

# How Messages About Gender Bias Can Both Help and Hurt Women's Representation

American Politics Research

2019, Vol. 47(3) 601–627

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DOI: 10.1177/1532673X18795608

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## Abstract

Gender bias in elections is both a source of debate in the political science literature and a prominent topic in U.S. political discourse. As a result, Americans are exposed to differing messages about the extent to which women face disadvantages in their campaigns for office. We argue that such messages can have differing effects—some of which benefit female candidates, but others that may perpetuate the gender gap in political ambition. Using a survey experiment administered on samples of the U.S. public, campaign donors, and college students, we show that messages portraying women as facing gender bias boosts female candidates' support and young people's willingness to engage in campaign activism on their behalf. Simultaneously, it does not affect female candidates' fundraising ability. But paradoxically, such messages also reduce young women's confidence in their own ability to run a political campaign. These results suggest important implications for women's underrepresentation.

## Keywords

women and politics, gender, bias, stereotypes, media, experiment, candidate, campaigns, elections

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Hillary Clinton's loss in the 2016 presidential election produced a deluge of speculation about the prospects of a woman ever winning the U.S. presidency. In postelection analyses, some noted that "unconscious sexism" might have been responsible for Clinton's defeat.<sup>1</sup> Others suggested that Clinton lost because women "suffer more than male candidates" when they are seen as untrustworthy, a perception that bedeviled the former senator and secretary of state throughout the campaign.<sup>2</sup> One common refrain was that Clinton was just the latest female candidate to have "faced more resistance, and received less support" than their male counterparts.<sup>3</sup> Clinton herself concluded that "misogyny played a role" in her defeat.<sup>4</sup> Meanwhile, others argued that her Electoral College loss had little to do with gender and was instead largely about partisanship and other dynamics.<sup>5</sup> And although less widespread, still other analyses suggested that being a woman might have given Clinton an advantage,<sup>6</sup> especially in an era in which many strategists had begun to view women as stronger candidates than men.<sup>7</sup>

These postmortems were hardly surprising, given that debates over the role of gender were a staple of 2016 campaign coverage.<sup>8</sup> And while Clinton's campaign was historic, the focus on her electoral prospects as a woman was not unusual. At a time when women occupy less than one quarter of most major political offices in the United States, the extent to which gender bias impedes female candidates is a prominent part of public discourse surrounding U.S. elections. Stories about female candidates often focus on whether discrimination, stereotypes, or other factors among voters makes it more or less difficult for women to win office.<sup>9</sup>

Our question is how exposure to discourse about gender bias can affect political attitudes and behavior. This is a critical matter, because such debates may affect people's support for female candidates, as well as the willingness of men and women to potentially run for office. And although we emphasize the delivery of these messages via the news media, people can also be exposed to those discussions in the workplace, at home, through social media, in fundraising brochures, in campaign speeches, and in classrooms. As such, this study, the first of its kind, offers a view of how those messages can affect political behavior and attitudes.

We draw on the political communication, psychology, and women and politics literatures to develop expectations about how discourse about the prospects for female candidates can affect a wide range of political behaviors. We argue that when the media portray women as facing systematic discrimination in elections, female candidates can gain support relative to coverage that paints a more optimistic picture of the electoral landscape. We show experimentally that the end result is to help women win additional votes and mobilize people to engage in campaign activism on their behalf. We also

show that, while it does not boost their fundraising from donors, coverage that frames women as facing gender bias does not hurt female candidates' efforts to raise money. At the same time, we also find that such coverage simultaneously undermines the confidence that young women have in their ability to run an effective campaign themselves. This collection of findings suggests that public discourse emphasizing gender bias may benefit female candidates in the short run but might simultaneously make it more difficult to close the gender gap in political ambition.

Our findings come from a survey experiment conducted simultaneously among three different samples, allowing us to explore the heterogeneous effects of political communication. Using the same instrument, we find minimal effects among donors, while finding important effects on different behaviors for a cross-section of U.S. adults and college students. Our design thus permits us to capture a range of relevant effects among different types of political actors who play distinctive roles in contemporary elections.

## **Debates over the Causes of Women's Under-Representation**

Despite substantial gains in recent decades, women continue to be numerically underrepresented in American politics. As of 2018, 20% of the U.S. Congress is made up of women. Just one quarter of state legislators are women. Women hold the governor's offices in only six of the 50 states, and just 20 mayors in the country's 100 biggest cities are women.<sup>10</sup>

Aside from structural factors such as the absence of gender quotas (e.g., O'Brien & Rickne, 2016) and high re-election rates among (mostly male) incumbents (Schwindt-Bayer, 2005), the prevailing explanation for the continued underrepresentation of women in the United States is the gender gap in political ambition. That is, even controlling for objective qualifications, women are less likely than men to run for office (e.g., Lawless & Fox, 2010). This disparity has multiple roots, including childhood socialization (Lawless & Fox, 2010), patterns of political recruitment (Fox & Lawless, 2010; Sanbonmatsu, 2006), an aversion to electoral competition (Kanthak & Woon, 2015; Schneider, Holman, Diekman, & McAndrew, 2015), and an ideological mismatch with the Republican Party (Thomsen, 2015).

At the same time, scholars have been engaged in a robust debate about the extent to which gender bias on the campaign trail makes it harder for women to win when they do run. A large literature argues that social stereotypes of women lead voters to view female candidates as insufficiently tough, lacking leadership skills, or poorly suited in handling the "masculine" issues, such as crime and national security, that are often at the center of political debates

(e.g., Alexander & Andersen, 1993; Bauer, 2015; Bell & Kauffman, 2015; Huddy & Terkildsen, 1993; Lawless, 2004; Rosenwasser & Dean, 1989). Media coverage that treats female candidates less seriously than their male opponents contributes to this disadvantage (e.g., Aday & Devitt, 2001; Braden, 1996; Kahn, 1996). And more recent work has suggested that implicit bias, at least among some voters, may impose penalties on female candidates (Mo, 2015; Ono & Burden, 2018). Although none of this prevents women from winning office, it raises a series of barriers that make it harder for women to succeed (Dittmar, 2015; Fulton, 2012).

Other work has argued that gender bias presents few obstacles, pointing to evidence that women who run raise just as much money, win just as many votes, and are elected just as often as men (e.g., Burrell, 2014; Lawless, 2015). Several recent studies, both experimental and observational, suggest that stereotypes do not harm female candidates' prospects, and that they do not lead voters to hold women to higher standards on the campaign trail than their male counterparts (e.g., Brooks, 2011; Brooks, 2013; Dolan, 2014; Fridkin & Kenney, 2014; Hayes 2011; Hayes, Lawless, & Baitinger, 2014). Recent work also finds inconsistent, small, or nonexistent differences in the news coverage of male and female candidates (Atkeson & Krebs, 2008; Fridkin & Kenney, 2014; Hayes & Lawless, 2016). In part because of the increasing number of female candidates, changing societal views, and increasing partisan polarization, gender bias appears to have little direct causal leverage for explaining women's underrepresentation.

