

Candidate-Gender Bias and the Partisan Gender-Gap in Office

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ABSTRACT

Female elected officials are underrepresented in the Republican Party relative to the Democratic Party. What accounts for this partisan disparity in women elected to office? The authors present evidence that registered voters exhibit a partisan gap in candidate-gender bias of a nature that would contribute to the partisan gender-gap in office-holding. Using an implicit mediation experimental design, the researchers find evidence that the partisan difference in gender preference is motivated by political inferences drawn from candidate-gender stereotypes. Both registered Democrats and registered Republicans move counter to the direction of bias when given information that reverses those stereotypes. Two important implications of the researchers' findings are that (1) there may be a voter-driven element to the partisan gender-gap in office, but (2) Republican voters, whom they find to be as pro-female as Democratic voters when presented with a policy-congruent female candidate, are not the cause of persistently low levels of Republican women in office.

I. Introduction

After the 2018 U.S. midterm elections, women made up nearly 40% of the Democratic delegation in Congress, and just 9% of the Republican delegation. This disparity reflects a partisan gender gap in office-holding that has grown steadily since the early 1990s, when the percentage of female Democrats in Congress began marching upwards while the percentage of female Republicans stagnated (Elder 2018; Thomsen 2015).

What accounts for the partisan disparity in women elected to Congress? Studies investigating this partisan gender gap in office have primarily focused on factors restricting the Republican pipeline to office for women (e.g., Elder 2008, 2012, 2018; Thomsen 2015). In addition to such pipeline effects—that is, the *supply* of female candidates—voters’ *demand* for women in office also affects the representation of women in Congress (Karpowitz et al. 2017). If Democratic voters exhibit a greater preference for female candidates than do Republican voters, then demand-side effects may contribute to the partisan gender gap in office.

We draw together three literatures regarding candidate gender—on the gender-gap in office, on voters’ use of gender stereotypes, and on women’s descriptive representation—to propose a set of hypotheses about demand-side (i.e., voter-based) contributions to the partisan gender gap in office.

In this study, we present results from two implicit mediation experiments designed to shed light on voter-driven contributions to the partisan gender gap in office. Our findings indicate that registered Democrats do exhibit a greater preference for female candidates than do registered Republicans—and consistent with a subtle trend in prior work (see Schwarz et al. 2018), this preference gap appears to stem more from a Democratic bias *toward* women than from a bias against women among Republicans. We find compelling evidence that voters of both parties use

gender stereotypes to infer politically-relevant information. Contrary to our expectations, we see no evidence that a desire for gender-equal descriptive representation is a motivating factor for partisans of either party.

In sum, our findings show that registered partisans display tendencies that would lead to a partisan gender-gap in office. The evidence from our implicit mediation design suggests that these biases are largely driven by inferences about a candidate's policy congruence based on gender stereotypes. We also find that character-trait stereotypes, though not determinative on their own, can intensify or dampen the effect of stereotype-reversing information about policy congruence.

Importantly, neither party shows an aversion to female candidates. Republican respondents exhibit a candidate-gender bias in some respects, but this does not manifest in their candidate choice (while a pro-female bias among Democratic respondents does manifest). Of course, candidate choice in a costless, abstract setting is far different than vote choice in a real election. But to the extent that such experiments are able to honestly reveal underlying predilections, our findings would mean that pipeline effects such as those demonstrated by Elder (2012) and Thomsen (2015) are obstructing Republican voters who are very receptive of female candidates. And considering that registered Democrats show a greater preference for female candidates than male candidates all else equal, our findings suggest there may be unsatisfied demand for female candidates on both sides of the aisle.

II. Theory

For roughly the past four decades, the U.S. electorate has exhibited a “modern” gender gap in vote choice: female voters have shown a greater preference for the Democratic party than have male voters (Kaufmann & Petrocik 1999; Norrander 1999; Box-Steffensmeier et al. 2004; Harsgor

2018). The partisan gender gap in office, on the other hand, refers to the difference in the proportion of elected officials in each party who are women. Starting in the early 1990s, women have formed a larger share of Democratic legislators than of Republican legislators at both the state level (Elder 2012) and in Congress (Thomsen 2015). The gender gap in vote choice and the partisan gender gap in office could certainly be connected, perhaps reinforcing each other (see, e.g., Elder 2018). However, as Elder succinctly notes: “Many pundits have discussed the Republican Party's problem with women, focusing their concerns on the persistent but relatively modest gender gap in vote choice. The lack of women among Republican state legislators is actually a much bigger and more consequential ‘woman problem.’” (2012, p. 79).

Fig. 1

Women as a proportion of Democratic and Republican Caucuses:

