 15%, 16%, and 91%, respectively. The first percentage falls between the census data and the students' estimates, and the latter two percentages are nearly identical to population estimates. A percentage that is more similar to students' estimates than to national data is that for women majoring in pre-law (52%). Many more students attend law school than major in pre-law; however, the exact percentage attending law school was not available.

It should be noted that there is some degree of similarity between the correlations with Modern Racism for women and men. Even though the correlations with Protestant Work Ethic and Humanitarian-Egalitarian differed for women but not for men, they were both significantly different from 0 for both groups. Hence, the primary difference between women's and men's responses can be found in the correlations with the Modern Sexism scale. It is possible that the women did not show the same focus on individualistic beliefs because they were expressing beliefs about their own sex. Women might not be expected to project individualistic-based prejudices, such as laziness, onto their own gender group.

A stronger indication of the validity of distinguishing Old-Fashioned Sexism and Modern Sexism comes from estimates of the percentage of women in three male-dominated jobs. As predicted, respondents who were high in Modern Sexism were more likely to overestimate the percentage of women in male-dominated jobs than were those who were low in Modern Sexism. This is consistent with the concept that Modern Sexism measures the belief that women are not currently victims of discrimination. However, although the results for the Modern Sexism scale are consistent with predictions, and the effects of this scale are distinct from the results for Old-Fashioned Sexism, the opposite pattern of effects for Old-Fashioned Sexism versus Modern Sexism and the fact that women overestimated more than men on two occupations suggests that the perceived percentage of women in various occupations is not a direct or unambiguous measure of sexism. A more direct measure related to these estimates may be revealed by the reasons for differences in employment patterns and the consequences of the different estimates. We addressed different reasons for sex segregation in jobs in Study 2. In general, although larger estimates from respondents scoring high in Modern Sexism may reflect a denial of discrimination, lower estimates from those scoring high in Old-Fashioned Sexism may be consistent with a belief in inherent sex differences and preferences for traditional roles. The sex differences may reflect women's motivation to perceive themselves as having opportunities unrestricted by sex.

Study 2

One purpose of Study 2 was to replicate the confirmatory factor analyses conducted in Study 1. This was necessary because the previous confirmatory analyses were based on scale changes derived initially from exploratory analyses. We also wished to examine whether the greater differentiation between Old-Fashioned Sexism and Modern Sexism for men than for women observed in Study 1 could be replicated in a separate sample. We further wished to replicate our findings for the racism scales, because the minimal difference between the fit indices for the one- and two-factor solutions suggests less of a differentiation between the Old-Fashioned Racism and Modern Racism scales than has been described previously (McConahay, 1986).

The second purpose of Study 2 was to conduct further construct validity tests. The opposite effects of Old-Fashioned Sexism and Modern Sexism on estimates of the percentages of women and men in different occupations highlight the several explanations for job segregation. These reasons include attributions to individual causes, such as innate, biological differences,

or to external causes, such as pro-male biases in the workforce (England & McCreary, 1987; Nieva & Gutek, 1981; Ragins & Sundstrom, 1989). Preferences for different explanations may underlie differences in estimates. Specifically, we predicted that compared with respondents who were low in Modern Sexism, those high in Modern Sexism would be less likely to attribute the low numbers of women in male-dominated occupations to job discrimination and would be more likely to attribute them to biological differences. This is consistent with our previous prediction regarding beliefs about the extent of sex segregation in the workforce. We also examined attributions to differences in socialization. Socialization suggests that sex differences may be due to external causes but also implies that these forces begin early in life and therefore may not be changed easily. Socialization therefore could be considered an external- or an individual-level explanation. Hence, we did not make specific predictions for this explanation.

As a further test of construct validity we studied Modern Sexism as a predictor of voting preferences. Previous research has demonstrated that Modern Racism is a better predictor of choosing an African-American mayoral candidate over a European-American mayoral candidate than is Old-Fashioned Racism (Sears, 1988). Hence, we predicted that Modern Sexism would be a better predictor than Old-Fashioned Sexism of voting preference for a male or a female candidate. However, a difficulty with previous voting studies has been the confounding of candidates' race with party affiliation (Roth, 1990). The Modern Racism scale may be differentiating liberal and conservative respondents rather than those who are low and high in prejudice. The present study shares the same difficulty in that the female candidate was a Democrat and the male candidate was a Republican. However, we also asked respondents to identify whether they considered themselves liberal or conservative and whether they considered themselves Democrats, Republicans, or Independents. These variables were then used as covariates in our analyses.

