An Exploratory Investigation of Americans’ Expression of Gender Bias Before and After the 2016 Presidential Election

Oriane A. M. Georgeac1, Aneeta Rattan1, and Daniel A. Effron1

Abstract
Did the 2016 U.S. presidential election’s outcome affect Americans’ expression of gender bias? Drawing on theories linking leadership with intergroup attitudes, we proposed it would. A preregistered exploratory survey of two independent samples of Americans pre- and postelection (ns = 1,098 and 1,192) showed no pre–post differences in modern sexism, concern with the gender pay gap, or perceptions of gender inequality and progress overall. However, supporters of Donald Trump (but not of Hillary Clinton) expressed greater modern sexism post-versus preelection—which in turn predicted reporting lower disturbance with the gender pay gap, perceiving less discrimination against women but more against men, greater progress toward gender equality, and greater female representation at top levels in the United States. Results were reliable when evaluated against four robustness standards, thereby offering suggestive evidence of how historic events may affect gender-bias expression. We discuss the theoretical implications for intergroup attitudes and their expression.

Keywords
election, Donald Trump, Hillary Clinton, gender bias, sexism, intergroup relations

The 2016 U.S. presidential election sparked intense debate about gender bias. Americans questioned what the first nomination of a woman candidate from a major party signaled in terms of gender bias in society, whether the media treated Hillary Clinton differently because of her gender and whether certain comments from Donald Trump reflected sexism. Such debate raised the question: What effect, if any, would the 2016 presidential election outcome have on the degree to which Americans express gender bias?

The present research explores this question, examining gender bias as expressed through the acceptance and justification of gender inequality (Jost & Kay, 2005; Swim, Aikin, Hall, & Hunter, 1995). By investigating gender-bias expression before and after a one-time historic event, we advance theoretical understandings of factors that may shape bias expression beyond both intraindividual and interpersonal predictors identified in the intergroup-relations literature (Fiske, Cuddy, Glick, & Xu, 2002; Fiske & North, 2015; Swim, Hyers, Cohen, & Ferguson, 2001) and cultural factors described by cross-cultural perspectives (Glick et al., 2000).

Why would a one-time historic event like a national election influence gender-bias expression, given that changing intergroup attitudes is difficult (Devine, 1989; Nosek et al., 2007) and requires targeted interventions (Cundiff, Zawadzki, Danube, & Shields, 2014; Kilmartin et al., 2008) or repeated interactions? (Dasgupta & Asgari, 2004) Theories linking leadership with intergroup attitudes have proposed that authority figures and leaders powerfully influence their in-group members’ social attitudes (Allport, 1954; Hogg, 2001; Sherif, 1962). Drawing on this perspective, we suggest that historic events that elevate a leader (e.g., a popular election) could trigger sensemaking processes (Higgins & Bargh, 1987; Tankard & Paluck, 2017) that shape bias expression (Butz & Yogoesswaran, 2011; Eibach & Ehrlinger, 2006; Norton & Sommers, 2011). More specifically, Americans may have looked to the 2016 election’s outcome to inform their perceptions and attitudes about gender in society. Some research indeed suggested that the election of Barack Obama reduced implicit racial bias (Columb & Plant, 2011; Plant et al., 2009; but see Skinner & Cheadle, 2016), although other work suggested it weakened support for redressing racial inequality (Kaiser, Drury, Spalding, Cheryan, & O’Brien, 2009), and that endorsing Obama could license people to subsequently favor Whites over Blacks (Effron, Cameron, & Monin, 2009). These studies could have informed predictions about how the election of America’s first female President would affect gender-bias expression but cannot inform predictions about the effect of Donald Trump’s victory.

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To explore how gender-bias expression might have changed following the election, we recruited two independent samples of Americans several days before and after the election. Because people may have different psychological responses to elections depending on whether their preferred candidate wins, we explored whether the results depended on the candidate people supported. Our primary outcome measure was modern sexism—a subtle, contemporary form of gender bias that involves denying the existence of gender discrimination in society, dismissing women’s demands, and resenting them for purportedly receiving special favors (Swim et al., 1995). The modern sexism scale is well suited to detecting subtle shifts in gender bias because people are more willing to express it than hostile sexism (Glick & Fiske, 1996), which assesses overtly prejudiced negative attitudes toward women (Swim, Mallett, Russo-Devosa, & Stangor, 2005). Moreover, modern sexism assesses perceptions of women and gender in society and could thus more plausibly be influenced by society-level events (like elections) than measures capturing sexism in intimate relationships (see Ratliff, Redford, Conway, & Smith, 2017).