The upshot is that the academic literature offers very different ways to frame the prospects of women's fortunes in American elections. And increasingly, this discussion has played out in public discourse, including the media.<sup>11</sup> One reason is the news media's love affair with the horse race (Iyengar, Norpoth, & Hahn, 2004; Patterson, 1994), which encourages journalists to frame stories in terms of the strategic imperatives for candidates. In particular, narratives about women facing disadvantages because of gender bias taps into the news value of conflict, which makes those stories attractive for journalists.

We are of course not suggesting that gender bias dominates the news environment; such coverage is less common than other types of election reporting focused on the polls, candidate events, and so forth (Hayes & Lawless, 2016). But the topic of gender bias in elections—whether overt, as in many of the news articles surrounding the 2016 campaign, or more subtle and indirect—arises often enough to suggest the possibility of effects. Moreover, the issue clearly has become a part of political discussions beyond the news (i.e., through interpersonal networks, social media, classroom settings, candidate speeches, fundraising emails, and other forms of political communication).

As such, in our experiment, we use the media as one plausible venue for exposure to these messages, but we emphasize people can be exposed to them in various ways.

## Hypotheses

We expect that the framing of the landscape facing female candidates can have important effects on political behavior. One reason is a body of previous research showing that media coverage has strong effects on citizens' causal attributions of other political and social problems. Story frames about poverty, for instance, can influence whether citizens blame societal factors or individuals themselves for economic misfortune (Iyengar, 1991). The framing of mass shootings in the news can affect support for gun control laws (Haider-Markel & Joslyn, 2001). News coverage also influences who citizens hold responsible for personal financial problems (Abramowitz, Lanoue, & Ramesh, 1988).

The same could be true for the way people use information they encounter to explain the causes of women's under-representation. In a 2015 study, Dowling and Miller note that large numbers of Americans erroneously believe that when women run for office, they are less likely than men to win (Dowling & Miller, 2015). In an experiment, they showed respondents an informational video highlighting the fact that women who run for office are just as likely to win as men. Compared to a control group, subjects who saw the video became significantly less likely to believe that women have a lower chance of winning than men, attitudes that persisted even weeks after exposure to the message. Thus, public opinion may be responsive to information about the presence and extent of gender bias.

Beliefs about the reasons for women's under-representation may just be the tip of the iceberg, however, and we focus on three ways that exposure to media coverage framed around gender bias could affect support for female candidates. First, we expect that when women are portrayed as facing gender bias in elections, they will receive more support from the public. In other words, relative to media coverage that frames women as facing a level playing field or even having an electoral advantage, stories emphasizing voter bias against female candidates will lead women to do better. Theoretically, this emerges from the idea of an "underdog" effect, which may lead voters to be more supportive of a candidate facing as systematic disadvantage (Ceci & Kain, 1982; Fleitas, 1971). This could stem from multiple sources, including people's affinity for an individual perceived as struggling (Goldschmied & Vandello, 2009; Kim et al., 2008) or a sense of justice (Skitka & Tetlock, 1992). For the present purposes, we are focused not on the specific

mechanisms but instead on identifying whether portraying female candidates as facing varying degrees of bias (or an advantage) results in differences in support from voters.

Our second expectation is that when female candidates are portrayed as facing gender bias, it will encourage campaign activism—such as volunteering and encouraging other citizens to support a candidate—on their behalf. Our expectation here, however, is limited to a subset of the electorate—in particular, young people. That is because young people, especially those who are college educated, form the core of the volunteer base for many contemporary political campaigns (Enos & Hersh, 2015).<sup>12</sup> Thus, because college students tend to be particularly responsive to recruitment efforts, we expect this to be the group whose willingness to engage in campaign activism responds to news stories with varying portrayals of female candidates' fortunes. As a result, we focus our empirical analysis of campaign activism on our sample of college students.

Our third expectation focuses on fundraising. By the “underdog” logic, donors should be more likely to give money to female candidates who are portrayed as being at a disadvantage than when they are portrayed as facing a level playing field or holding an advantage. Indeed, there are some indications that consultants and groups that work on behalf of female candidates may believe this to be true. In 2014, for instance, an official from Emily's List, which supports prochoice women running for office, told the *New York Times* that publicizing episodes of sexism against women was a major fundraising tool.<sup>13</sup> Claims of bias against women have also been highlighted in fundraising communications distributed by other organizations.<sup>14</sup>

Nonetheless, donors may actually be less likely to be affected by this type of message than the general public. Donors are highly engaged with politics and thus likely to have well-defined partisan and/or ideological preferences, making them more resistant to media effects (e.g., Abramowitz, 2011; Taber & Lodge, 2006; Zaller, 1992). Donors are also more likely to be strategic, which could mean that a message portraying a female candidate as facing bias might make the donor to believe that their money would be better spent elsewhere. Both of these dynamics make it less likely that we will find effects among donors than among voters or potential campaign volunteers.

These expectations all suggest that female candidates would benefit—or at least not be harmed, in the case of fundraising—when news coverage frames them as facing gender bias compared with coverage that describes the electoral landscape more favorably. In the context of individual elections, that augurs favorably for women's representation.

But our fourth expectation is that there may be a downside: When female candidates are portrayed as facing systematic disadvantages, it may erode other women's confidence in their ability to run campaigns of their own. Given Fox and Lawless's (2011) findings that women are less likely to believe themselves to be qualified, such portrayals may amplify beliefs that women have a harder time competing in elections. When those attitudes are activated, this could lead to lower levels of confidence among women in their ability to orchestrate a successful campaign, a critical precursor to actually launching a bid for office. If we find this to be the case, it would mean that portrayals of women as facing electoral bias could contribute to the long-term gender gap by undermining women's confidence in their ability to run for office in the future.