Method

Respondents

Four hundred seventy-seven women and 311 men completed the racism and sexism questionnaires for extra credit in their introductory psychology course. Nearly all respondents were European-American. We made an attempt to recontact 280 of the original respondents within 2 weeks of the U.S. Senate race. Ninety-seven women and 72 men were contacted by phone and asked if they would be willing to participate in a 5-min survey about the upcoming election. Respondents were unaware of the relationship between the initial questionnaires and the phone survey. Two women and 1 man refused to answer the survey with the female interviewer, and 1 woman refused to answer with the male interviewer. Interviewer sex did not have any significant effects on the results presented below.

Questionnaire

Respondents were given a packet that contained several questionnaires used as a mass screening of the introductory psychology class. In addition to questionnaires for other studies, respondents received a packet that contained one of the following: a) the racism items only; b) the sexism items only; c) the racism items followed by the sexism items;

or d) the sexism items followed by the racism items.³ All items generated for the first study were included in the questionnaire. The Old-Fashioned Racism and Modern Racism scale items were alternated, and the Old-Fashioned Sexism items were interspersed among the Modern Sexism items. The scale responses ranged from 1 (*strongly agree*) to 7 (*strongly disagree*). Item responses were averaged. Principal-components exploratory factor analyses were again conducted. Results were similar to those found in Study 1. The loadings for the factor analyses, eliminating the same items as in Study 1, are listed in Appendix F.

Phone Survey

After agreeing to participate in the phone survey, respondents were first asked about their preference for the presidential election and whether they were Pennsylvania residents. They then were asked to think about the Pennsylvania senate election (Arlen Specter vs. Lynn Yeakel) and asked "If the election were tomorrow, would you vote for Arlen Specter or Lynn Yeakel?" (For half of the respondents, Lynn Yeakel was mentioned before Arlen Specter.) Nonresidents were asked the same question prefaced by the qualification, "If you were a resident . . ." Then all respondents were asked whether they planned to vote in the upcoming election. Thirty-three respondents indicated that they did not know for whom they would vote. These respondents were excluded from the analyses of voting preferences.

A series of questions about sex segregation in the workforce followed. Respondents were asked to consider the fact that more men than women occupied positions as physicians, police officers, lawyers, engineers, architects, and airplane pilots. They were then asked to explain, in their own words, the reasons for sex segregation in the workforce.

After the open-ended responses, respondents were told that they were going to be asked to decide the extent to which biological differences, differences in socialization, and discrimination explained job segregation by sex. They were told that biological causes included genetic or hormonal differences that could lead to differences in abilities and interests. Socialization included different treatment by peers, families, schools, and the media, leading to differences in abilities and interests. Discrimination included blocking women from employment and promotions, being given fewer opportunities to demonstrate skills, or being harassed sexually. They were then asked to rate each potential cause on a scale that ranged from 1 (*not very much a cause*) to 7 (*very much a cause*). Respondents were asked to rate themselves politically by degree of liberalism or conservatism. In this scale, 1 = *very liberal*, and 7 = *very conservative*, with 4 indicating *neither*. They were also asked whether they considered themselves Democrats, Republicans, independents, or something else.

After all surveys were completed, these open-ended responses were coded independently by phone interviewers who were unaware of the respondents' pretest responses to the sexism questions and their responses to the phone survey. The responses were coded into five categories. Coders agreed on 81% of the responses with a kappa of .76. The coders discussed responses until agreement was reached. The first category was labeled *tradition* and contained responses such as "This is as it has developed historically. It is changing. It reflects past history." The second category was labeled *socialization* and contained responses such as "Women are brought up to be housewives." The third category was labeled *prejudice against women* and contained responses such as "Women aren't given a fair chance. This reflects policies by white males and other factors." The fourth category was *women's lack of interest or ability* and contained responses such as "Fewer women want (male-dominated jobs) and are willing to work that hard to achieve them." The fifth category was *don't know*.

Results

Confirmatory Factor Analyses

Racism items. The χ^2 difference test indicated that the two-factor solution, $\chi^2(1, N = 459) = 35$, fit significantly better than

Table 5
Fit Indices for Null, One-, and Two-Factor Confirmatory
Factor Analyses on Racism and Sexism Items (Study 2)

Model	χ^2	df	GFI	IFI1	IFI2	Tucker-Lewis	PGFI
Racism							
Null	2,252	91	.47				
One-factor	276	77	.92	.88	.91	.89	.67
Two-factor	241	76	.93	.89	.92	.91	.67
Sexism							
Null	1,790	78	.55				
One-factor	456	65	.87	.76	.80	.73	.62
Two-factor	209	64	.95	.81	.86	.90	.66

Note. IFI1 and IFI2 are two versions of Bentler and Bonett's (1980) incremental fit indices. IFI2 takes into account the number of degrees of freedom in the model (Bollen, 1989). GFI = goodness-of-fit index; PGFI = parsimonious goodness-of-fit index.

the one-factor solution (see Table 5). Furthermore, the GFI and the normed fit indices also indicated that the two-factor solutions fit relatively well. The loadings were all significantly different from 0 (see Appendix E). Finally, the internal reliabilities were adequate for the Old-Fashioned Racism ($\alpha = .64$) and Modern Racism scales ($\alpha = .83$). As in Study 1, these results support the two-factor solution. However, again, the difference between the fit indices, particularly the PGFI, and the high correlation between the factors ($\phi = .86$) indicate little differentiation between the two factors.