State legislatures, United States House, & United States Senate

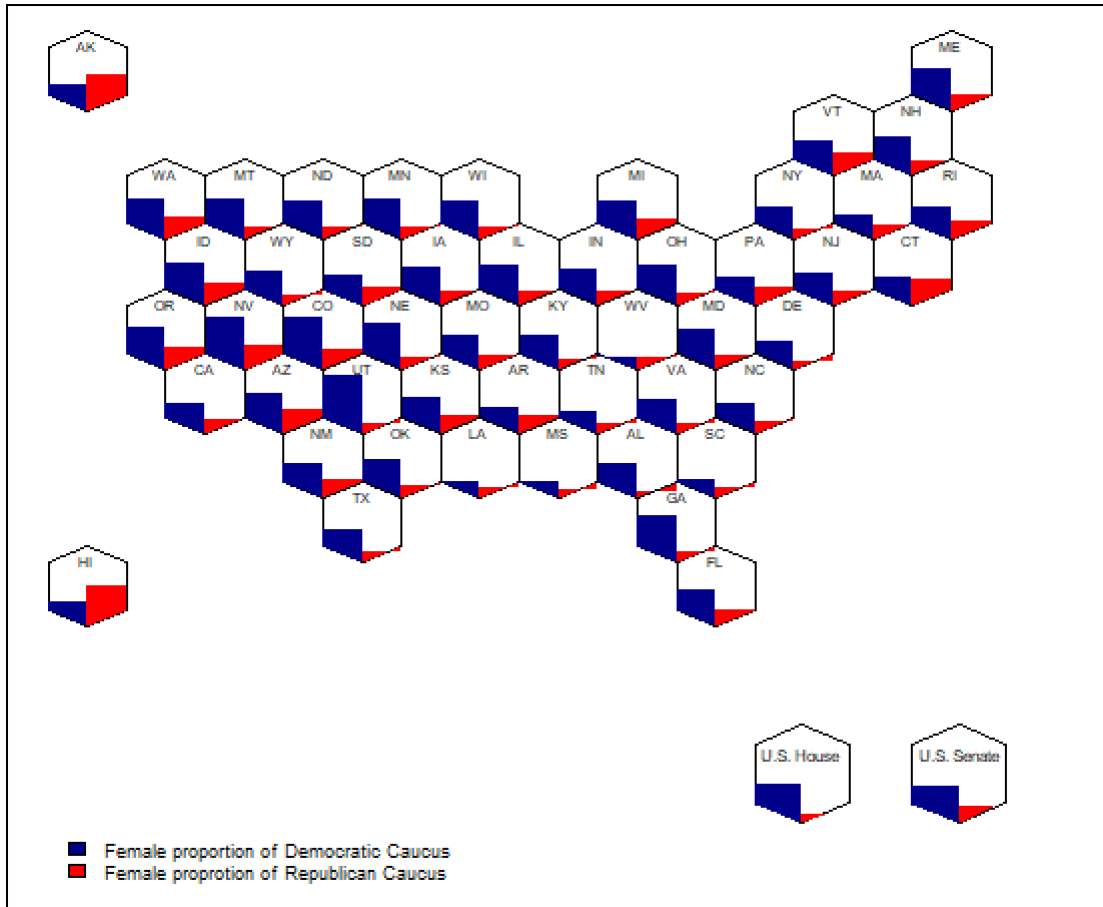


Fig. 1: Figure 1 maps the proportion of women among the Democratic (blue) and Republican (red) caucuses in each state legislatures and both chambers of Congress. State legislatures take both chambers together (except for NE). The Democratic proportion of women is higher than the Republican proportion of women in every state legislature in the continental United States, as well as in the United States House and Senate.

Figure 1 shows that women currently make up a larger proportion of the Democratic party than of the Republican party in all but two state legislatures (Alaska and Hawaii), as well as in both chambers of Congress. What explains this partisan gender gap in office? Elder (2012) makes a strong case for a pipeline effect into state legislatures. A constellation of factors relating to party polarization—the concentration of conservatives in the Republican party, the affiliation of the Christian Right with the Republican party, the concomitant emphasis on traditional roles for women, the lesser likelihood of Republican women to enter pipeline careers (Lawless & Fox 2005; see also Crowder-Meyer & Lauderdale 2014), and the reinforcing cycle of weak recruitment and lack of Republican women in leadership roles—come together to restrict the emergence of Republican female candidates. Mirror-image factors on the Democratic side—its concentration of liberals and affiliation with feminist groups featuring strong recruitment of women, the greater representation of Democratic women in pipeline careers and in elected Democratic leadership positions—work to promote the emergence of Democratic female candidates.

Thomsen (2015) shows that ideological fit further deters Republican women in state legislatures from seeking higher office, again highlighting the role of political polarization. Thomsen finds that ideological moderation corresponds with a lower estimated likelihood of running for Congress—and that this has implications for the gender composition of the parties because Republican women are more likely to be moderate than their male counterparts, and there is a dearth of conservative women in the pipeline (Thomsen 2015).

These accounts both focus on supply-side factors, but both authors suggest that pure pipeline theories do not fully explain the partisan gender gap in office (e.g., Thomsen 2015, p. 300) and that voter stereotypes of female candidates may play a role (Elder 2012, p. 70). Indeed, the results of Elder's analysis leave room for a role of such demand-side influences: controlling

for elite-level factors and the availability of women in the potential candidate pool, there remains a significant negative relationship between the presence of Republican voters and the percentage of women among Republican legislators (Table 2).

Further evidence that demand-side influences may play a role can be seen in Figure 2. The bright red line shows the proportion of female Congressional primary candidates who are Republican, and the dark red line shows the proportion of women in the U.S. Congress who are Republican. The partisan divide among women who enter a Congressional primary is consistently more balanced than is the partisan divide of women elected to Congress. In their 2002 study of women as candidates in Congressional elections, Matland & King report that in primaries for open House seats from 1990 through 2000, Democratic voters show a higher propensity to choose female candidates than do Republican voters (2002, Table 6.6), and posit that, “the differences in intraparty success may exacerbate the growing gender gap in the House.”

Fig. 2

Partisan split of female primary candidates and legislators, U.S. Congress

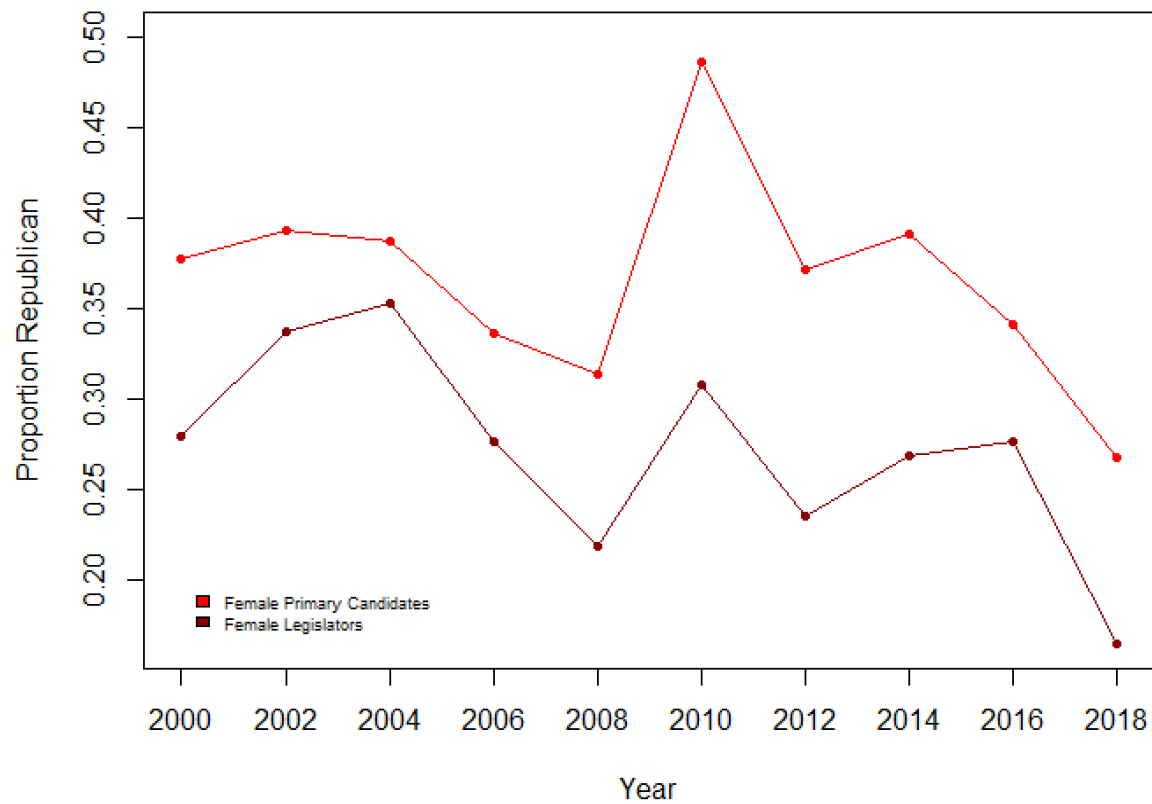


Fig. 2: Figure 2 plots the Republican proportion of female candidates running in a Congressional primary election (bright red) and Republican proportion of female legislators (dark red) from 2000 to 2018. Among women running for Congressional office over this period, the proportion who are Republican has hovered near 40%, while the proportion Republican among those whom voters elect to Congress is always lower.