We also conceptualized modern sexism as an antecedent to a variety of gender-bias outcomes, following previous work (for a review, see Fiske & North, 2015). For example, past research shows that modern sexism predicts poorer detection of sexism in one’s day-to-day environment (Swim et al., 2005), inflated perceptions of women’s advancement in traditionally male-dominated fields (Swim et al., 1995), and lower support for women’s political movements (Becker & Wagner, 2009; Campbell, Schellenberg, & Senn, 1997). We thus examined whether modern sexism would predict outcomes relevant to the national conversation about gender at the time of the election: disturbance with a concrete instance of gender discrimination (the gender pay gap), beliefs about the prevalence of gender discrimination against women and men, perceptions of progress toward gender equality, and perceptions of female representation in top political and business positions. Given our interest in whether the election would affect modern sexism, and the theoretical reasons for expecting modern sexism to predict these other outcomes, we explored whether the election, through modern sexism, could indirectly affect these outcomes.

We wrote an internal preregistration1 specifying the targeted sample size, all measures, and methods. We preregistered directional hypotheses about how our measures might shift after a Clinton win because these predictions directly followed from past research. We did not formulate hypotheses about the consequences of Trump’s election, as previous literature did not clearly suggest directional predictions. Given the election outcome, our investigation is exploratory.

Method
Design
The study has a quasi-experimental, between-subjects, pre–post design. We surveyed different participants pre- and postelection because surveying the same participants twice (a within-subjects design) could have resulted in high attrition levels, revealed our interest in the election (i.e., create demand characteristics), and pressured participants to provide consistent responses pre- and postelection. We describe robustness checks to ensure the pre- and postelection samples are comparable (e.g., on demographics), which helps address potential third-variable concerns.

Participants
We hired Survey Sampling International to recruit two independent samples of American adults around the November 8, 2016, Election Day (preelection: November 4—November 8 early morning EST and postelection: November 9 evening EST—November 15). Based on a power analysis, we requested 1,200 unique participants. Even in case of substantial attrition, this offers adequate power to detect a small effect of the election (e.g., \( n = 930 \) per sample provides 80% power to detect \( d = .13 \) at \( p < .05 \)).

We initially set quotas for equal numbers of women and men and an approximately proportionate distribution of ethnic groups based on U.S. Census Bureau’s (2011) estimates—63.7% non-Hispanic Whites, 12.2% non-Hispanic Blacks, 4.7% non-Hispanic Asians, 16.3% Hispanics or Latinos, and 3.0% Others—but relaxed the ethnicity quota in the final hours to meet targeted sample sizes within the time line (see Supplementary Online Material [SOM] for demographics). Only U.S.-based Americans (indicated by self-reported citizenship and IP address) who consented and, for the postelection survey, had not already completed the preelection survey, participated.

Prior to analysis, we excluded participants who failed either of two attention checks (preregistered), provided incomplete responses, or took less than one third of the median time to complete the study (lab-standard practice),2 leaving \( N = 2,290 \) people (preelection: \( n_{\text{preelection}} = 1,098; M_{\text{age}} = 33.87, SD = 16.63; 531 men, 564 women, and 3 other gender; 747 European Americans, 157 African Americans, 55 Asian Americans, 97 Hispanic or Latino Americans, and 42 other race; postelection: \( n_{\text{postelection}} = 1,192; M_{\text{age}} = 33.39, SD_{\text{age}} = 17.13; 567 men, 625 women; 807 European Americans, 161 African Americans, 59 Asian Americans, 113 Hispanic or Latino Americans, and 52 other race).}

Procedure
Participants provided demographics, answered an attention check, and completed the measures below (in which a second attention check was embedded). At the end of the survey, pre-election participants indicated how closely they had followed the election and whether they were registered to vote in the United States; postelection participants instead answered these questions at the survey’s start to increase the election’s salience.
Table 1. Correlations Among, and Descriptive Statistics for, the Outcome Variables Measured.