Sexism items. Like the analyses for racism, the χ^2 difference test for the sexism items indicated that the two-factor solution fit significantly better than the one-factor solution, $\chi^2(1, N = 461) = 247$ (see Table 5). The fit indices support this difference, and all the loadings for both factors are significantly different from 0 (see Appendix E). The correlation between the factors is much smaller than that found for the racism scale ($\phi = .47$). The fit indices, though not as high as those found in Study 1, are respectable. Finally, the internal reliabilities of the scales were adequate for the Old-Fashioned Sexism ($\alpha = .65$) and Modern Sexism scales ($\alpha = .75$).

Men's Old-Fashioned Sexism ($M = 2.57$) and Modern Sexism ($M = 3.36$) scores were again significantly higher than women's Old-Fashioned Sexism ($M = 1.94$) and Modern Sexism ($M = 2.82$) scores, $t(531) = 6.84, p < .001$ and $t(531) = 6.42, p < .001$, for Old-Fashioned Sexism and Modern Sexism, respectively. Although analyses indicate that the two-factor solution fit significantly better than the one-factor solution for men, $\chi^2(1, N = 186) = 125$, and women, $\chi^2(1, N = 275) = 31$, the small differ-

³ We conducted separate confirmatory analyses on the racism and sexism items for the alternative orders. The results indicated little difference in fit. The correlation between the two factors for the racism analyses was .80 if only the racism scales were completed, .92 if the racism scales were completed before the sexism scales, and .94 if the racism scales were completed after the sexism scales. Although there was a slightly lower correlation in the first case, the correlations were high in all three instances. The correlation between the two factors for the sexism analyses was .51 if only the sexism scales were completed, .43 if the sexism scales were completed before the racism scales, and .50 if the sexism scales were completed after the racism scale.

Table 6
Fit Indices for Null, One-, and Two-Factor Confirmatory Factor Analyses on Sexism Items for Men and Women (Study 2)

Model	χ^2	df	GFI	IFI1	IFI2	Tucker-Lewis	PGFI
Men							
Null	643	78	.54				
One-factor	258	65	.80	.59	.69	.59	.52
Two-factor	133	64	.90	.67	.79	.85	.63
Women							
Null	671	78	.61				
One-factor	153	65	.92	.73	.83	.82	.66
Two-factor	122	64	.94	.74	.84	.88	.66

Note. IFI1 and IFI2 are two versions of Bentler and Bonett's (1980) incremental fit indices. IFI2 takes into account the number of degrees of freedom in the model (Bollen, 1989). GFI = goodness-of-fit index; PGFI = parsimonious goodness-of-fit index.

ences between the fit indices for women relative to men indicate that the differentiation between the two factors is stronger for men than for women (see Table 6).

Voting Preferences

We conducted logistic regressions to test the extent to which the Old-Fashioned and Modern Sexism scales predicted preference for a female or a male candidate in the Senate race in Pennsylvania. The first step in this analysis was to enter respondents' Old-Fashioned Sexism and Modern Sexism scores and their sex into the regressions predicting the dichotomous voting preference variable. Respondents with lower Modern Sexism scores were more likely to prefer to vote for the female candidate ($B = .45$, partial $r = .14$, $p = .02$). Neither their Old-Fashioned Sexism scores ($B = -.01$, partial $r = 0$, $p = .99$) nor their sex ($B = -.32$, partial $r = -.06$, $p = .10$) predicted their voting preference. Next, the interactions among respondents' sex and Modern Sexism and Old-Fashioned Sexism scores were entered into the equation. These interactions were not significant. Thus, Modern Sexism appeared to be a better predictor than Old-Fashioned Sexism. However, if liberalism was entered as a covariate in the equation ($B = .46$, partial $r = .21$, $p = .002$), the effect of Modern Sexism was only marginally significant ($B = .36$, partial $r = .08$, $p = .08$). Furthermore, if both liberalism and party affiliation were entered as covariates in the equation, neither Modern Sexism nor liberalism predicted voting preference.