If voters do contribute to the partisan gender gap in office, what accounts for the partisan difference in gender-preference? That is, why might Democratic and Republican voters show systematically different preferences for female candidates? It could be that voters in each party

have prejudices that are unrelated to political reasoning. For example, conservative beliefs about gender roles may lead some voters to believe that women do not belong in political office (Dolan & Sanbonmatsu, 2009); or female voters, more likely to vote Democratic, may prefer to have women in office based on an affinity for their own gender per se (Plutzer & Zipp 1996; Brians 2005). On the other hand, partisan differences in candidate-gender preference could arise from political reasoning: Voters might use gender to make inferences about candidates' ideology or policy positions; voters might use gender to make inferences about candidate character traits; and voters in each party may have different preferences regarding descriptive representation.

In other words, a *candidate-gender bias*—a preference for candidates of one gender over the other—could arise from prejudice (as we will call biases not based in political reasoning); it could arise from voters' reliance on candidate-gender stereotypes to infer the *political congruence* offered by a candidate (how closely does the candidate reflect the voter's own political opinions and priorities); or it could arise from a desire for more gender-equal *descriptive representation* (producing a bias toward female candidates that is based in political reasoning, but not necessarily stemming from gender stereotypes or inferences about congruence).

For clarity, we distinguish the following terms:

stereotype: an assumption about a relationship between characteristics that can be applied as an informational heuristic (regardless of whether it is correct) -- e.g., a voter's belief that women are usually more liberal than men.

prejudice: a generalized attitude or judgement that cannot be applied as an informational heuristic -- e.g., a voter's belief that women do not belong in political office.

candidate-gender bias: a tendency to favor candidates of one gender vs. the other. (This is the same as "baseline gender preference" in Sanbonmatsu 2002. We opt for this alternative term only to avoid the association in "baseline" of a starting point or natural predisposition.)

Candidate-gender stereotypes

Voters make assumptions about candidates based on the candidate's gender. The public holds strong and consistent gender-based stereotypes about candidates' ideology, character traits, and issue competencies (Dolan & Sanbonmatsu 2009), and people employ these candidate-gender stereotypes when evaluating candidates (Sanbonmatsu 2002; Dolan 2004). Voters may use one of two different methods to make gender-based inferences about a candidate: trait stereotyping or belief stereotyping (Huddy & Terkildsen, 1993a). In trait stereotyping, personality traits assumed to differ between men and women are used to infer what a candidate's issue positions and competencies will be. For example, women are assumed to be compassionate and nurturing, and to place priority on issues like poverty, education and health. Belief stereotypes paint women as more liberal and more likely to identify with the Democratic Party, men as more conservative and more likely to identify with the Republican Party.

Why and how are candidate-gender stereotypes employed? McDermott (1997, 1998) shows that voters can use belief and trait stereotypes as informational cues. But evidence on how these stereotypes ultimately affect vote choice appears to be mixed and context-dependent—for example, gender stereotypes influence vote choice far less than does the candidate's party (Dolan & Lynch 2016). Importantly, however, candidate-gender stereotypes operate even *within* party. Republican women are perceived as more liberal than Republican men (King & Matland 2003); Democrats are more likely to hold within-party stereotypes about issue competency that are favorable toward women (Sanbonmatsu & Dolan 2009).

As increased party sorting within the public has led to a Democratic party composed of liberals and a Republican party composed of conservatives (Levendusky 2009), candidate-gender stereotypes conveying that female candidates are more liberal than male candidates (McDermott

1997, 1998; Koch 2000, 2002) imply that Democrats should expect greater policy-congruence from female candidates, and Republicans from male candidates. The persistence of candidate-gender stereotypes within party means that these stereotypes can contribute to the partisan gender gap in office even if their effect on vote choice is dwarfed by the effect of partisanship.

Gender-based descriptive representation

Voters may hold preferences about descriptive representation—that is, representation distinguished by an accurate resemblance, in outward manifestations or shared experiences, of those who are represented (Pitkin 1967; Mansbridge 1999)—that lead to a preference about the gender balance of elected officials. Dolan & Sanbonmatsu (2009) find that ANES respondents report a preference for much greater gender balance among elected officials than we currently see, with a mean preference of 40% female, and a modal preference of gender parity. Preferences about the gender balance of elected officials could lead to candidate-gender bias.¹

A candidate-gender bias that is rooted in preferences about descriptive representation could be informed by gender stereotypes, and Dolan & Sanbonmatsu (2009) demonstrate a strong relationship between stereotypes and gender-balance preferences in their data. However, such a bias could also emerge from considerations unrelated to gender stereotypes. Voters may hold preferences about gender-descriptive representation based in a belief that the presence of more women in elected office will promote greater civic engagement among women in the public

¹ Though they need not necessarily: as Dolan & Sanbonmatsu (2009) note, gender-descriptive representation preferences may be entirely eclipsed by candidate particularities or other political variables known to influence vote choice.

(Reingold & Harrell 2010)—for example, women may be more willing to contact their representative if that representative is female (see, e.g., Gay 2002). Or, voters may see more abstract, intrinsic good in descriptive representation—for example, Dolan & Sanbonmatsu (2009) refer to Mansbridge’s argument that descriptive representation “increases the degree to which the society as a whole sees all (or almost all) descriptive groups as equally capable of ruling” (1999, p. 650).

III. Hypotheses

Our aim is to understand potential demand-side contributions to the partisan gap in electing women to public office. Do Democratic and Republican voters exhibit different candidate-gender biases? If so, what accounts for these biases?

We hypothesize that, all else equal, Democratic voters show a preference for female candidates, and Republican voters show a preference for male candidates. But partisan expression of a candidate-gender bias does not necessarily indicate prejudice: these biases could arise from political reasoning. We investigate two mechanisms based in political reasoning—policy-congruence inferences and descriptive representation preferences—that could produce a partisan gap in candidate-gender biases.

First, we hypothesize that these partisan biases arise at least in part from inferences that both Democrats and Republicans make about a candidate’s political beliefs (e.g., policy congruence)—and that *the same* gender-linked stereotypes push Democrats toward a pro-female bias and Republicans toward a pro-male bias.

Moreover, we hypothesize that Democrats are also motivated by a desire for gender parity in descriptive representation, and that, accordingly, the under-representation of women in elected

office produces a pro-female bias among Democrats. We hypothesize that Republicans are not motivated by a desire for gender-based descriptive representation.

Belief stereotypes

Voters use gender-linked stereotypes to infer candidate political beliefs and policy preferences (see, e.g., Huddy & Terkildsen 1993). Both Democrats and Republicans perceive female candidates as more liberal than male candidates (King & Matland 2003; Sanbonmatsu & Dolan 2009), meaning that belief stereotypes should lead Democrats to expect greater policy-congruence from female candidates, and Republicans to expect greater policy-congruence from male candidates. In other words, reliance on the same gender-linked belief stereotype would lead partisans to candidate-gender biases in opposite directions. To the extent that a partisan gap in candidate-gender biases arises from reliance on these belief stereotypes to make political inferences, then providing information reversing those stereotypes should move partisans toward candidate of the other gender—i.e., Democrats should shift toward the male candidate, and Republicans toward the female candidate—narrowing the partisan gap in candidate-gender bias.

H1: Democrats and Republicans will exhibit a partisan gap in candidate-gender bias.