<table>
<thead>
<tr>
<th>Outcome Variables</th>
<th>M (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Modern sexism</td>
<td>2.52 (0.86)</td>
<td>−.62***</td>
<td>−.68***</td>
<td>.23***</td>
<td>.72***</td>
<td>.31***</td>
<td></td>
</tr>
<tr>
<td>2. Disturbance with the gender pay gap</td>
<td>5.35 (1.62)</td>
<td></td>
<td>.54***</td>
<td>−.26***</td>
<td>−.57***</td>
<td>−.08***</td>
<td></td>
</tr>
<tr>
<td>3. Perceptions of gender discrimination against women</td>
<td>6.78 (2.09)</td>
<td></td>
<td></td>
<td>.03</td>
<td>−.63***</td>
<td>−.05*</td>
<td></td>
</tr>
<tr>
<td>4. Perceptions of gender discrimination against men</td>
<td>3.99 (2.19)</td>
<td></td>
<td></td>
<td></td>
<td>.21***</td>
<td>.23***</td>
<td></td>
</tr>
<tr>
<td>5. Perceptions of progress toward gender equality</td>
<td>3.81 (1.09)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.16***</td>
</tr>
<tr>
<td>6. Perceived female representation at top levels</td>
<td>29.97% (18.75%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. N = 2,290.

*p < .10. **p < .05. ***p < .01. ****p < .001.

Measures

We compared pre- and postelection responses on the following measures (see Table 1 for descriptive statistics and correlations).

Modern sexism. As noted, we focused on gender bias expressed through the acceptance or justification of gender inequality, operationalized with the 8-item Modern Sexism Scale (Swim et al., 1995; α = .87). Modern sexism, although unidimensional, captures gender bias in the guise of the denial of ongoing discrimination against women (e.g., “Discrimination against women is no longer a problem in the United States,” reverse scored), antagonism toward women’s demands (e.g., “It is easy to understand the anger of women’s groups in America”), and resentment about purported special favors for women in society (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,” reverse scored). Higher numbers indicate greater modern sexism (1 = strongly agree to 5 = strongly disagree).

Because modern sexism predicts a range of consequential gender-bias-related outcomes (Fiske & North, 2015; also see Georgeac & Rattan, 2018), we also conceptualized it as a potential mediator of indirect effects on the following measures.

Disturbance with the gender pay gap. Participants indicated how disturbed they felt by each of six factual statistics about the gender pay gap (e.g., “across all jobs, women who work full-time earn 78 cents for every dollar a man earns for the same work”; 1 = not at all disturbed to 7 = extremely disturbed; α = .97; Georgeac & Rattan, 2018; full scale in SOM Appendix).

Perceptions of gender discrimination against women and men. Participants indicated how much they thought women and men were “the victims of discrimination in the United States these days,” using separate 10-point scales for each gender (1 = not at all to 10 = very much; adapted from Norton & Sommers, 2011). We analyzed each item separately.

Perceptions of progress toward gender equality. Four items assessed perceived progress toward gender equality in the United States (e.g., “How much improvement has there been in equality for women in the United States in the last 10 years?”; α = .74; adapted from Brodish, Brazy, & Devine, 2008). Higher numbers indicate greater perceived progress toward gender equality (e.g., 1 = little improvement to 7 = a lot of improvement).

Perceived female representation at top levels. Participants estimated the percentage (on a slider scale of 1% increments) of women “in the top levels of U.S. politics (the President, the Vice President, the Cabinet, Congress, governors, and others at the top of the leadership hierarchy in the government),” and “in the top levels of U.S. organizations (CEOs, Boards of Directors, Senior Vice Presidents, and others at the top of the leadership hierarchy in the workplace)” (Georgeac & Rattan, 2018). The 2 items were highly correlated (r = .80, p < .001) and averaged.

We expected modern sexism to predict feeling less disturbed about the gender pay gap and perceiving less discrimination toward women, more discrimination toward men, more progress toward gender equality, and greater female representation at top levels of society.

Potential moderator: Candidate support. We also assessed whether the election’s effect would depend on the candidate supported. We categorized people as supporting Trump (n_preelection = 351 and n_postelection = 432) or Clinton (n_preelection = 622 and n_postelection = 605) based on whom they planned to vote for (in the preelection survey) or had voted for (in both surveys).

Finally, participants provided additional demographics (see SOM) and reported their political ideology (−3 = extremely liberal to +3 = extremely conservative).