Job Segregation

Open-ended responses. We used two-tailed t tests for independent proportions to test whether respondents who were high or low on the Old-Fashioned Sexism and Modern Sexism scales (based on median splits = 1.60 and 3.00, respectively) differed in the types of reasons they gave to explain sex segregation in the workforce. Low and high scorers on the Modern Sexism scale were equally likely to indicate that job segregation resulted from women's lack of interest (12% and 16%, respectively), $t(163) = .85$, or socialization (15% and 8%, respectively), $t(163) = 1.57$. However, low scorers were more likely than high scorers

to indicate that segregation was a result of prejudice against women (40% and 20%, respectively), $t(163) = 2.80$, $p < .01$, and less likely than high scorers to indicate that the segregation was a result of tradition (26% and 40%, respectively), $t(163) = 1.96$, $p < .05$. Low scorers also were marginally less likely to indicate a lack of knowledge with regard to the reasons for differences (6% and 15%, respectively), $t(163) = 1.93$, $p < .10$. The reasons given did not differ for low versus high scorers on the Old-Fashioned Sexism scale.

A priori categories for job segregation. We used regressions to examine the impact of Old-Fashioned Sexism and Modern Sexism on the a priori categories of reasons for a sex-segregated workforce. First the main effects of Old-Fashioned Sexism, Modern Sexism, and respondent's sex were entered into the equations.⁴ Higher scores on Modern Sexism predicted higher ratings of biological differences as a likely reason for job segregation (standardized $\beta = .20$, $p = .02$) and lower ratings of socialization (standardized $\beta = -.16$, $p = .04$) and discrimination (standardized $\beta = -.34$, $p < .001$) as likely reasons. Old-Fashioned Sexism did not predict the ratings. There was only one effect for sex. Women were more likely than men to indicate that socialization was a likely reason (standardized $\beta = -.17$, $p = .04$). Interactions of the scales with respondents' sex were then entered in the regressions. Neither interaction was significant. However, when self-identification as a liberal was included as a covariate (standardized $\beta = -.07$, $p = .38$), ratings of socialization became nonsignificant (standardized $\beta = -.14$, $p = .10$). The results for the importance of biological causes and discrimination remained significant when liberalism was included as a covariate.

Discussion

The factor analytic results from Study 2 replicated those from Study 1. The analyses revealed that the two-factor solutions fit better than the one-factor solution for both the Racism and Sexism scales, and all the items on the two-factor solutions were significantly different from 0. Furthermore, the difference in fit between the one- and two-factor solutions for the sexism items was stronger for the male respondents than for the female respondents. However, the same lack of difference between Old-Fashioned Racism and Modern Racism found in Study 1 occurred in Study 2. The correlation between the two factors was high ($\phi = .86$), and the fit indices for the one- and two-factor solutions did not differ much. These findings suggest that the significant difference between the one- and two-factor solutions may not translate into practical differences (see also Weigel & Howes, 1985).

The tests predicting voting preferences and explanations for

⁴ Several sets of hierarchical regressions were also conducted. In the first set, respondents' sex was entered first, Modern Sexism was entered second, and Old-Fashioned Sexism was entered third. In the second set, respondents' sex was entered first, Old-Fashioned Sexism was entered second, and Modern Sexism was entered third. The change in R^2 in all of these regressions indicated that Modern Sexism, but not Old-Fashioned Sexism, was significant. The only change from the above results was that respondents' sex significantly predicted higher ratings of discrimination as a reason for job segregation when it was the only independent variable in the equation.

job segregation confirmed the construct validity of the Modern Sexism scale and its greater predictive power than the Old-Fashioned Sexism scale.⁵ The Modern Sexism scale was a better predictor of preference for a male senatorial candidate over a female senatorial candidate than was the Old-Fashioned Sexism scale. The ability to predict voting preferences is likely to be a function of the issues raised during the campaign. In this particular campaign, the female candidate explicitly argued that the male candidate was not sensitive to women's issues. Speaking practically, separating a candidate's sex from sympathy toward women's issues may be difficult, because female candidates may be more likely than male candidates to be sympathetic to women's issues or to be perceived this way. The confound between sex and sympathy in this study suggests that the scale cannot distinguish between favoring a male over a female candidate and responding less favorably to candidates who express support for women's issues. Furthermore, the ability of the Modern Sexism scale to predict voting preferences is also likely to be a function of its association with self-identification as a liberal or a conservative ($r = .26, p < .01$) and party identification ($r = .27, p < .01$; see also Roth, 1990). The predictability of the Modern Sexism scale decreased after these variables were entered as covariates. The content of the Modern Sexism scale as well as its relationship with the Old-Fashioned Sexism scale ($r_s = .42$ and $.30$ for Studies 1 and 2, respectively), however, indicate that the Modern Sexism scale is not simply a measure of liberalism.