As with our focus on campaign activism, we test our electoral confidence hypothesis among college students.<sup>15</sup> This is for two reasons. First, Fox and Lawless (2014) show that the gender gap in political ambition is established by the time individuals reach college, making this a relevant period to explore young women's perspective about running for office. Second, the vast majority of U.S. adults have had no thoughts of running for office in the future. Many are well past the time one would start a political career, and many lack a college education, which, while not technically required to run for public office, is almost universal for elected officials (Pew Research Center, 2017). And although the average American college student will never run for office either, they are more likely to consider doing so than the average adult and will be somewhat better positioned to do so. Thus, focusing on the electoral confidence on this "next generation" of potential candidates allows us to study the effects of gender-focused messages among a population for whom they could be particularly relevant.<sup>16</sup>

To recap, we have four empirical expectations. The more that media coverage emphasizes gender bias that puts women at a disadvantage, the more (a) voters will support a female candidate and (b) people will express a willingness to engage in campaign activism on her behalf. In the studies that follow, we test the electoral support hypothesis among a representative sample of the U.S. public and the campaign activism hypothesis among a national sample of college undergraduates. We also test whether media emphasis on gender bias (c) leads people to give more money to female candidates, a hypothesis we examine with a sample of donors to U.S. campaigns. Finally, we expect that media coverage emphasizing gender bias will (d) lower young women's electoral confidence relative to more favorable portrayals of the landscape, which we test with our sample of undergraduates. We describe our multifaceted research design in the next section.

## Research Design

Our wide array of expectations requires an unusual research design. A typical approach in experimental studies of political behavior is to administer a survey to a single sample, exploring perhaps several different dependent variables within that same sample. A second study might be conducted with a second sample, but typically with the goal of making inferences about the same population. For the reasons we described, messages regarding gender bias in elections should not only affect various political behaviors, but those effects should occur among different populations. And because the subsets of people of concern to our study comprise a small portion of the population at large, our approach requires us to conduct surveys with multiple samples.

To do this, we designed a survey experiment that was conducted during the final weeks of the 2014 midterm elections. The survey was administered in late October to three different samples—a nationally representative sample of American adults, a group of past donors to political campaigns, and a diverse sample of undergraduates at more than two dozen colleges and universities across the country. This approach allows us to study a variety of effects on outcomes relevant to women's representation among the groups for whom those outcomes should be relevant.

### *U.S. Adult Sample*

Our adult sample was drawn and administered by the survey firm YouGov. For standard U.S. adult samples, YouGov draws on its large “opt-in” panel and uses a variety of different methods to approximate a random draw of the American public, utilizing a proprietary “sample matching” process targeted to a range of variables (gender, age, race, education, party identification, ideology, and political interest). The data are then weighted back to expected population proportions based on demographics from the 2010 American Community Survey.<sup>17</sup> Several studies have validated online samples as being at least as accurate as telephone surveys today (Berrens, Bohara, Jenkins-Smith, Silva, & Weimer, 2003; Sanders, Clarke, Stewart, & Whiteley, 2007; see also Rivers, 2006). For our sample, we interviewed 1,019 individuals. Cell-based weights were used so that each cell best reflects the demographics of the population at large.

### *Donors*

The donor sampling carried out by YouGov was based on 2012 political donations reported to the Federal Election Commission,<sup>18</sup> which was compiled and validated by Adam Bonica (2013) for the DIME (Database on

Ideology, Money in Politics, and Elections) database<sup>19</sup> and then appended to the records of YouGov opt-in panel participants. Rather than sample randomly from the full pool of donors in the YouGov panel—whereby small donors would be vastly overrepresented relative to their actual dollar power in campaigns—we drew more heavily from donors with the highest FEC-reported donations.<sup>20</sup> Leaning independents were coded as being affiliated with the party toward which they lean, but we excluded from the sample pure independents (a relative rarity among large political donors). We also took steps to make sure that the donors in our experimental treatments were roughly equally distributed by gender and partisanship.<sup>21</sup> In the end, this process produced a sample of 1,131 validated donors. The average self-reported contribution was US\$2,335 during the 2012 election cycle, with a median donation of US\$775.<sup>22</sup> Three quarters of the donors had contributed US\$300 or more, whereas 22% had contributed US\$2,000 or more.

### *Undergraduate Sample*

Our third sample is a large group of U.S. undergraduates, on whom we focus our campaign activism and electoral confidence expectations. It consists of 1,494 students from 28 different colleges and universities across the United States.<sup>23</sup> No single institution accounted for more than 16% of the total sample, assuring us an unusually diverse subject pool. Many were recruited for participation from within political science courses, whereas some were from other fields such as business or psychology.<sup>24</sup> Forty-three percent identified as Democrats and 27% identified as Republicans, which is very close to the national distribution of party identification among 18- to 25-year olds.<sup>25</sup> Just over half of our respondents are women.

### *Comparing the Three Samples*

Table A1 in Appendix A shows that our samples differ from each other in expected ways. For example, donors are far wealthier, more engaged in politics, and more strongly partisan than members of the public at large and college students. In addition, Table A2 in Appendix A shows that the political participation patterns of the men and women in our control group in each sample differ in the manner predicted by prior literature.

### *Treatments*

Respondents in our three samples each took a nearly identical online survey, with just a few minor differences between the questionnaires.<sup>26</sup> The survey

began with basic demographic and attitudinal questions, and then respondents read a newspaper article about a fictional congressional race. They then answered questions about the campaign described in the article. All subjects were guaranteed anonymity, and were fully debriefed at the end of the survey.

The experimental treatment involved the manipulation of the content of the news story with the headline “Primary Results Set Up Race for U.S. House Seat between State Legislators.” The article described an upcoming general election race for an open U.S. House seat between two candidates, Amy Haskins and Mark Johnson. Haskins is described a member of the State Assembly and small business owner who won her party’s nomination in the recent primary. Johnson is described as a former district attorney and current state legislator who won his party’s nomination. The story contains a description of the race, with comments by party leaders about each of the candidates and their (not-clearly partisan) issue positions. The news article ends with, “With the majority party of the U.S. Congress hanging in the balance, this race is being watched closely at the national level as well as within the state.”

Respondents were randomly assigned to read one of the five versions. Control group respondents read a version of the story that included no explicit discussion of gender. The remaining subjects read an article that contained a varied discussion of the female candidate’s (Haskins) prospects, given her gender. We accomplished these manipulations through revisions to the subhead that appeared directly beneath the main headline, a paragraph discussing whether or how being a woman would affect the likelihood of Haskins winning, and a quote from a political analyst. This resulted in what we call the Disadvantage, Mixed, Parity, and Advantage treatments.

In the Disadvantage treatment, Haskins is described as facing electoral challenges because she is a woman. In the Mixed treatment, she was described as potentially being affected by gender dynamics, with a mix of suggestions as to whether those effects would likely be helpful, neutral, or harmful. In the Parity condition, Haskins was described as neither benefiting nor being harmed electorally by her gender—essentially that the playing field was level. In the Advantage treatment, she was described as benefiting by being a woman. Appendix B presents an example of the news story and displays the key variations to the subhead and two key paragraphs in the various treatments. Our focus is whether these different portrayals of Haskins’s prospects, because of her gender, lead to different attitudes and behavior among respondents.