H1a: Democrats will exhibit a candidate-gender bias favoring female candidates over male candidates.

H1b: Republicans will exhibit a candidate-gender bias favoring male candidates over female candidates.

H2: Voters' reliance on gender-linked political-belief stereotypes contributes to the partisan gap in candidate-gender bias.

H2-corollary: When gender-linked political belief stereotypes are reversed, Democrats and Republicans will exhibit reduced candidate-gender bias, narrowing the partisan gap in candidate-gender bias.

Trait stereotypes

Voters use gender-linked stereotypes to infer candidate character traits, with the assumption that female candidates are more likely to be warm and compassionate, while male candidates are more likely to be tough and decisive (see, e.g., Huddy & Terkildsen 1993). Both political-belief and character-trait stereotypes appear to influence voters' evaluations of candidates (Sanbonmatsu 2002). However, although character-trait stereotypes have some link to party (see, e.g., Winter 2010) character traits are not directly partisan in the way that inferences about political beliefs are. Evidence suggests that the influence of trait stereotypes is overshadowed by inferences about political beliefs (Hayes 2011). This is not to say that character-trait stereotypes have no effect on candidate evaluations, but that we do not expect those effects to have a strong partisan split. For example, the character-trait stereotype that men are more decisive than women would likely disadvantage a female candidate among both Democratic and Republican voters; the political-belief stereotype that women are more liberal than men would likely benefit a female candidate among Democrats and disadvantage her among Republicans. Therefore, while we expect political-*belief* stereotypes to contribute to the partisan gap in candidate-gender biases, we do not expect character-trait stereotypes to meaningfully contribute to this partisan gap.

H3: Voters' use of gender-linked character-trait stereotypes contributes little or nothing to the partisan gap in candidate-gender bias.

H3-corollary: Reversing gender-linked character-trait stereotypes will have little effect on candidate-gender bias among either Democrats or Republicans.

Descriptive representation

Partisans may exhibit systematically different preferences regarding descriptive representation. Dolan & Sanbonmatsu (2009) report that Democrats show greater desire for gender balance in government, and Rosenthal (2006) finds that conservative views depress women's desire for descriptive representation. There are also notable differences between the two parties in organized efforts to increase descriptive representation. Democratic donors, especially female donors, are more likely to donate to female candidates not just because of ideology but because they value electing women to office, while Republican donors do not embrace this imperative (Thomsen & Swers, 2017). This value is evident in the Democratic Party's coalition, of which women and women's groups (like EMILY's List) are an integral part, as well as Democratic Party policies that mandate the representation of women in party convention delegations so the concerns of women may be heard and understood by the party—a mandate not in place for the Republican party (Thomsen & Swers, 2017).

To the extent that a candidate-gender bias arises from a preference for gender-balance in descriptive representation, then that bias should fade in the context of a representative body that already exhibits gender balance. On the other hand, the presence or absence of gender-balance should have no effect on candidate-gender bias that does not stem from descriptive representation preferences.

H4: Democrats have a preference for gender equality in descriptive representation; Republicans do not have a preference about gender-equal descriptive representation.

H4-corollary a: Democrats will exhibit reduced candidate-gender bias when gender-based descriptive representation is satisfied.

H4-corollary b: Satisfying gender-based descriptive representation will not affect candidate-gender bias among Republicans.

IV. Method

We ask two main questions in this study: (1) Do Democratic and Republican voters exhibit different candidate-gender biases? (2) If so, what accounts for these biases? The first question is descriptive, and can be tested by manipulating candidate gender and holding all else constant. The second question aims at uncovering causal mechanisms. If the hypothesized partisan candidate-gender biases do appear, *why* do Democrats show a greater preference for female candidates than do Republicans? To what extent do these candidate-gender biases arise from voters' inferences about the candidates' political beliefs? From their inferences about character traits? From their descriptive representation preferences? Or from some other source of bias (e.g., gender-based prejudices with no basis in political reasoning).

In order to investigate the causal mechanisms, we conduct two implicit mediation experiments featuring “path-severing” treatments (Pearl 2001)—i.e., treatments that block off a particular causal pathway. The logic of such treatments is that, if blocking off a hypothesized pathway has no effect on the outcome, that pathway likely had little or no causal effect on the outcome to begin with. If blocking off a pathway does produce a hypothesized effect, this can serve as evidence that the pathway had been contributing causally as predicted.

To illustrate, assume that a voter's candidate-gender bias is based entirely in prejudice—say, the belief that women do not belong in political roles. Providing a treatment that blocks off a

political-inference pathway—e.g., informing the voter that the female candidate offers greater policy congruence—would not influence that voter’s candidate-gender bias, because political inferences made no contribution to the bias in the first place. Say, on the other hand, that blocking off the political-inference pathway *does* affect the voter’s candidate-gender bias, then the presence of that predicted effect can serve as evidence that the political-inference pathway had been contributing to candidate-gender bias.

The foundation of our experimental design is a candidate choice experiment, in which survey respondents are asked to indicate which of two candidates they would support in a primary election within their own party. Mo (2015) shows that providing information can move people away from relying on implicit gender-biases in vote choice. Similarly, Bauer (2017) shows that counter-stereotypic information can shift respondents’ perceptions of female candidates, and that such counter-stereotypic strategies are likely to be most effective within the context of a primary election. In our design, we randomize respondents into conditions in which gender-linked stereotypes are either *reversed* or *reinforced*, or to a condition in which candidates are indistinguishable except for their gender (the single-experiment condition). Independent of these assignments, respondents are also randomized to see that gender-equal descriptive representation has either been *satisfied* or *not satisfied* in the given electoral context. If these treatments successfully eliminate the effects of candidate gender on the proposed mediators (political-belief assumptions, character-trait assumptions, demand for gender-equal representation), this design point-identifies the natural direct effects of candidate gender on vote choice (Glynn 2019). In combination with the single-experiment condition, the natural indirect effects of political-belief inferences, character-trait inferences, and descriptive representation preferences on vote choice are also identified (Glynn 2019).

Gerber and Green (2012) note a number of benefits to an implicit mediation design. Importantly, from an analytic standpoint, “it never strays from the unbiased statistical framework of comparing randomly assigned groups” (p. 334). And this strictly experimental approach also fosters further exploration, particularly when multiple mediators are thought to be at play. Early experiments provide broad clues about “active ingredients” in a proposed mechanism, and further experimentation gradually refines the theoretical understanding of the causal pathways at work (p. 334).

Candidate choice experiments are limited in their ability to inform us how voters will behave in a real electoral setting. It is important to note, though, that our aim is not to predict what voters will do at the ballot box. Instead, our aim is to investigate psychological mechanisms, to uncover patterns of decision-making and to shed light on the motivations behind those predilections. Candidate choice experiments provide a tool well suited to such investigations: In a highly controlled setting, do we detect systematic tendencies, and can we gather evidence about the source of those tendencies? Once we establish that such tendencies exist, at least in an abstract setting, and once we have a greater understanding of what drives those patterns of decision-making, a remaining and important question is the extent to which these biases actually influence voter behavior in the real world (see, e.g., Dolan & Lynch 2016).