Results concerning perceptions of reasons for the lack of women in certain jobs yielded more evidence of the construct validity and implications of the Modern Sexism scale. Respondents who scored high on Modern Sexism were less likely to indicate that discrimination, socialization, and prejudice against women were causes for sex segregation and were more likely to indicate that biological differences were causes. These explanations may translate into different assumptions about the likelihood of attaining equality and the extent to which organizations should address gender-related issues. The regressions predicting socialization as a reason for sex segregation indicate overlap between modern sexism and self-identification as a liberal. However, results relating Modern Sexism to beliefs about biological differences and discrimination were not affected by this self-identification.

General Discussion

The results from the two studies confirm that Modern Sexism is distinguishable from Old-Fashioned Sexism. The factor analytic results from Studies 1 and 2 suggest that the distinction may be stronger for men than for women. However, similar effects of Modern Sexism were found on percentage estimates, explanations for job segregation, and voting preferences, indicating that the Modern Sexism scale predicts important outcomes similarly for both women and men.

The present results are limited to assessment of college-age students' responses. College-age women may be more sensitive than non-college-age women to gender issues and may not differentiate between old-fashioned and modern beliefs. Consistent with this idea, Gurin (1985) found that younger and more educated women were more likely to identify themselves in the social category of "women," to be discontented with the extent

of women's power, and to perceive the sex disparities in wages and other market disparities as illegitimate. Other differences between college- and non-college-age respondents, such as possible greater sensitivity to the social desirability or political correctness of particular ideas, suggest that although the scale is a valid measure of Modern Sexism, subsequent testing with non-student samples is warranted.

Greater differences in fit indices and lower correlations between factors for the racism scales may have been found if we had used noncollege adult samples. However, comparison with McConahay's (1986) findings suggests that this would not be the case. The correlation between our factors using exploratory factor analyses is lower than those previously reported for adults (McConahay, 1986). Although the relative lack of difference could indicate a lack of a practical distinction between Old-Fashioned Racism and Modern Racism, Sears (1988) argued that high correlations between factors do not diminish the validity of the distinction. Furthermore, Mulaik et al. (1989) noted that "If two models applied to the same data both obtain normed-fit indices in the .90s, the differences in fit between them may indeed be small, involving only differences in a few parameters, and yet the differences may have considerable theoretical importance at a given historical moment" (p. 434). Hence, the small difference in fit for the one- and two-factor solutions for racism does not demonstrate that the distinction between Old-Fashioned Racism and Modern Racism is not theoretically meaningful. Supporting this, McConahay, Hardee, and Batts (1981) found discriminant validity between the two scales such that the Old-Fashioned Racism responses were more influenced by experimenter race than were Modern Racism scores, suggesting that the latter is less subject to social desirability concerns.

It is compelling to speculate about the reasons for a greater difference in fit between the one- and two-factor solutions for sexism than for racism, especially given that one purpose of the present study was to test whether beliefs said to underlie racism also underlie sexism. One possible reason may be methodological. The larger distinction between old-fashioned and modern prejudices for sexism than for racism could be a result of the content of the scale items. Most items on the Modern Sexism scale dealt with perceptions of continued discrimination and equality, whereas only one item on the Modern Racism scale dealt with this issue. Many items that had been written to address the other two components of modern sexism (antagonism

⁵ Although it is possible that greater predictive ability of the Modern Sexism scale than the Old-Fashioned Sexism scale is a result of the higher reliability of the Modern Sexism scale, additional analyses suggest that this is not the case. Specifically, LISREL analyses correcting for measurement error in regressions were conducted for the voting preferences and the explanations for gender segregation (Jöreskog & Sörbom, 1989). (The analyses included the use of biserial correlations for the dichotomous data.) These results indicated that, after covarying out respondents' gender, Modern Sexism, but not Old-Fashioned Sexism, significantly predicted voting preferences ($B = .34$, standardized $B = .30$), $t(133) = 2.26$, biological explanations ($B = -.43$, standardized $B = .30$), $t(163) = 3.42$, and discrimination-based ($B = .24$, standardized $B = .22$), $t(166) = 2.08$, explanations for job segregation. After Old-Fashioned Sexism and respondents' sex were covaried out, the relationship between Modern Sexism and socialization explanations was marginally significant ($B = -.21$, standardized $B = -.19$), $t(133) = 1.68$.

toward women's demands and special favors directed at women) loaded equally on the Old-Fashioned and Modern factors in the exploratory factor analyses and were eliminated from the analyses for the present study. Hence, the differentiation between modern and old-fashioned prejudices may be more strongly a function of perceptions about the current status of racial and gender equality than of antagonistic or unsupportive thoughts.⁶ Perhaps revisions to the Modern Racism scale are in order.