Results

Participant gender did not significantly moderate any of the following results (see SOM).

No Main Effect of Survey Time

The timing of the survey (pre vs. postelection) had no significant main effects on the dependent measures, |t| ≤ 1.60, ps ≥ .11, ds ≤ .07 (see Table 2).

Different Effects of Survey Time for Clinton Versus Trump Supporters

The following analyses have a smaller sample size (N = 2,010; n_preelection = 973, n_postelection = 1,037) because some
participants supported alternative candidates or reported they would not or did not vote (see SOM, Table S1 for Ms and SDs).

**Modern sexism.** A $2 \times 2$ analysis of variance yielded a significant Survey Time $\times$ Candidate Support interaction, $F(1, 2,006) = 6.25, p = .012, \eta^2_p = .003$ (see Table 3). Trump supporters endorsed modern sexism significantly more postelection, $M_{\text{Pre}} = 2.93, SD = 0.80; M_{\text{Post}} = 3.05, SD = 0.81; F(1, 2,006) = 4.27; p = .039; \eta^2_p = .002; 95% confidence interval (CI) = [.01, .23], whereas Clinton supporters did not, $M_{\text{Pre}} = 2.26, SD = 0.76; M_{\text{Post}} = 2.20, SD = 0.77; F(1, 2,006) = 2.02; p = .16; \eta^2_p = .001, 95% CI [−.15, .02].

**Perceptions of gender discrimination against women and men.** Candidate support also significantly moderated the effect of survey time on perceived discrimination against women, $F(1, 2,006) = 4.47, p = .035, \eta^2_p = .002$ (see Table 3). Whereas Clinton supporters reported perceiving significantly more discrimination against women postelection, $M_{\text{Pre}} = 7.36, SD = 1.77; M_{\text{Post}} = 7.59, SD = 1.74; F(1, 2,006) = 4.56; p = .033; \eta^2_p = .002; 95% CI [.02, .45]. Trump supporters did not, $M_{\text{Pre}} = 5.77, SD = 2.08; M_{\text{Post}} = 5.63, SD = 2.19; F(1, 2,006) = 1.01; p = .32; \eta^2_p = .001, 95% CI [−.41, .13]. This finding is consistent with a concurrent investigation (Does, Gundemir, & Shih, 2018).

Whereas only Trump supporters expressed greater modern sexism postelection, only Clinton supporters perceived greater discrimination against women postelection. Given the negative correlation between modern sexism and perceived discrimination of women ($r = −.68, p < .001$), these two effects appear complementary.

The survey time by candidate support interaction was not significant for any other measure, $F_s \leq 2.29, ps \geq .13, \eta^2_p \leq .001$ (see Table 3). However, it is possible this interaction had a theoretically meaningful indirect effect on these measures through modern sexism (Rucker, Preacher, Tormala, & Petty, 2011), which we test next.

### Table 2. Comparison of Pre- Versus Postelection Samples Across Variables Measured.

<table>
<thead>
<tr>
<th>Outcome Variables</th>
<th>Preelection M (SD)</th>
<th>Postelection M (SD)</th>
<th>Mean difference (SE)</th>
<th>95% CI [Lower bound, Upper bound]</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>Cohen's d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Modern sexism</td>
<td>2.50 (0.83)</td>
<td>2.54 (0.88)</td>
<td>.04 (.04)</td>
<td>[−.03, .11]</td>
<td>1.21</td>
<td>2,288</td>
<td>.23</td>
<td>.05</td>
</tr>
<tr>
<td>2. Disturbance with the gender pay gap</td>
<td>5.34 (1.57)</td>
<td>5.35 (1.66)</td>
<td>.01 (.07)</td>
<td>[−.12, .14]</td>
<td>1.04</td>
<td>2,288</td>
<td>.31</td>
<td>.01</td>
</tr>
<tr>
<td>3. Perceptions of gender discrimination against women</td>
<td>6.80 (2.02)</td>
<td>6.76 (2.15)</td>
<td>−.04 (.09)</td>
<td>[−.21, .13]</td>
<td>−.48</td>
<td>2,287</td>
<td>.63</td>
<td>.02</td>
</tr>
<tr>
<td>4. Perceptions of gender discrimination against men</td>
<td>3.91 (2.15)</td>
<td>4.06 (2.23)</td>
<td>.15 (.09)</td>
<td>[−.03, .33]</td>
<td>1.60</td>
<td>2,288</td>
<td>.11</td>
<td>.07</td>
</tr>
<tr>
<td>5. Perceptions of progress toward gender equality</td>
<td>3.80 (1.05)</td>
<td>3.82 (1.13)</td>
<td>.02 (.05)</td>
<td>[−.07, .11]</td>
<td>0.36</td>
<td>2,287</td>
<td>.72</td>
<td>.02</td>
</tr>
<tr>
<td>6. Perceived female representation at top levels</td>
<td>29.84% (18.57%)</td>
<td>30.08% (18.93%)</td>
<td>.24% (78%)</td>
<td>[−1.30%, 1.78%]</td>
<td>0.30</td>
<td>2,288</td>
<td>.76</td>
<td>.01</td>
</tr>
</tbody>
</table>