Experimental Design & Procedure

Recruited participants are first asked whether they are registered to vote in the United States as either a Republican or a Democrat. Only registered partisans are included in the survey. Participants then respond to a few demographic questions, including party identification and gender, and are asked to rank nine political issues in order of their importance to the respondent

“when selecting a candidate to vote for.” On the subsequent page, respondents are presented with a table juxtaposing two candidates, and are asked to imagine that the candidates are running against each other in a state-level primary contest within the respondent’s party.

The contents of the table juxtaposing the candidates depend on the conditions to which the respondent has been assigned. Immediately before viewing the table, respondents are randomly assigned either to a *control* condition, in which candidates are indistinguishable except for their gender, or to *reverse* or *reinforce* conditions. In Experiment 1, the *reverse* and *reinforce* conditions bundle together gender-linked belief and trait stereotypes, such that, in the *reverse* condition, both political-belief stereotypes and character-trait stereotypes are reversed; in the *reinforce* condition, both forms of stereotype are reinforced. Independent of their stereotype condition assignment, respondents are also randomized to see a textual description of the electoral conditions indicating either that gender-equal descriptive representation is present (e.g., the state legislature is described as 51% female) or that it is not (21% female). For balance, randomization occurs within party and gender.

Political-belief stereotypes cast female candidates as more liberal and Democratic than male candidates (Koch 2000, 2002) and these gender-linked political-belief stereotypes operate within party (King & Matland 2003, Sanbonmatsu & Dolan 2009). Democratic voters employing these stereotypes should thus perceive female candidates as more likely to share their concerns; the same stereotypes employed by Republican voters would imply that the female candidate is less likely to share their concerns. As such, we operationalize political-belief stereotype *reinforcement* as providing information to Republican respondents indicating the male candidate offers greater policy congruence than the female candidate, and to Democratic respondents indicating that the female candidate offers greater policy congruence than the male. Assignment to the *reversal*

condition does the opposite, treating Republican respondents such that the female candidate offers greater policy congruence than the male, and Democratic respondents such that the male candidate offers greater policy congruence than the female. In Experiment 1, this is accomplished by listing the respondent's top-three policy issues as the more-congruent candidate's key platform issues, and listing the respondent's bottom-three policy issues as the less-congruent candidate's key platform issues. As noted above, in Experiment 1 political-belief and character-trait stereotypes were bundled, such that for respondents assigned to the *reverse* condition, the female candidate was shown as having a stereotypically male trait profile, and the male candidate shown as having a stereotypically female trait profile (vice versa for the *reinforce* condition). For respondents assigned to the *control* condition, the respondent's middle three policy issues were listed as both candidates' key platform issues (with order randomized), and both candidates were shown with gender-neutral trait profiles.

Immediately beneath the candidate-comparison table, a textual description gave information on the balance of race, gender, and political party in the electoral context (e.g., the current composition of the state legislature in which the seat was being contested). Across all conditions, the information on racial and partisan balance was held constant. Respondents were randomized either to a condition describing women as under-represented in the office (*descriptive representation not present*) or a condition describing gender balance (*descriptive representation satisfied*).

All participants make two candidate-choice selections, one for a state House of Representatives primary and one for a gubernatorial primary. Respondents were randomized to either see the state House primary first, followed by the gubernatorial primary, or vice versa.² The design of Experiment 2 followed that of Experiment 1, with three main alterations. First, instead of ranking nine policy issues, respondents completed a short questionnaire asking them to indicate their preferred position on a number of issues and to rate that issue's importance to them. This questionnaire was presented to the respondents as a means of identifying their "best match" within a field of primary candidates. In Experiment 2, "match-scores" from this quiz were used in the candidate-comparison table to indicate policy congruence. In the control condition, both candidates were randomized to nearly identical scores.

Second, the political-belief and character-trait stereotype conditions were independently randomized in Experiment 2. Some respondents were assigned to a control group in which both candidates were described with randomly selected gender-neutral traits. Non-control respondents were randomized to either a political-belief stereotype *reversed* or *reinforced* condition, and independently, to a character-trait stereotype *reversed* or *reinforced* condition.

Finally, the descriptive representation treatments in Experiment 2 differed from those in Experiment 1 by including graphics representing the party, race, and gender balance, in addition to the text.

The primary outcome variable in both experiments is candidate choice, measured on a four point scale ("Very likely to vote for Candidate A", "Somewhat likely to vote for Candidate A",

² We found no evidence of an effect of office. Our analyses below take office into account, but we do not discuss the results separately.

“Somewhat likely to vote for Candidate B”, “Very likely to vote for Candidate B”). The outcome measures in Experiments 1 and 2 were the same except that immediately following the candidate choice, Experiment 2 provided an opportunity for respondents to explain their selection. Krupnikov et al. (2016) show that providing such an opportunity mitigates the effects of social-desirability bias in reporting support for Black or female candidates. In both experiments, respondents were asked to rate each candidate’s policy congruence (i.e., the extent to which the candidate matches the respondent on policy preferences) in order to allow for a manipulation check.

Sample

For Experiment 1, 447 respondents were recruited in January and February of 2019 through Bovitz survey platform. The sample was 30% Democratic women, 14% Republican women, 33% Democratic men, and 22% Republican men. Fifty percent of the sample was between the ages of 18-44. Fifty-four percent of respondents held a two-year or more advanced degree.

For Experiment 2, 1,016 respondents were recruited in July of 2019 through the Lucid survey platform (see Coppock & McClellan 2019). The sample was recruited to be balanced on gender and political party identification (26.2% Democratic women; 24.5% Republican women; 24.5% Democratic men; 24.7% Republican men). Mean age was 43 years old, with a standard deviation of 17 years. Fifty-three percent of respondents held a two-year or more advanced degree.

V. Results

Our investigation of voter-based contributions to the partisan gender gap in office aims to answer the following questions: First, is there a partisan gap in candidate-gender bias? That is, all else

equal, do Democratic respondents exhibit a greater preference for female candidates than do Republican respondents? Second, if we do see such a partisan gap, what accounts for it? To what extent do voters employ gender stereotypes as informational heuristics, drawing inferences about candidate political beliefs? To what extent do inferences about character traits matter? Do partisan differences disappear if gender-equal representation is satisfied?

Candidate-gender bias

Do partisans exhibit a gap in candidate-gender bias? We hypothesized that, all else equal, Democrats would exhibit a preference for female candidates, and Republicans would exhibit a preference for male candidates.

Figure 3 plots the mean vote choice by party for Experiments 1 and 2. Here, vote choices are coded such that 1 = “Very likely” to vote for the male candidate, 4 = “Very likely” to vote for the female candidate. A mean of 2.5—marked by the dotted line in Figure 3—would indicate that vote choices were gender-neutral on average (no tendency toward male or female candidates). In both experiments, Democratic respondents exhibit a significant preference for female candidates on average (Exp. 1: mean = 2.7, 95% CI: [2.59, 2.77]; Exp. 2: mean = 2.6, 95% CI: [2.54, 2.68]). Republican respondents’ mean vote choice is statistically indistinguishable from gender-neutral in both experiments (Exp. 1: mean = 2.5, 95% CI: [2.35, 2.58]; Exp. 2: mean = 2.45, 95% CI: [2.38, 2.53]), although both means fall slightly in the direction of a preference for male candidates.