However, conceptual reasons are also possible. Perhaps the public has paid greater attention to racial issues than to gender issues, which may have caused the Modern Racism scale to become a less subtle measure of prejudice. Consistent with this, McConahay (1986) noted that the correlation between the two factors appears to have been steadily increasing over time. Given the present results and the continued increase in the magnitude of the correlation, it would seem prudent to retest the conclusion that the Modern Racism scale is a less reactive measure of racism than the Old-Fashioned Racism scale. It also would be important to test the reactivity of the Modern Sexism scale.

Another important distinction between racism and sexism is in the amount of contact between racial groups and between sexes. Widespread contact between women and men could increase men's awareness of women's issues or, alternatively, could lead to skepticism regarding the presence of discrimination and to less sympathy for women's issues. Although most people living below the poverty line are women, and although many women face discrimination (Unger & Crawford, 1992; U.S. Bureau of the Census, 1993), respondents probably were aware of many successful and content women. This awareness may lead people to conclude that complaints of discriminatory treatment are not valid. Furthermore, because many women do not perceive personal effects of discrimination (Crosby, 1984), greater contact would not necessarily lead to more sympathy for complaints about equality. Thus, contact with women may increase men's sensitivity to traditional beliefs about women but not to men's modern beliefs, causing a distinction between old-fashioned and modern beliefs. Less contact with members of ethnic minority groups may result in less of a differentiation between the two types of beliefs.

One last distinction between sexism and racism is likely in the affective content of the two prejudices. Perhaps prejudice against women is more affectively ambivalent (Glick & Fiske, 1994) than prejudice against ethnic minority group members. For instance, although previous research has demonstrated that people have generally more positive affective responses to women than to men (Eagly & Mladinic, 1989; Eagly, Mladinic, & Otto, 1991), it seems likely that European-Americans would have less affective positive responses toward, for example, African-Americans than toward members of their own group (cf. Gaertner & Dovidio, 1986). It is possible that Modern Sexism would be related to only negative affect, whereas Old-Fashioned Sexism would be related to both positive and negative affect, because Old-Fashioned Sexism measures both endorsement of traditional roles (such as motherhood, which is likely viewed positively) and negative stereotypes about women.

In sum, the present findings suggest that beliefs about women can be separated into two meaningful and distinct components: obviously unequal treatment of women and the questioning of women's intelligence (Old-Fashioned Sexism), and less sympathetic responses toward women's issues (Modern Sexism). Al-

though distinct, the two types of beliefs are correlated, indicating that people who endorse more modern sexist beliefs also are more likely to hold traditional beliefs about women. Furthermore, those high in Modern Sexism are likely to have different perceptions of women's experiences in the workforce and are more likely to perceive greater equality in the workforce than actually exists. People high in Modern Sexism also are more likely to attribute sex segregation to individualistic causes rather than to discrimination or prejudice against women. The relatively greater correlation of Protestant Work Ethic values and Modern Sexism than that between Protestant Work Ethic values and Old-Fashioned Sexism for men supports this finding. These perceptions are likely to lead to less support for social and political changes designed to increase women's opportunities. For instance, respondents who were high in Modern Sexism were more likely to prefer a male political candidate portrayed by his opponent as insensitive to women's issues.

The Modern Sexism scale may prove to be a better predictor of sexist behavior than older scales designed to measure attitudes about women. Alternatively, old-fashioned and modern beliefs may predict different types of behaviors in different situations. Modern sexism could predict subtle or covert sexism, whereas old-fashioned sexism could predict overt sexism (Benokraitis & Feagin, 1986). Finally, the results from the present study show that insights about both sexism and racism can be gained by making explicit comparisons designed to highlight similarities and differences in the two types of prejudice.

⁶ We tested a three-factor solution by dividing the Modern Sexism factor into two components; one component addressed denial of continuing discrimination, and the second combined antagonism toward women's demands with resentment about special favors for women. Old-Fashioned Sexism represented the third factor. Although the χ^2 difference tests indicated that the three-factor solutions differed from the two-factor solutions, the fit indices were nearly identical. The correlation between the two modern factors (.88 for Sample 1 and .82 for Sample 2) was higher than the correlation between either modern factor and the old-fashioned factor (.49 and .55 for Sample 1 and .39 and .41 for Sample 2). These findings were true for both male and female respondents.

One might also wonder whether our Old-Fashioned Sexism scale represents old-fashioned beliefs. An examination of the content of older scales (e.g., Kirkpatrick, 1936; Spence, Helmreich, & Stapp, 1973) and our Old-Fashioned Sexism scale suggest greater similarity between these older scales and Old-Fashioned Sexism than these older scales and our Modern Sexism scale. Additional factor analyses, including the Attitudes Toward Women scale, suggest that the Attitudes Toward Women scale and the Old-Fashioned Sexism scale load on one factor and that the Modern Sexism is a second factor (Swim, 1994).