To be sure, the subheads draw more attention to gender than many news articles about female candidates do. That may raise questions about whether

the treatments are a realistic approximation of actual news coverage. Given many of the examples we cited above, we think these stories are not unlike the news content about women in U.S. elections that consumers encounter on a regular basis, giving the treatments' reasonable external validity. But perhaps more importantly, the overt references to gender are quite common in public discourse beyond mainstream news coverage. Americans are exposed to debates about gender bias in politics in their own interpersonal discussions, through social media, and in popular culture. Given that we are interested in the effects of exposure to these discussions in general—not solely in the news media—we think these stories provide a fair simulation of the way people encounter debates about gender and politics in a variety of venues.

These four treatments are intended to represent a continuum that communicates varying degrees of gender bias in elections. Although we focus most of our attention below on the results of the Disadvantage and Advantage treatments, we generally expect the effects of the Mixed and Parity treatments to fall in between. To the extent that respondents in the two “moderate” treatments respond in ways that place them toward the middle of the continuum, we can have more confidence that our treatments effectively communicated differing levels of gender bias and that those discussions have the expected consequences for political attitudes and behavior.

It is also important to point out that our Disadvantage treatment mimics what many Americans already believe about the landscape for female candidates. This is evident in our manipulation checks, in which respondents in the control group and Disadvantage treatment were equally likely to say that in a scenario where male and female candidates were equally qualified, the man would be more likely to win (see Appendix E; Dowling & Miller, 2015). Thus, we generally have modest expectations for the ability of our experiment to produce differences between the control and Disadvantage conditions. As a result, in addition to discussing treatment effects relative to the control, we also emphasize comparisons among the treatments themselves.

Finally, we designed the survey so that partisan respondents always share the party affiliation of Haskins (and thus never the male candidate). This means most respondents will already have a naturally high level of support for the female candidate (for pure independents, the female candidate's party was randomly assigned).<sup>27</sup> That approximates the situation voters face in most real-world general elections, where partisanship weakens any effects of candidate gender (Dolan, 2014; Hayes & Lawless, 2016). In that respect, our analysis constitutes a hard test for finding effects.<sup>28</sup>

## Results

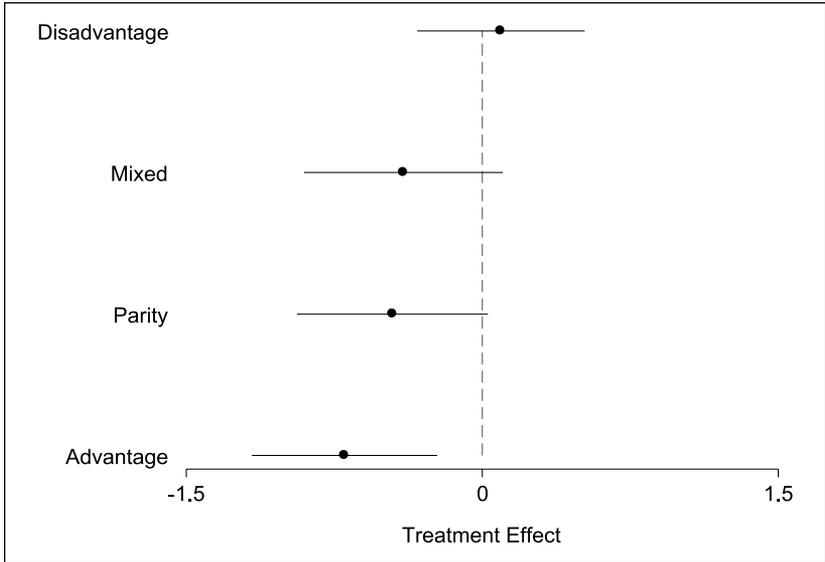
### *Electoral Support*

We begin by looking at support for the female candidate in our general population sample. After reading the news article, respondents were asked about their relative preference for the candidates. Through a series of branching questions, respondents could indicate anything from an “extremely strong” preference for Mark Johnson (coded 1) to an “extremely strong” preference for Amy Haskins (coded 9). (See Appendix C in the Supplementary Materials for details on question wording and scale construction for all of our measures.) We use this continuous measure of relative candidate support rather than a vote choice question because all partisan and partisan-leaning respondents share partisanship with Haskins; thus, we would expect people to be more favorable toward her than not. The question of interest is whether the degree of support for Haskins varies across treatments, which can be gauged by our continuous measure.

In Figure 1, we present the effects for each of our experimental conditions—that is, the difference between the treatment and the control from a regression model (available in Appendix Table D1). Higher numbers indicate more support for Haskins, the female candidate.

In the top row, we find that support for Haskins is not significantly higher than the control when she is portrayed as facing a disadvantage than when the news story does not focus on gender at all. As we discussed earlier, one likely explanation, confirmed by our manipulation checks, is that people already believe women are disadvantaged in American elections—absent other information, many people assume gender bias puts women at a disadvantage (e.g., Dowling & Miller, 2015). But in what offers a cleaner test of our hypothesis, we find that compared to each of the other treatments—Mixed, Parity, and Advantage—support for Haskins is higher in the Disadvantage treatment. Below the figure, we present  $p$  values for Wald tests of differences between the coefficients on the treatments. Compared to every other treatment, electoral support is statistically significantly higher when Haskins is described as facing gender bias. Moreover, the overall monotonic pattern in the figure is what we would expect if portrayals of gender bias influence respondents’ preferences—as the treatments increasingly characterize women as facing disadvantages, the higher their support.