Fig. 3

Mean vote choice by respondent party registration, Experiments 1 & 2

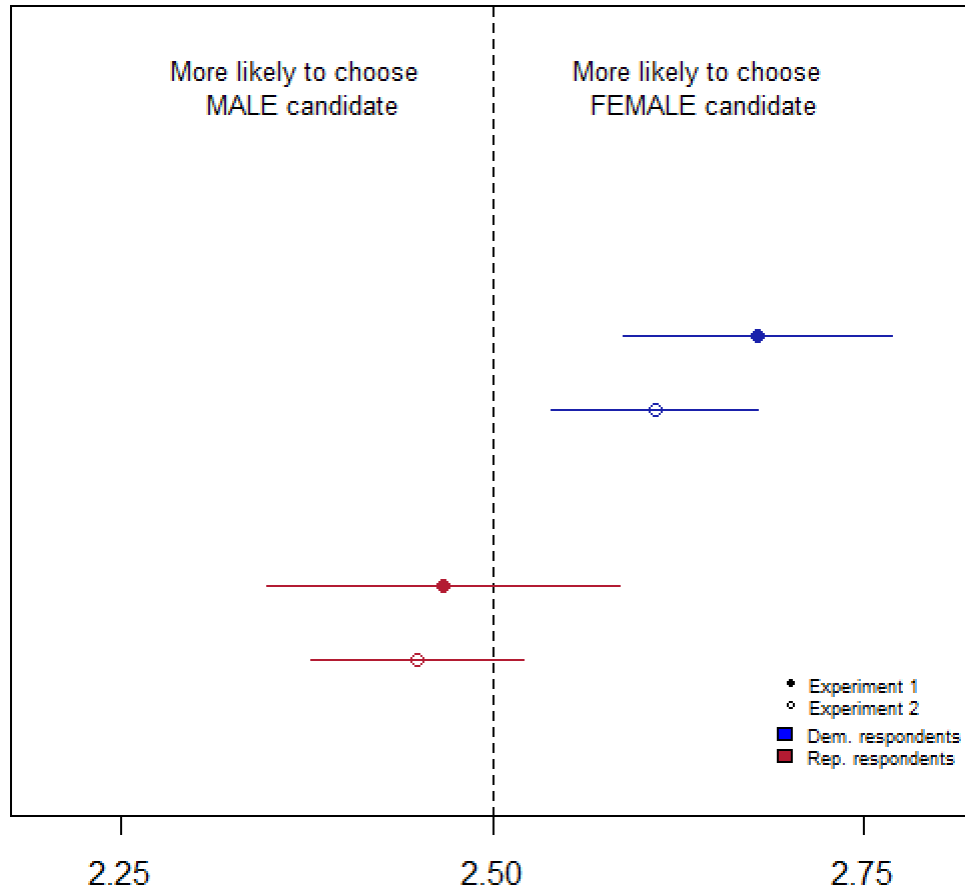


Fig. 3: Figure 3 plots mean vote choice with 95% confidence intervals among Democratic and Republican respondents. The x-axis measures mean vote choice on a scale of 1-4, where a mean less than 2.5 indicates more likely to choose the male candidate, a mean greater than 2.5 indicates more likely to choose the female candidate, and a mean of 2.50 indicates gender neutrality. The means among registered Democrats are shown in blue; the means among registered Republicans are shown in red. Experiment 1 means are represented with a solid point, Experiment 2 with a hollow point.

In addition to comparing within-party means against a benchmark of gender-neutrality as in Figure 3, we can also examine how manipulating candidate gender affects partisans' likelihood of voting for their policy-congruent candidate. Table 1 shows how candidate gender affects Democrats' and Republicans' likelihood of voting for their policy-congruent candidate. Here, the vote-choice variable is re-coded so that 4 indicates "Very likely" to vote for the candidate whose positions reflected the respondent's self-reported issue priorities. Candidate gender has a significant effect on Democrats' reported vote choice, as shown in the first column of Table 1. Among Democratic respondents, changing the gender of the policy-congruent candidate from female to male causes a .26 scale-point decrease (95% CI: [-.39, -.14]), meaning that a male policy-congruent candidate loses just over one-quarter of a scale point compared to an otherwise identical female policy-congruent candidate. Among Republicans, a female policy-congruent candidate loses just over one-tenth of a scale point compared to an otherwise identical male policy-congruent candidate, and the difference between genders is not significant at conventional levels (-.12, 95% CI: [-.25, +.02]).

Table 1: Effect of candidate gender on vote for policy-congruent candidate

	Democrats	Republicans
<i>Candidate-Gender</i>	-.26**	-.12 [†]
<i>Reverse</i>	[.06]	[.07]
<i>Office</i>	.01	.05
<i>(0=Leg., 1=Gov.)</i>	[.05]	[.07]
<i>Experiment</i>	.03	-.07
<i>(0=Exp.1, 1=Exp.2)</i>	[.07]	[.09]
<i>Constant</i>	3.06	3.08
	[.07]	[.09]
<i>N</i>	1198	1031

OLS regression with fixed effects for office and Experiment, estimating the effect of candidate gender on likelihood of voting for policy-congruent candidate. Robust standard errors, clustered by respondent, shown in brackets. ** denotes $p < .01$; [†] denotes $p < .10$

Together, the results presented in Figure 3 and Table 1 suggest that partisans do exhibit a gap in candidate-gender bias (H1)—although it did not manifest on both sides of the partisan divide as we expected (H1a & H1b). While Democrats show a clear bias toward female candidates compared to male candidates (H1a), Republican respondents demonstrated much greater gender neutrality. In both Figure 3 and Table 1, results among Republican respondents were statistically

indistinguishable from gender-neutrality (though both showed a tendency in the same direction as our hypothesis H1b).

Reversing policy-congruence assumptions

The results above indicate that partisans do exhibit a gap in candidate-gender bias. What accounts for this partisan difference? Our next set of hypotheses relate to the mechanism behind the partisan gap in candidate-gender bias. Table 2 presents the results of our path-severing treatments, which are designed to block politically-relevant inferences drawn from candidate-gender stereotypes. The first and third columns (Experiment 1 and 2) show mean vote choice between two candidates that are indistinguishable except for their gender (the control group). The second and fourth columns show mean vote choice when stereotype-reversing information is provided so as to preclude respondents' use of gender-linked stereotypes to make political inferences about a candidate.³ Stereotype-reversing information significantly affected vote choice in consistent manner, moving Democrats and Republicans in Experiment 1 and Experiment 2 between .4 and .6 scale points in the direction of bias reduction (H2-c).

Notably, the assumption-reversing information does not simply reduce candidate-gender bias, but completely reverses it, moving partisans to select the candidate of the opposite gender than the tendencies in Fig. 3 suggest. For Democrats, this means they move from a clear expression of pro-female bias when the candidates are indistinguishable (Exp. 1: mean = 2.7; Exp. 2: mean = 2.6) to a vote in favor of the male candidate (Exp. 1: mean = 2.25; Exp. 2: mean = 2.14) when

³ As noted in Section IV, this included linked belief-and-trait stereotypes in Experiment 1, and belief stereotypes in Experiment 2.

information is provided to reverse the political assumptions that would otherwise be drawn from candidate gender. Republicans move from gender neutrality in the face of indistinguishable candidates (Exp. 1: mean = 2.5; Exp. 2: mean = 2.5) to a vote in favor of the female candidate when gender-linked political assumptions are reversed (Exp. 1: mean = 3.0; Exp. 2: mean = 2.9).