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Appendix A

Items From McConahay's (1986) Old-Fashioned and Modern Racism Scale and the Classification of the Modern Racism Items as Described by Sears (1989)

Scale	Item
Old-Fashioned Racism	1. Black people are generally not as smart as whites.*
	2. I favor laws that permit black persons to rent or purchase housing even when the person offering the property for sale or rent does not wish to rent or sell it to blacks.
	3. Generally speaking, I favor full racial integration.
	4. I am opposed to open or fair housing laws.*
	5. It is a bad idea for blacks and whites to marry one another.*
	6. If a black family with about the same income and education as I have moved next door, I would mind it a great deal.*
	7. It was wrong for the United States Supreme Court to outlaw segregation in its 1954 decision.*
Modern Racism	1. Discrimination against blacks is no longer a problem in the United States.*
	2. It is easy to understand the anger of black people in America.
	3. Blacks have more influence upon school desegregation plans than they ought to have.*
	4. Blacks are getting too demanding in their push for equal rights.*
	5. Blacks should not push themselves where they are not wanted.*
	6. Over the past few years, blacks have gotten more economically than they deserve.*
	7. Over the past few years, the government and news media have shown more respect to blacks than they deserve.*
Denial of continuing discrimination	
Antagonism toward African-Americans' demands	
Resentment about special favors for African-Americans	

Note. Items with an asterisk required reverse scoring.

(Appendixes continue on next page)

Appendix B

Items Developed to Measure Modern and Old-Fashioned Sexism

Scale	Item
Old-Fashioned Sexism	<ol style="list-style-type: none"> 1. Women are generally not as smart as men.*^a 2. I would be equally comfortable having a woman as a boss as a man. 3. It is more important to encourage boys than to encourage girls to participate in athletics.* 4. Women are just as capable of thinking logically as men. 5. When both parents are employed and their child gets sick at school, the school should call the mother rather than the father.*
Modern Sexism	
Denial of continuing discrimination	<ol style="list-style-type: none"> 1. Discrimination against women is no longer a problem in the United States.** 2. Women often miss out on good jobs due to sexual discrimination. 3. It is rare to see women treated in a sexist manner on television.* 4. On average, people in our society treat husbands and wives equally.* 5. Society has reached the point where women and men have equal opportunities for achievement.*
Antagonism toward women's demands	<ol style="list-style-type: none"> 6. It is easy to understand the anger of women's groups in America.^a 7. It is easy to understand why women's groups are still concerned about societal limitations of women's opportunities.
Resentment about special favors for women	<ol style="list-style-type: none"> 8. 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.*^a

Note. Items with an asterisk required reverse scoring.

^a Item was adapted from McConahay's (1986) Modern Racism Scale.

Appendix C

Means, Standard Deviations, and Standardized Loadings for Two-Factor Exploratory and Confirmatory Analysis on the Racism Scales, Sample 1

Item	<i>M</i>	<i>SD</i>	Exploratory analysis		Confirmatory analysis		
			Old-Fashioned	Modern	Old-Fashioned	Modern	
Old-Fashioned Racism							
Intelligence	1.76	1.08	.60	.48	.67	0	
Renting or purchasing housing	1.83	1.14	.62	.30	.51	0	
Racial integration	1.82	1.11	.62	.41	.61	0	
Open housing laws	1.93	1.21	.52	.19	.40	0	
Interracial marriage	2.25	1.25	.51	.49	.72	0	
Dislike housing desegregation	1.37	0.85	.62	.19	.32	0	
Supreme Court and desegregation	1.49	0.97	.51	.23	.35	0	
Modern Racism							
Discrimination not a problem ^a	1.83	0.93	.14	.68	0	.52	
Understand anger ^b	3.74	1.14	.23	.68	0	.66	
Too much influence ^b	2.12	1.01	.44	.75	0	.74	
Too demanding ^b	2.35	1.25	.37	.82	0	.97	
Should not push ^b	2.08	1.11	.58	.57	0	.65	
Gotten more economically ^c	2.13	1.12	.35	.78	0	.84	
Government and media ^c	3.97	1.14	.40	.72	0	.78	
Correlation between factors			.43		.84		

Note. Scales range from 1 to 5, with lower scores recoded to indicate less racist responses.

^a Items measuring denial of continuing racism. ^b Items measuring antagonism toward African-Americans' demands. ^c Items measuring resentment about special favors for African-Americans.