Does that result come from, as we hypothesized, an “underdog” effect, with voters rallying to support a politician assumed to face uphill battle? If so, and if it represents a general pattern rather than one tied to female candidates only, we would expect to see relative support for the male candidate increase between the Parity and Advantage conditions, given that the male



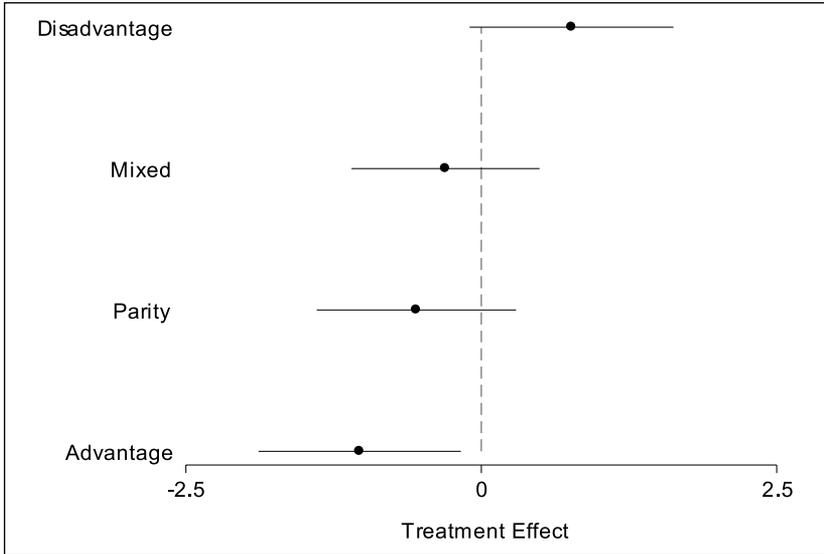
**Figure 1.** The effect of portrayals of gender bias on support for a female candidate.

Note. Point estimates are from a regression model (the control is the omitted category), with 95% confidence intervals. Model appears in the appendix. Wald tests: Disadvantage versus Mixed,  $p = .04$ ; Disadvantage versus Parity,  $p = .02$ ; Disadvantage versus Advantage,  $p = .00$ ; Mixed versus Parity,  $p = .83$ ; Mixed versus Advantage,  $p = .26$ ; Parity versus Advantage,  $p = .34$ .

candidate would be the underdog in the latter condition. The direction of the result is consistent with that theory, although the difference is not statistically significant ( $p = .34$ ). Of course, this is not an ideal test, because respondents never share the partisanship of the male candidate, which prevents us from observing whether an underdog effect might occur among copartisans with a man. Nonetheless, the results suggest that the more severe the disadvantage a female candidate is portrayed as facing, the more her support goes up, and future work could clarify whether the same “underdog” effect could also occur in a different scenario for a male candidate.

### Campaign Activism

Voting behavior may not be the only way that news stories emphasizing gender bias could affect female candidates. Such portrayals could also help women recruit volunteers and encourage individuals to engage in campaign activism on their behalf. Because volunteers tend to come disproportionately



**Figure 2.** The effect of portrayals of gender bias on campaign activism on behalf of a female candidate.

Note. Point estimates are from a regression model (the control is the omitted category), with 95% confidence intervals. Model appears in Appendix D. Wald tests: Disadvantage versus Mixed,  $p = .01$ ; Disadvantage versus Parity,  $p = .00$ ; Disadvantage versus Advantage,  $p = .00$ ; Mixed versus Parity,  $p = .55$ ; Mixed versus Advantage,  $p = .09$ ; Parity versus Advantage,  $p = .28$ .

from young people and college students, we focus on the treatment effects among our national sample of undergraduates.

The dependent variable is an index built from a series of questions about a respondent's likelihood of volunteering on each candidate's campaign, talking to others to convince them to vote, and helping to raise money for the campaign. We added the values of the measures for the three items for each candidate, then subtracted the score for Mark Johnson from that of Amy Haskins. That resulted in a "net activism" index, ranging from  $-18$  (i.e., maximum activity for Johnson and none for Haskins) to  $+18$  (i.e., maximum activity for Haskins, and none for Johnson).

In Figure 2, we again display the treatment effects for each condition (compared to the control). As hypothesized, the disadvantaged portrayal generates the highest level of campaign activism on behalf of Haskins. Compared to the control, it falls just short of conventional levels of significance ( $p = .09$ ). But again, given the prevailing view that women have a harder time winning, the nearly significant results suggest the presence of

substantively meaningful movement in respondents' views. Most critically, as shown by the Wald tests, activism in the remaining three conditions is once again significantly lower than in the Disadvantage condition. And just as in Figure 1, the average level of campaign activism for Haskins increases as the news story in each condition becomes more pessimistic about her chances because of gender bias. Of course, the uncertainty around the point estimates recommends caution in drawing conclusions about whether, say, activism in the Mixed condition is higher than in the Parity condition. But taken as a whole, the data strongly suggest that young people are less active on behalf of a female candidate when she is described as not likely to face gender bias.<sup>29</sup>

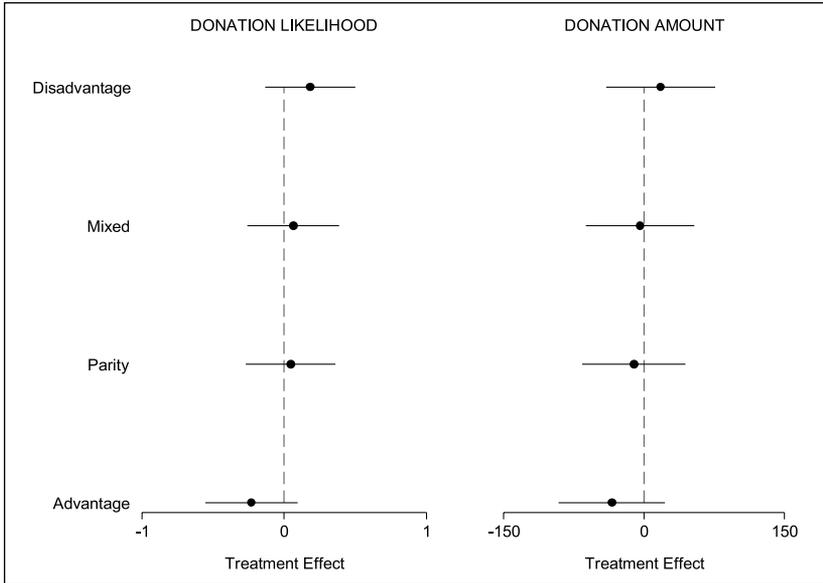
### *Campaign Contributions*

For a variety of reasons, we hypothesized that donors may be less subject to the information effects that our experiment is designed to produce. But because campaign consultants and organizations seem to frequently rely claims of gender bias in an effort to raise money, the hypothesis merits testing.

In our survey of campaign donors, we asked about their likelihood of donating money to Haskins's campaign and how much they would give.<sup>30</sup> It should be noted that we asked all of the same questions with respect to Johnson, the male candidate, as well. Unsurprisingly, donors are quite loyal to their party; because we designed the survey so that respondents never share the party affiliation of Johnson, his donation totals were so low as to be irrelevant. Thus, we analyze the donation data for Haskins rather than focusing on differences between the candidates.