Table 2: Effect of reversing policy-congruence assumptions

		Experiment One		Experiment Two	
		Candidates Indistinguishable	Assumptions Reversed	Candidates Indistinguishable	Assumptions Reversed
Democratic Respondents	<i>Mean</i>	2.65	2.25	2.62	2.14
	<i>Std. Error</i>	[.08]	[.08]	[.07]	[.05]
	<i>N</i>	191	181	417	204
	<i>Difference</i>	-.40** (-.62, -.18)		-.48** (-.65, -.30)	
		Experiment One		Experiment Two	
		Candidates Indistinguishable	Assumptions Reversed	Candidates Indistinguishable	Assumptions Reversed
Republican Respondents	<i>Mean</i>	2.47	3.02	2.53	2.90
	<i>Std. Error</i>	[.09]	[.10]	[.08]	[.07]
	<i>N</i>	108	102	212	199
	<i>Difference</i>	.55** (.29, .81)		.37** (.18, .56)	

Mean vote choice by party, condition and experiment. The top panel shows means among Democratic respondents, with Republican respondent means in the bottom panel. At the bottom of each panel is the difference-of-means between treatment (Assumptions Reversed) and control (Candidates Indistinguishable), along with 95% Confidence Intervals. **indicates a p-value less than .01

In order to conduct a manipulation check on the assumption-reversal treatments, we asked respondents to rate each candidate's policy congruence (i.e., the extent to which the candidate matches the respondent on policy preferences). The assumption-reversal condition should exert a negative effect on Democrats' assessment of the extent to which the female candidate provides policy congruence, and exert a positive effect on Republicans' assessment of the female candidate's policy congruence. The assumption reversal treatment has the predicted effect on Democrats and Republicans for both offices, in both Experiment 1 and Experiment 2. (Results shown in the Appendix).

Interaction w/Character Traits

In Experiment 2, we independently randomized character traits so as to examine whether character-trait information moderates the effect of reversing political-belief assumptions. Figure 4 plots mean vote choice by party, office, and candidate-trait condition. Mean vote choices in the political-belief assumption-reversal conditions are plotted with 95% confidence intervals. Democratic respondent means are shown in blue, and Republican respondent means shown in red. The darker colors (dark blue, dark red) show mean vote choice when candidate character-trait assumptions are reversed along with political-belief assumptions. The light colors (light blue, light red) show mean vote choice when political-belief assumptions are reversed, but character-trait assumptions are *reinforced* (i.e., candidate traits align with gender stereotypes rather than reversing gender stereotypes). As a benchmark for comparison, mean vote choice between indistinguishable candidates (i.e., the control group) is plotted in bright red and bright blue with no confidence intervals. The legislative conditions are marked with circles and the gubernatorial conditions are marked with squares.

Fig. 4: Moderating effect of character-traits on belief-stereotype reversal

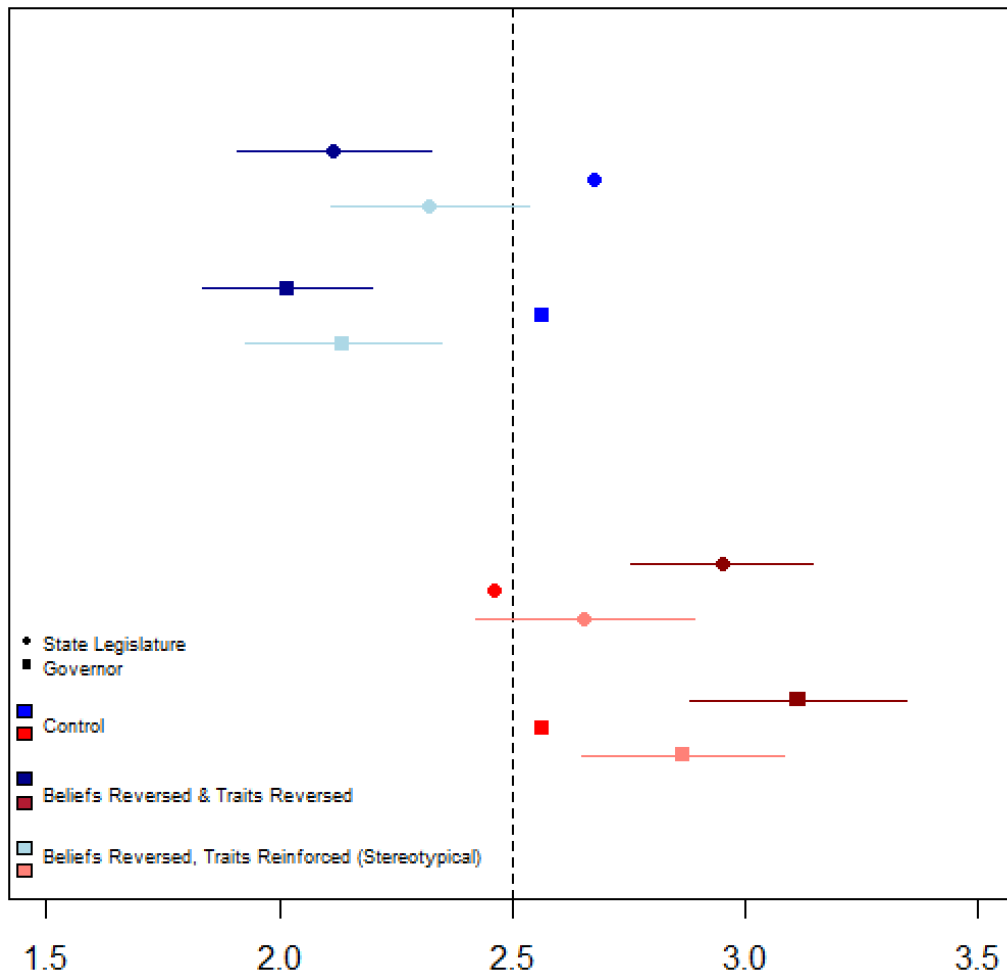


Fig. 4: Figure 4 plots mean vote choice in terms of likelihood of voting for the female candidate, with 95% confidence intervals. Data is from Exp. 2 only (traits were not independently randomized in Exp. 1). A mean < 2.5 indicates more likely to choose the male candidate; > 2.5 indicates more likely to choose the female candidate. The bright-color markers show mean vote choice in the control group (i.e., between two candidates indistinguishable except for gender) among Democratic (bright blue) and Republican (bright red) respondents. The dark-color markers show mean vote choice when candidate-gender belief stereotypes are reversed *and* candidate-gender trait stereotypes are reversed. The light-color markers show mean vote choice when candidate-gender belief stereotypes are reversed, but candidate-gender trait stereotypes are reinforced.