Note. $N = 2,290$. Where df is not a whole number, the test does not assume equality of variances.

**Potential Consequences of Modern Sexism as a Function of Survey Time and Candidate Support**

**Confirmatory factor analysis.** We first tested whether modern sexism represents a distinct construct from the other measures. Suggesting it does, modern sexism loaded onto a different factor from the other measures in a confirmatory factor analysis (see SOM). It was thus informative to test whether modern sexism mediated any indirect effects of survey time on the other measures.

**Indirect effects of survey time through modern sexism.** A meaningful conditional indirect effect can arise in the absence of a significant total effect (e.g., due to power or suppression effects; Rucker et al., 2011; Shrout & Bolger, 2002; Zhao, Lynch, & Chen, 2010). We thus examined indirect effects conditional on candidate support, using a moderated mediation analysis. Specifically, we tested whether an indirect effect from survey time ($X$), via modern sexism endorsement ($M$), to each of the other outcomes ($Y$) depended on candidate support ($W$), which could moderate the $X\times M$ link or the $X\times Y$ link (see Figure 1; model 8 in Hayes, 2013). We effect-coded survey time (preelection $= −1$ and postelection $= 1$) and candidate support (Clinton $= −1$ and Trump $= 1$) and mean-centered the mediator, modern sexism. The coefficients reported below are indirect effects and their bias-corrected, bootstrapped 95% CIs, computed with 10,000 resamples using the PROCESS macro (Hayes, 2013).

For each of the five outcome variables, the indirect effect from survey time via modern sexism endorsement was significantly larger for Trump supporters than for Clinton supporters, as indicated by significant indices of moderated mediation (see Table 4). Specifically, Trump supporters’ greater modern sexism endorsement postelection predicted less disturbance with the gender pay gap, $b = −.06, SE = .03, 95% CI [−.12, .003]; lower perceived discrimination against women, $b = −.09, SE = .04, 95% CI [−.17, .004]; higher perceived discrimination against men, $b = .03, SE = .02, 95% CI [.002, .07]; greater perceived progress toward equality for women, $b = .05, SE = .02, 95% CI [.002, .10]; and greater perceived female representation at top levels in the United States, $b = .45, SE = .23, 95% CI [.02, .92].
No indirect effects were significant for Clinton supporters, \(|b_s| \leq .25\) (see Table 4), because as noted, survey time did not significantly predict Clinton supporters’ expressed modern sexism.

**Critically Evaluating Exploratory Findings With Robustness Checks**

Exploratory correlational research must be evaluated against strong standards of robustness if any insights are to be drawn. Therefore, we conducted robustness checks to address potential concerns regarding (1) the choice of moderator, (2) selection bias across the pre- and postelection samples, and (3) multiple hypothesis testing.

**Choice of moderator.** Our main analyses focused on candidate support as a moderator. Candidate support ought to overlap with political ideology; indeed, more conservative participants tended to support Trump in our sample, though this relationship...
was only modest in size ($r = .56, p < .001$). Our political ideology measure allows us to address two questions regarding robustness.