Are female candidates who are portrayed as facing gender bias likely to get more campaign funding? The short answer is no. The left side of Figure 3 presents the treatment effects for the likelihood of a respondent donating to Haskins. Compared to the control, none of the conditions produces statistically significant differences. Although the general pattern across the treatments is similar to the electoral support and campaign activism findings, the only difference that is statistically significant is between the Disadvantage and Advantage conditions ( $p = .01$ ). The results are similar when we consider the right side of the figure, which examines how much respondents said they would donate to Haskins campaign. Again, there are no significant effects of the treatment, and the only difference among the conditions to approach significance is between the Disadvantage and Advantage ( $p = .07$ ).

Unlike ordinary voters, donors do not seem to retract support for female candidates when they are portrayed as having an equal chance of winning



**Figure 3.** The effect of portrayals of gender bias on donations to a female candidate.

*Note.* Donation likelihood: Point estimates are from a regression model (the control is the omitted category), with 95% confidence intervals. Model appears in the Appendix D. Wald tests: Disadvantage versus Mixed,  $p = .46$ ; Disadvantage versus Parity,  $p = .39$ ; Disadvantage versus Advantage,  $p = .01$ ; Mixed versus Parity,  $p = .91$ ; Mixed versus Advantage,  $p = .08$ ; Parity versus Advantage,  $p = .09$ . Donation amount: Point estimates are from a regression model (the control is the omitted category), with 95% confidence intervals. Model appears in Appendix D. Wald tests: Disadvantage versus Mixed,  $p = .46$ ; Disadvantage versus Parity,  $p = .31$ ; Disadvantage versus Advantage,  $p = .07$ ; Mixed versus Parity,  $p = .81$ ; Mixed versus Advantage,  $p = .30$ ; Parity versus Advantage,  $p = .39$ .

(though they are less likely to donate when the female candidate is portrayed as being advantaged by her sex.) And it is important to note that the lack of differences among donors go beyond monetary variables. Bolstering our theoretical argument, the results for candidate preference also suggest that donors are simply less affected by media coverage than voters in general. Whereas we saw that U.S. adults considered as a whole were more likely to support Haskins when she was portrayed as facing gender bias, Haskins's support among campaign donors is unchanged regardless of experimental condition (the means range from just 8.0 to 8.3, and none of the differences are significant). Of course, ceiling effects likely are playing a role, considering that the maximum score was nine on the preference scale. But these

results also provide little evidence that donors are more or less likely to support woman when she is portrayed as being an underdog.

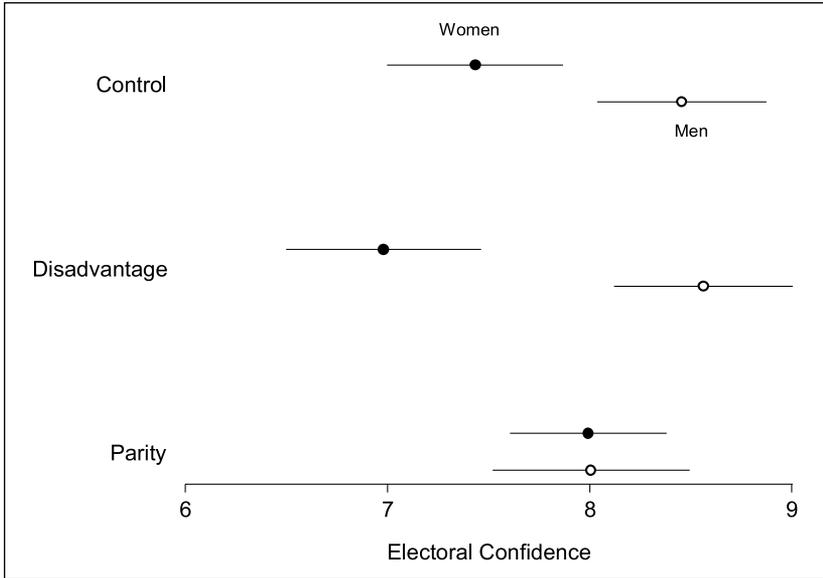
### *Electoral Confidence*

The findings thus far indicate that pessimistic portrayals of the landscape faced by female candidates can provide gains for women running for office. It also does not appear to help or hurt their fundraising. But we also hypothesized that such a frame could have consequences that augur less favorably for increasing the representation of women, while frames emphasizing a lack of bias could help women to see themselves as candidates. This is especially important given the claims that media portrayals of bias against women could continue to perpetuate a gender gap in political ambition (Dowling & Miller, 2015; Hayes & Lawless, 2016). Our question is whether messages that challenge the concept of bias against female candidates might lead young women to become more confident in their own abilities to run a successful political campaign.

In our study of undergraduates, we included two measures of electoral confidence, asking respondents after they had been exposed to the treatment whether they agreed with each of the two statements: “If I ran for office, I would be able to raise enough money from others for my campaign” and “Someone like me would be likely to win a congressional seat if they ran for office.” Respondents could choose a response from 1 (*strongly disagree*) to 7 (*strongly agree*). We summed these measures to create an additive scale ranging from 2 to 14. Higher scores indicate more confidence in their ability to successfully run a future campaign. We are interested in whether exposure to these messages affects electoral confidence—and whether they do so differently among men and women. We model the effects with a regression in which we include dummy variables for the treatments, a dummy variable for respondent gender, and interactions between gender and the treatments (the results of the model appear in Appendix Table D2.)

Among men, there is no statistically significant movement. Their electoral confidence is impervious to portrayals of whether women do or do not face gender bias. That is unsurprising; we would not expect men to lose confidence in light of information that women face electoral challenges.

But, as expected, we do find that young women’s electoral confidence is affected by the messages to which they are exposed. Compared to the control, electoral confidence among women is lowest in the Disadvantage condition, though the shift does not quite meet conventional levels of significance ( $p = .17$ ). Critically, however, we find a positive effect produced by the



**Figure 4.** The effect of portrayals of gender bias on electoral confidence, by respondent gender.

Note. Figure shows mean values with 95% confidence intervals.

Parity treatment. Electoral confidence among young women is significantly higher when exposed to a news story that depicts systematic gender bias as something that female candidates do not have to overcome.

The consequences for the gender gap can be seen in Figure 4, where we plot the average electoral confidence scores for men and women in the Disadvantage and Parity treatments compared with the control. (We find no meaningful movement in the Mixed or Advantage conditions relative to the control group and thus have omitted them from the figure.) In the control group, electoral confidence is 1.02 points higher for men than for women ( $p < .01$ ), confirming previous studies showing that women are less likely than men to believe that they can run effective campaigns. When a news story portrays women candidates as facing gender bias, as in the Disadvantage treatment, the gap in electoral confidence widens to 1.58 (though the shift is not statistically significant). In the Parity condition, however, the gap is eliminated entirely, with women and men coming away with identical levels of electoral confidence. To the degree that electoral confidence is a precursor to a willingness to run for office, our results suggest that framing female

candidates as facing a level playing field may help close the gap in ambition. In contrast, framing women as facing disadvantages because of gender bias may reduce the odds of some women throwing their hats into the ring.