Candidate character traits do moderate the effect of candidate political-belief assumption-reversal, as is apparent in Figure 4: trait-reversal (darker-colored means) boosts the effect of belief assumption-reversal, and trait-reinforcement (lighter-colored means) dampens it. For both Republican and Democratic respondents, trait-stereotype reinforcement moves mean vote choice closer to the control group means, compared to the trait-reversal conditions.

Among both Democrats and Republicans, the effect of political-belief assumption-reversal is stronger when candidate trait assumptions are also reversed, compared to when candidate traits are stereotypical. Table 3 shows the effect of trait-reversal vs. trait-reinforcement. In order to evaluate Democratic and Republican respondents together, vote choice is re-coded here to reflect the presumed direction of bias (i.e., for Table 3, vote choice is re-coded such that, among Democratic respondents, 4 = “Very likely” to select the female candidate; among Republican respondents, 4 = “Very likely” to select the male candidate). The effect of belief-assumption reversal when character traits are also reversed (.5 scale point reduction in bias) is significantly greater than the effect when character traits are stereotypical (.3 scale point reduction in bias) ($F_{1,859} = 7.99, p < .01$). Moreover, while reversing character trait assumptions does not exert a direct effect on candidate-gender bias (H3), *reinforcing* character trait assumptions does exert a direct effect *increasing* candidate-gender bias, compared to the control group with gender-neutral character traits ($\tau = .14$ scale point increase, 95% CI: [.01, .26]).

Table 3: Character Trait Moderation of Assumption-Reversal Effect**Regression estimate of assumption reversal/reinforcement on bias vote**

<i>Trait Reversal & Assumption Reversal</i>	-0.53**
	[.07]
<i>Trait Reinforcement & Assumption Reversal</i>	-.31**
	[.08]
<i>Republican</i>	-.08
	[.07]
<i>Gubernatorial Race</i>	-.15
	[.05]
<i>Constant</i>	2.66
	[.07]

N 1210

OLS regression with fixed effects for office and respondent party, estimating the effect of trait-and-belief assumption reversal and trait-reinforcement-but-belief-reversal on voting in the direction of presumed candidate-gender bias. Robust standard errors, clustered by respondent, are shown in brackets. ** denotes a p-value less than or equal to .01. An F-test shows that the coefficients on Trait-Reversal vs. Trait-Reinforcement are significantly different ($F_{1,859} = 7.99$, $p < .01$).

Descriptive representation and heterogeneity

We found no evidence supporting our Descriptive Representation hypotheses (H4-c a). Presenting information indicating that gender-balance was already present (compared to a stark imbalance in gender-descriptive representation) had no effect on vote choice among Democrats or Republicans in Experiment 1 or Experiment 2, regardless of office. Of course, our failure to find evidence supporting this hypothesis does not necessarily indicate that considerations of gender-descriptive representation play no role in voter decision-making, or even in the partisan gender-gap in office. For example, voters may care about descriptive representation on a scale beyond what our treatments addressed. In both the legislative and gubernatorial conditions, descriptive representation was addressed within the immediate context: the gender-composition of the state House going into the election, the gender of the past six governors of the state in question. It could be that voters who care about gender-descriptive representation consider the larger picture nationwide, such that, e.g., a treatment indicating that the House of Representatives within a particular state exhibits gender balance is subsumed within the context of a dramatic under-representation of women in the United States in general.

Another relevant null result is that we found no evidence of heterogeneity by respondent gender. The results among Democratic women versus Democratic men showed no notable differences, nor did the results among Republican women versus Republican men.

VI. Discussion

A partisan gender-gap in office—with women making up a larger share of elected Democrats than of elected Republicans—has grown over time and currently manifests in every state legislature across the continental United States, as well as both chambers of Congress. We investigated voter-

driven contributions to this partisan gender gap in office. Our results demonstrate that registered partisans do exhibit a gap in candidate-gender bias, but that this gap appears largely a product of a pro-female bias among Democrats, while Republicans are more gender-neutral. These findings mirror results from other experimental studies (Schwarz et al. 2018) as well as analysis of Congressional elections (Dolan 2004).

Our results also provide evidence suggesting the candidate-gender biases that do appear reflect political inferences drawn from candidate-gender stereotypes, rather than stemming from gender-based prejudices unrelated to political reasoning. Both Democrats and Republicans are moved by counter-stereotypic political information: the pro-female bias among Democrats is entirely eliminated by information indicating that a male candidate provides greater policy-congruence, and Republicans move from gender-neutrality in the absence of information to voting for the female candidate when she provides greater congruence. Indeed, Republicans match Democrats' level of support for a policy-congruent female candidate.

Inferences drawn from gender-linked trait stereotypes moderate this effect. The effect of belief-stereotype reversal is strengthened when paired with a reversal of character-trait stereotypes; the effect is muted when the candidate's character traits are gender-stereotypical.

An important consideration in interpreting these findings is that any influence of social desirability would suppress a pro-male bias more than a pro-female bias. We took a number of precautions in our design to curtail the influence of social desirability. We employ Krupnikov et al.'s (2016) explanation-based technique for mitigating the effects of social desirability bias in reporting support for female candidates. We also took care to avoid drawing attention to gender as a variable of interest: no questions about gender were asked aside from the respondent providing their own in the demographic questions; gender was never mentioned as a topic of the study; and

candidate gender was one of a number of variables presented about the candidate, appearing fourth in a list of eight attributes that also included party, ideology, age, education, and chances of winning the general election.⁴ Nevertheless, we cannot rule out that the finding of gender-neutrality among Republicans is due to respondents' sensitivity about revealing a bias against female candidates.

But it is also important to note that social desirability has no bearing on the results from our implicit mediation tests. We find that blocking gender-linked political belief stereotypes moves all respondents—Democratic and Republican—in the direction of bias reduction (Table 2). The effect of this bias reduction is consistent across two experiments and within both parties, lending strong evidence to the conclusion that, to the extent that partisans *do* judge candidates based on gender, they are employing those gender-linked stereotypes in order to make inferences about a candidate's policy congruence. While it remains possible that the influence of social desirability is leading us to underestimate a possible pro-male candidate-gender bias among Republican respondents, this would simply shift the baseline against which the treatment effect operates. We have no reason to believe that treatment effect estimates would differ.

Contrary to our hypothesis, we found no evidence that the pro-female candidate-gender bias exhibited by Democrats was motivated by a desire for gender-descriptive representation. However, if preferences for gender-descriptive representation derive from the broader perspective of widespread underrepresentation of women in office, then our context-specific descriptive representation treatments may simply not have been scale-appropriate.

⁴ All attributes were either randomized or fixed across candidates. None showed any influence on the results reported here.

As Schrieber (2018) and others have noted, the partisan gender gap in office is consequential. Republican women differ in their policy preferences and political priorities both from Republican men and from Democratic women. Importantly, the results from this study indicate that Republican voters are *not* an impediment to greater representation of women among elected officials. Republicans demonstrated no aversion to female candidates, and were as pro-female as Democratic voters when presented with a policy-congruent female candidate. Taken together with the work by Elder (2008, 2012, 2018) and Thomsen (2015), these findings suggest that structural and elite-level blockades are obstructing considerable demand for female candidates among Republican voters.

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