First, how stable were our results across conceptually related measures of the moderating variable? If the results did not arise solely due to chance, then they should replicate in new analyses replacing candidate support with political ideology. The new analyses replicated the modern sexism findings. We observed a significant interaction between survey time and political ideology on modern sexism, $b = .02, SE = .01, t(2,286) = 2.04, p = .042, 95\% CI [.001, .04]$. Those on the conservative side of the scale (tested at $+1 SD$) expressed significantly greater modern sexism postelection, $b = .05, SE = .02, t(2,286) = 1.98, p = .047, 95\% CI [.001, .09]$, whereas those on the liberal side of the scale (tested at $-1 SD$) did not, $b = -.02, SE = .02, t(2,286) = -0.90, p = .37, 95\% CI [-.07, .03]$. The indirect effects of survey time via modern sexism on the other measures were significant or (in one case) marginally significant among conservatives (see SOM). Thus, our findings on modern sexism hold when we use political ideology rather than candidate support as a moderator. By contrast, our findings on perceived discrimination against women were less robust. While political ideology

<table>
<thead>
<tr>
<th>Outcome Variables</th>
<th>Subsample</th>
<th>A Path</th>
<th>B Path</th>
<th>Indirect Effect</th>
<th>Direct Effect</th>
<th>Difference in Indirect Effects (Index of Moderated Mediation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Disturbance with gender pay gap</td>
<td>Trump supporters (SE)</td>
<td>$b$</td>
<td>.06</td>
<td>.106</td>
<td>-.06</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>Clinton supporters (SE)</td>
<td>$b$</td>
<td>-.03</td>
<td>.106</td>
<td>.03</td>
<td>-.003</td>
</tr>
<tr>
<td>2. Perceptions of gender discrimination against women</td>
<td>Trump supporters (SE)</td>
<td>$b$</td>
<td>.06</td>
<td>-.148</td>
<td>-.09</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Clinton supporters (SE)</td>
<td>$b$</td>
<td>-.03</td>
<td>.148</td>
<td>.05</td>
<td>.07</td>
</tr>
<tr>
<td>3. Perceptions of gender discrimination against men</td>
<td>Trump supporters (SE)</td>
<td>$b$</td>
<td>.06</td>
<td>.59</td>
<td>.03</td>
<td>.10</td>
</tr>
<tr>
<td></td>
<td>Clinton supporters (SE)</td>
<td>$b$</td>
<td>-.03</td>
<td>.59</td>
<td>.02</td>
<td>.08</td>
</tr>
<tr>
<td>4. Perceptions of progress toward gender equality</td>
<td>Trump supporters (SE)</td>
<td>$b$</td>
<td>.06</td>
<td>.82</td>
<td>.05</td>
<td>-.03</td>
</tr>
<tr>
<td></td>
<td>Clinton supporters (SE)</td>
<td>$b$</td>
<td>-.03</td>
<td>.82</td>
<td>-.03</td>
<td>.03</td>
</tr>
<tr>
<td>5. Perceived female representation at top levels</td>
<td>Trump supporters (SE)</td>
<td>$b$</td>
<td>.06</td>
<td>7.81</td>
<td>.45</td>
<td>.11</td>
</tr>
<tr>
<td></td>
<td>Clinton supporters (SE)</td>
<td>$b$</td>
<td>-.03</td>
<td>7.81</td>
<td>-.25</td>
<td>-.24</td>
</tr>
</tbody>
</table>

Note. $N = 2,010$. The A and B paths refer to the paths depicted in Figure 1. CIs were computed with the bias-corrected bootstrap method with 10,000 resamples. IV = survey time; W = candidate support; M = modern sexism (mean centered); CI = confidence interval.
marginally moderated the effect of survey time on perceived discrimination against women, \(b = -0.5, SE = 0.3, t(2,286) = -1.86, p = .064, 95\% CI [-0.9, 0.03]\), survey time did not have a significant effect for either liberals, \(b = 0.7, SE = 0.6, t(2,286) = 1.25, p = .21, 95\% CI [-0.4, 0.19]\), or conservatives, \(b = -0.8, SE = 0.6, t(2,286) = -1.38, p = .17, 95\% CI [-0.2, 0.03]\).

A second question we can address with the political ideology measure is whether there is an effect of candidate support on our dependent variables above and beyond political ideology. For Trump supporters, results revealed statistically significant and education differed marginally. We addressed this issue in two ways (see SOM).

First, we redid our main analyses controlling for each of these variables in turn, as well as for both variables simultaneously. None of the results previously reported changed meaningfully. Second, we used propensity score matching, a technique widely used in nonexperimental research to simultaneously correct for demographic differences between two samples. For Trump supporters, results revealed statistically indistinguishable demographics pre- versus postelection (ps ≥ .15), suggesting that the results reported above for Trump supporters are reliable. For Clinton supporters, results revealed potentially confounding demographic differences across pre- and postelection samples but accounting for these differences produced similar results as above: Clinton supporters reported perceiving marginally greater discrimination against women postelection. Thus, selection bias cannot account for the results.