## Conclusion

This study shows that the way candidate gender is discussed in the news can affect political attitudes and behavior. Among other things, it has the potential to shape support for female candidates, campaign activism, and the electoral confidence of the next generation of political actors.

Although we used the news media as the mechanism to examine these relationships, such effects may not necessarily be limited to that domain. These dynamics may potentially also extend to messages that get shared in other venues, whether among families, in classrooms, social networks, in campaign materials, candidate speeches, or elsewhere. That would require further study. But to the extent that those other conduits of this type of information might produce similar results, the real-world effects of these findings in this study would be magnified accordingly.

This study suggests several related avenues for future research. Research is increasingly confirming that biological sex and gender identity are distinctive constructs (e.g., Bittner & Goodyear-Grant, 2017). As such, the dichotomy that studies such as ours use to distinguish “female” versus “male” candidates may oversimplify more nuanced reactions to individual candidates, depending upon that candidate’s personal characteristics. In addition, our study focuses on a general election, but there are many reasons to think that the kind of effects we find here would be even stronger in a primary or nonpartisan election, where party identification cannot anchor respondents’ preferences. On the contrary, it is possible that “bandwagon effects” (e.g., Bartels, 1985) could cause partisans to more strongly support candidates with a better chance of winning. As such, a study of primary dynamics would be a worthwhile extension of this research.

We see several implications of our findings. One is that there is good reason to expect that the narrative that women are disadvantaged in American politics to persist for some time, even as that conclusion is subject to vigorous debate in the academic literature. That is at least partly because our results suggest that a more positive message could hurt female candidates in the short term by decreasing their electoral support and campaign activism (while not affecting fundraising either way). Compared to framing women as facing gender bias, a more positive portrayal of the landscape for female candidates may actually undermine their support to a small degree.

As just one example, Hillary Clinton regularly highlighted gender bias in her 2016 president bid, often talking about how women face double standards, and higher standards, in political life than men. One reasonable inference is that her campaign team saw advantages to telling a “higher and harder hurdles” story about female candidates, rather than a story about an even playing field.<sup>31</sup> This is not to say that Clinton or other people who make arguments about gender bias are not sincere in their views. But our findings suggest there are incentives that encourage candidates and others to communicate messages about disproportionate challenges facing women. Moreover, that message will also tend to be an easy sell, because so many members of the public and potential candidates are primed to believe the message already.

For political science more generally, our study reinforces that messages can matter to different people in different ways. Because of sample sizes, experiments often do not easily lend themselves to subgroup analyses. And it is always challenging to adequately represent small groups in the electorate, such as donors or campaign activists. But our findings underscore that some research questions require attention to these matters at the design stage. If we had analyzed only a standard cross-section of U.S. adults, we could have concluded simply that news stories emphasizing gender bias are beneficial for female candidates. If we had studied only donors, we would have found that discussions of gender bias do not matter much at all. And if we had surveyed only college students, we would have concluded that bias can be harmful to women’s representation in the long term, while garnering more volunteers in the short term. Our more complete and nuanced conclusions about the paradoxical effects of messages about gender bias were possible only because our design allowed us to study each of these groups and potential outcomes simultaneously. In so doing, we were able to paint a broad picture of the various ways that news coverage of gender bias in American elections can potentially produce a range of short- and long-term trade-offs. These findings are a reminder that studying political behavior in other realms with this kind of 360-degree approach, when applicable, can have the potential to produce other important insights.

Finally, because our treatments differed largely on the basis of the scholarly perspectives shared with respondents through the news, this study provides affirmation that scholarly research disseminated beyond the academy can have consequences for the public sphere. From a normative perspective, the effects of that information can be positive or negative, or a mix of both. Regardless, this research confirms that what political scientists share with the media about their research—and what journalists choose to convey to the public about political science scholarship—has the potential to affect political outcomes.

## Acknowledgments

We thank Ashley Grosse and Sam Luks of YouGov for their first-rate partnership on most of the data collection for this project. Kelly Dittmar, Connor Dowling, Kim Fridkin, Jennifer Lawless, and Brendan Nyhan gave us helpful comments and advice. We are also grateful to the many colleagues around the country, both inside and outside of political science, who helped us recruit a diverse undergraduate sample, with special acknowledgement of Chris Broberg, Jim Garand, Paul Freedman, and Elizabeth Theiss-Morse, who went above and beyond.

## Declaration of Conflicting Interests

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

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The authors received financial support from the Nelson A. Rockefeller Center for Public Policy and the Social Sciences at Dartmouth College for the research, authorship, and/or publication of this article.

## Supplemental Material

Supplemental material for this article is available online.

## Notes

1. <https://fivethirtyeight.com/features/how-unconscious-sexism-could-help-explain-trumps-win/>
2. <http://www.latimes.com/politics/la-na-pol-woman-president-20161223-story.html?ref=yfp>
3. <http://www.pbs.org/newshour/features/hidden-sexism/>
4. [https://www.washingtonpost.com/news/the-fix/wp/2017/04/08/hillary-clinton-says-misogyny-played-a-role-in-her-loss-research-suggests-she-might-be-right/?utm\\_term=.5e8694801247](https://www.washingtonpost.com/news/the-fix/wp/2017/04/08/hillary-clinton-says-misogyny-played-a-role-in-her-loss-research-suggests-she-might-be-right/?utm_term=.5e8694801247)
5. [https://www.washingtonpost.com/posteverything/wp/2016/11/16/sexism-did-not-cost-hillary-clinton-the-election/?utm\\_term=.ca583cc7b36c](https://www.washingtonpost.com/posteverything/wp/2016/11/16/sexism-did-not-cost-hillary-clinton-the-election/?utm_term=.ca583cc7b36c)
6. <http://www.washingtonexaminer.com/clintons-advantage-tonight-being-a-woman/article/2602830>
7. <https://www.theatlantic.com/magazine/archive/2013/05/a-womans-edge/309284/>
8. <http://www.pbs.org/newshour/features/hidden-sexism/>; <http://thehill.com/blogs/pundits-blog/presidential-campaign/301497-sexism-is-why-clintons-not-ahead-by-more>; and <http://www.bigstory.ap.org/article/cd818dbeb6fb445ca374a5583b17ecad/trumps-stamina-attack-clinton-stirs-talk-gender-bias>
9. [http://www.huffingtonpost.com/entry/gender-bias-role-in-elections\\_us\\_564357b4e4b045bf3ded2245](http://www.huffingtonpost.com/entry/gender-bias-role-in-elections_us_564357b4e4b045bf3ded2245); <https://www.bostonglobe.com/news/nation/2015/09/>