Appendix D

Means, Standard Deviations, and Loadings for Two-Factor Exploratory and Confirmatory Analysis on the Sexism Scales, Sample 1

Item	<i>M</i>	<i>SD</i>	Exploratory analysis		Confirmatory analysis	
			Old-Fashioned	Modern	Old-Fashioned	Modern
Old-Fashioned Sexism						
Intelligence	1.50	0.96	.75	.22	.64	0
Comfort with boss	1.56	0.94	.65	.24	.52	0
Sports	1.70	1.01	.66	.37	.60	0
Logical thinking	1.43	0.89	.72	.21	.58	0
Call mom	2.50	1.10	.45	.24	.36	0
Modern Sexism						
Discrimination not a problem ^a	1.95	1.01	.39	.77	0	.74
Often miss out on jobs ^a	2.34	1.03	.30	.72	0	.68
Rare to see sexism on TV ^a	1.93	0.97	.20	.54	0	.46
Spouses treated equally ^a	2.35	1.08	.14	.68	0	.58
Equal opportunities available ^a	2.52	1.19	.15	.75	0	.67
Understand anger ^b	2.52	1.11	.35	.71	0	.68
Understand women's groups ^b	2.31	1.04	.37	.74	0	.72
Government and media ^c	2.68	1.04	.30	.56	0	.51
Correlation between factors			.38		.54	

Note. Scales range from 1 to 5, with lower scores recoded to indicate less sexist responses.

^a Items measuring denial of continuing sexism. ^b Items measuring antagonism toward women's demands.

^c Items measuring resentment about special favors for women.

Appendix E

Means, Standard Deviations, and Loadings for Two-Factor Exploratory and Confirmatory Analysis on the Racism Scales, Sample 2

Item	<i>M</i>	<i>SD</i>	Exploratory analysis		Confirmatory analysis	
			Old-Fashioned	Modern	Old-Fashioned	Modern
Old-Fashioned Racism						
Intelligence	2.05	1.53	.63	.46	.65	0
Renting or purchasing housing	2.26	1.73	.54	.32	.48	0
Racial integration	2.16	1.68	.57	.13	.41	0
Open housing laws	2.37	1.84	.44	.14	.31	0
Interracial marriage	2.71	1.88	.60	.30	.53	0
Dislike housing desegregation	1.53	1.24	.60	.20	.65	0
Supreme Court and desegregation	1.54	1.32	.42	.17	.31	0
Modern Racism						
Discrimination not a problem ^a	2.13	1.41	.17	.68	0	.44
Understand anger ^b	3.11	1.74	.72	.18	0	.49
Too much influence ^b	2.58	1.48	.58	.68	0	.75
Too demanding ^b	3.03	1.88	.50	.74	0	.73
Should not push ^b	2.51	1.66	.45	.68	0	.61
Gotten more economically ^c	2.62	1.63	.52	.68	0	.72
Government and media ^c	2.53	1.64	.53	.68	0	.70
Correlation between factors			.41		.86	

Note. Scales range from 1 to 7, with lower scores recoded to indicate less racist responses.

^a Items measuring denial of continuing racism. ^b Items measuring antagonism toward African-Americans' demands. ^c Items measuring resentment about special favors for African-Americans.

(Appendixes continue on next page)

Appendix F

Means, Standard Deviations, and Loadings for Two-Factor Exploratory and Confirmatory Analysis on the Sexism Scales, Sample 2

Item	<i>M</i>	<i>SD</i>	Exploratory analysis		Confirmatory analysis	
			Old-Fashioned	Modern	Old-Fashioned	Modern
Old-Fashioned Sexism						
Intelligence	1.63	1.25	.72	.18	.60	0
Comfort with boss	1.89	1.52	.68	.10	.52	0
Sports	1.78	1.37	.71	.33	.68	0
Logical thinking	1.62	1.37	.66	.19	.52	0
Call mom	3.05	1.63	.44	.20	.35	0
Modern Sexism						
Discrimination not a problem	2.43	1.43	.27	.77	0	.74
Often miss out on jobs ^a	3.16	1.54	.26	.70	0	.64
Rare to see sexism on TV ^a	2.36	1.45	.13	.53	0	.44
Spouses treated equally ^a	3.03	1.61	.19	.70	0	.64
Equal opportunities available ^a	3.47	1.71	-.04	.63	0	.50
Understand anger ^b	3.40	1.71	.21	.64	0	.59
Understand women's groups ^b	3.02	1.54	.34	.70	0	.67
Government and media ^c	3.36	1.62	.31	.52	0	.45
Correlation between factors			.29		.47	

Note. Scales range from 1 to 7, with lower scores recoded to indicate less sexist responses.

^a Items measuring denial of continuing sexism. ^b Items measuring antagonism toward women's demands.

^c Items measuring resentment about special favors for women.

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