Multiple hypothesis testing. Recall that candidate support moderated the effects of survey time on two of the six measures. Conducting the same moderation test on multiple measures raises the family wise error rate (FWE) above \(\alpha = .05\). To quantify how much, we conducted the Bonferroni adjustment, which is the most well-known, and the Tukey–Ciminera–Heyes (TCH) adjustment, which is designed for correlated measures like ours. The results delineate a range of possible FWEs because, in our situation, Bonferroni is too conservative and TCH is too liberal (Sankoh, Huque, & Dubey, 1997).

The survey wave by candidate support interaction on modern sexism remained significant or marginally significant after adjusting for multiple testing, \(\alpha = .029\) (THC) to .072 (Bonferroni). Thus, this effect was robust.

The survey wave by candidate support interaction on discrimination against women was nonsignificant or marginally significant after adjusting for multiple testing, \(\alpha = .084\) (THC) to .21 (Bonferroni). Thus, this effect was again less robust.

Overall evaluation of robustness checks. To summarize, among Trump supporters, the effect of survey time on reported modern sexism was robust across four robustness checks, as were the indirect effects of survey time on other outcomes through modern sexism. These findings can thus be considered reliable. In contrast, among Clinton supporters, the effect of survey time on perceived discrimination against women was less robust and thus cannot be deemed reliable (see Does et al., 2018).

General Discussion

Did Americans express different amounts of gender bias before versus after the 2016 U.S. presidential election? Our findings suggest the answer may depend on which candidate they supported. Whereas Clinton supporters’ expressions of gender bias were not reliably different postelection, Trump supporters showed a small but statistically significant increase in modern sexism postelection, which in turn predicted reporting lower disturbance with the gender pay gap, perceiving a lower prevalence of discrimination against women but more against men, perceiving greater progress toward gender equality, and reporting greater female representation at top levels of U.S. politics and organizations. These results were reliable across four robustness standards, thereby offering evidence that the 2016 U.S. presidential election outcome could have shaped gender-bias expression.

Theoretical Implications

To our knowledge, the present research represents the first large sample, direct investigation of changes in gender-bias endorsement in the wake of a real-world historic event. Although the effects we observed could be considered small by traditional social psychology standards (Richard, Bond, & Stokes-Zoota, 2003), we suggest they are meaningful. Intergroup attitudes such as modern sexism are difficult to change (Clark, Wegener, Briñol, & Petty, 2009; Devine, 1989; Nosek et al., 2007), suggesting that even a small shift in their expression within 12 days could be theoretically important (Prentice & Miller, 1992).

The present research also expands our understanding of what factors may influence gender-bias expression. By examining a one-time historic event, we move beyond the intrapersonal, interpersonal, or cultural factors traditionally examined (Fiske et al., 2002; Fiske & North, 2015; Glick et al., 2000; Swim et al., 2001). Additionally, whereas intergroup research has investigated the effects of political events signaling societal change (Columb & Plant, 2011; Effron...
porters may have interpreted his election as a signal that correctness (Conway, Repke, & Houck, 2017), Trump sup-

Miller & Effron, 2010). Given Trump’s opposition to “political correctness” (Conway, Repke, & Houck, 2017), Trump sup-

porters may have interpreted his election as a validation of the in- group prototype he showcased, they may have expressed greater modern sexism postelection to approximate his perceived positions on gender issues. By contrast, Clinton sup-

porters’ gender attitudes may not have changed insofar as they did not perceive Trump as an in-group prototype.

A second possibility is that Trump’s election affected perceptions of social norms about gender bias. Research con-
ducted concurrently to ours indeed found that explicit prejudice against groups negatively targeted by Donald Trump’s campaign (e.g., Muslims) was perceived as more acceptable postelection (Crandall, Miller, & White, 2018)—although this research did not assess norms about gender bias broadly. Building on this perspective, given the accusations of sexism throughout the campaign, Trump’s election may have signaled to his supporters that gender equality is not a central concern among other Trump supporters. Consequently, they may have “tuned” their gender attitudes toward this perceived in-group norm and expressed greater modern sexism (Echterhoff, Higgins, & Levine, 2009; Hardin & Conley, 2001; Hardin & Higgins, 1996). Clinton supporters would not engage in such “social tuning” (Lowery, Hardin, & Sinclair, 2001) because Trump’s election did not inform them about the gender attitudes of other Clinton supporters—their refer-
ence group.