- 09/hillary-clinton-faces-challenges-unique-woman-running-for-office/Zkv99eyLTzAVzskuGnvRPN/story.html; and <http://www.scpr.org/news/2016/06/30/62081/clinton-aims-at-glass-ceiling-but-barriers-remain/>
10. <http://www.cawp.rutgers.edu/current-numbers>
  11. <https://www.bostonglobe.com/news/nation/2015/08/17/independent-groups-allied-with-clinton-launching-effort-mobilize-female-voters/6noNoLmGnmIZE75kp-D2k5L/story.html>
  12. For instance, Enos and Hersh report that campaign workers skew young and are dramatically more likely than the overall electorate to be either college graduates or in college. In 2012, this group made up 65.5% of Obama campaign workers, but just 33.9% of the electorate. This pattern is not restricted to the Obama campaign; workers for other campaigns that Enos and Hersh (2015) surveyed were even younger than Obama workers (Table A.7).
  13. [http://www.nytimes.com/2014/02/28/us/politics/outrage-over-sexist-remarks-turns-into-a-political-fund-raising-tool.html?\\_r=0](http://www.nytimes.com/2014/02/28/us/politics/outrage-over-sexist-remarks-turns-into-a-political-fund-raising-tool.html?_r=0)
  14. As one example, Political Parity, an interest group focused on the election of women candidates, led their November 5, 2015, marketing email with a quote by former U.S. Senator Carol Moseley-Braun: “We still haven’t made it beyond hair, hemlines, and husbands.”
  15. In addition to electoral confidence, we also measured stated likelihood to run for office someday. But given that most college students are relatively far from making that decision, we are wary about putting too much stock in far-distant career plans. As such, we are treating electoral confidence as a necessary precursor to future decisions to run.
  16. We should note that electoral confidence is the only outcome for which we expect differential effects for male and female respondents. For our other three hypotheses, we do not have apriori expectations about men and women reacting differently to these different frames. This is partly due to the equivocal literature on “gender affinity” (Dolan, 2008; Goodyear-Grant & Croskill, 2011), which suggests that in most cases male and female voters respond similarly to candidates.
  17. For more information about the YouGov panel, see <https://today.yougov.com/about/about-the-yougov-panel/>; see also YouGov (2016).
  18. Campaign committees are required to report donations for the FEC (Federal Election Commission) that exceed US\$200 or more over the course of a given year. Because donors often make multiple donations over a year, some campaign committees report individual donations of under US\$200, which appear in our data. For more information on FEC reporting requirements, see <http://www.fec.gov/pages/brochures/citizens.shtml>.
  19. See <http://data.stanford.edu/dime> for more information about the DIME (Database on Ideology, Money in Politics, and Elections) database.
  20. Larger donors tend to drive the fundraising strategies of groups and campaigns. Small, one-time donors have less influence over the decisions of candidates and other organizations.

21. In particular, we used separate sample replicates for female Republicans, male Republicans, female Democrats, and male Democrats, along with sequential cell assignment for respondents from each of those groups. That is, the first male Republican respondent is randomly assigned to a cell, and the next male Republican respondent is randomly assigned to one of the remaining cells, and so forth, until every cell has a Republican male respondent in it. Then the cell assignment process for male Republicans starts again. This approach does not guarantee equal numbers of Democrats and Republicans, or men and women, in the overall sample; rather, it simply guarantees evenly matched experimental cells on critical dimensions without compromising the principals of randomization.
22. Because political donations reported to the FEC are recorded publicly, validated donation amounts could have theoretically allowed individual respondents in our sample to be identified. To protect respondent confidentiality, YouGov provided us with categorical DIME estimations of FEC-reported donations, rather than more specific raw numbers. The categorical amounts were sufficient for identifying validated campaign donors in our sample, which was our primary need for this data; however, the categorical numbers do not yield useful estimates of averages and medians. As such, self-reported amounts are used for estimating donation amounts here, and in Appendix A, Table A1.
23. We offered relatively generous incentives for this study: a drawing for an iPad Air combined with a drawing for 30 Amazon gift certificates worth US\$35 each.
24. We are deeply indebted to the many scholars who circulated the survey to students at their institutions. Appendix A lists the colleges and universities from which our sample is drawn.
25. <http://www.people-press.org/2015/04/07/2014-party-identification-detailed-tables/>
26. For example, we did not ask undergraduates whether they would donate their own money to a political candidate, given the limited financial resources of most college students.
27. Our findings do not change when we exclude the small number of pure independents (about 100 in each sample) from the study.
28. The number of respondents in each experimental condition in each sample is displayed in Appendix Table A3.
29. We note that respondents answered the activism questions in ways that reflect what we would expect in a real election—that is, very few expressed interest in helping the male candidate (who never shared their partisanship). For instance, 36% of respondents registered the lowest possible activism level for the male candidate on all three activism measures. In addition, 93% of respondents ended up with a score of 12 or below for the male candidate—that is, either indifferent or on the “unlikely” side of the scale. By contrast just 8% of respondents gave the lowest score to the in-party candidate (always the woman).
30. To minimize the noise introduced by the fact that donors may have radically different incomes, we also asked how much they would donate to the candidates

and/or a charity of their choice if we gave them US\$500 to allocate. There were not notable differences in the findings between the measures, so we include only the results for the main measure here.

31. For example, at the opening of the Women of the World Summit in April 2014, Clinton opened her remarks with, "The double standard is alive and well, and I think in many respects the media is principal propagator of its persistence. And I think the media needs to be more self-consciously aware of that." See <http://onpolitics.usatoday.com/2014/04/04/hillary-clinton-double-standard-women-stereotypes-media>. In September 2015, Clinton told Ellen DeGeneres that, "It is just a reality that (women) are held to a higher, different double standard" See <http://www.cnn.com/2015/09/08/politics/hillary-clinton-ellen-women/>. In January 2016, she told DeGeneres that, "I think it still is hard being a woman running for president. . . . If you're forceful, you're too forceful. If you're not forceful, you're not tough enough." See <http://www.thedailybeast.com/articles/2016/01/11/hillary-clinton-talks-guns-kim-kardashian-and-snl-with-ellen-degeneres.html>.

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