A related possibility is that a shift in the perceived norms about gender bias did not actually affect Trump supporters’ attitudes per se but rather increased their willingness to express attitudes they already had. People generally strive to inhibit themselves from expressing views that could seem prejudiced—unless they believe they can express such views without discrediting themselves (Crandall & Eshleman, 2003; Miller & Effron, 2010). Given Trump’s opposition to “political correctness” (Conway, Repke, & Houck, 2017), Trump sup-
porers may have interpreted his election as a signal that expressing “politically incorrect” views about gender was no

longer discrediting and may thus have felt licensed postelection to voice gender-related attitudes that they previously kept pri-

vate. For this explanation to fit our data, Trump supporters would have to be more likely than Clinton supporters to hold modern sexist views about gender preelection or to interpret the election as a license to express modern sexism.

Finally, the observed shift in people’s perceptions of gender in society could reflect people’s motivation to justify the social and political systems in which they are embedded—particularly when these systems’ legitimacy is questioned (Jost & Banaji, 1994; Jost & Hunyady, 2003, 2005; Kay et al., 2009). Trump supporters likely interpreted his election as a victory of the better candidate, rejecting allegations that America treated Clinton unfairly because of her gender. They may then have supported this interpretation by denying the existence of gender discrimination in the U.S. social and political system, dismissing women’s demands as illegitimate and resenting them for asking for purported special favors—that is, by endorsing modern sexism (Swim et al., 1995). In contrast, Clinton supporters may not have felt the same tendency to justify the system upon witnessing the defeat of a woman they presumably perceived as highly competent.

These different possibilities offer fruitful directions for future research using different sources of data, events, and facets of gender bias (e.g., ambivalent sexism; Glick & Fiske, 1996) to determine the processes by which historic events may influence gender-bias expression.

Limitations and Future Directions

Of course, this work has limitations. First, although previous research shows that gender-biased attitudes predict behavior (Fiske & North, 2015), the present study’s focus on attitudes cannot speak to whether the election outcome shaped gender-biased behavior (e.g., interpersonal interactions). Second, because it is impossible to experimentally manipulate one-time historic events, this work cannot draw causal conclusions about the effects of the election outcome on gender-bias expression and should be considered suggestive until confirmatory work is conducted. However, the quasi-longitudinal nature of this study ensures that reverse causation is impossible, and the narrow time window during which the study was conducted minimizes the possibility that unmeasured variables may better explain the reported attitudinal shifts than the election outcome. Third, we recruited different participants pre- and post-election, which, unlike a longitudinal design, prevents us from examining whether gender-bias endorsement among the same participants increased postelection. However, compared to a longitudinal design, this study’s cross-sectional pre-/postelection design has the advantage of minimizing the risk of consistency bias and demand characteristics, and the propensity-score analysis reduces concerns that differences in the pre- and post-samples’ observed characteristics confounded our results. Despite these limitations, we suggest that exploratory correlational work, when taken as such and held to high standards of robustness, can meaningfully inform our understanding of
whether and how historic events (e.g., elections) could influence intergroup attitudes.

Conclusion
This research informs a topical debate about whether the 2016 presidential election affected gender-bias expression in the United States. Exploratory analyses suggest that Trump supporters, but not Clinton supporters, reported increased modern sexism post-versus pre-election. This increase in turn predicted perceiving less discrimination against women but more against men, perceiving greater progress toward gender equality, believing more women occupy top levels of politics and organizations, and reporting less disturbance with the gender pay gap. Together, these results, which held against four robustness standards, emphasize the importance of considering historic events—not just individuals, dyads, groups, or cultures—for understanding the psychology of intergroup attitudes.

Authors’ Note
Oriane A. M. Georgeac and Aneeta Rattan contributed equally.

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Notes
1. Uploaded on the Open Science Framework: https://osf.io/vb637/?view_only=d94baaccee89426b8ec95f0085f41bfde
2. The results’ direction and significance level were unchanged when retaining too fast responses.

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