Political Ideology Modifies the Effect of Glass Cliff Candidacies on Election Outcomes for Women in American State Legislative Races (2011–2016)

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Abstract

Research on glass cliff political candidacies shows that compared to men, women are more likely to run for office in districts where they are likely to lose. We examined if party differences in whether female candidates face these worse conditions in the United States could account for persistent and growing party and state variation in women's representation. Using election data from 2011 to 2016, we compared Republican versus Democratic candidacies at the state legislative level. We found that women in both parties faced glass cliffs in House races, but not in the Senate. For Republican women, glass cliff conditions accounted for worse election outcomes, but Democratic women were more likely to win when these conditions were considered. Variation in party by state measures of glass cliff effects were also found to explain state variation in women's office holding. We found that for Democrats, more women win when more women run, but for Republicans, more women win only when the seats they face are more winnable. These results point to the role of polarized traditional versus progressive political ideologies in structuring the motives which underlie glass cliff conditions for women in politics, suggesting that practical solutions be tailored to party. To overcome the growing gap in women's representation, current efforts to increase the quantity of women running would be complemented by a focus on improving the quality of contests they face, with Republican women most likely to benefit. Further research attending to the multiple sources of variation which impact gendered election outcomes can inform more targeted solutions for advancing equality. *Online slides for instructors who want to use this article for teaching are available on PWQ's website at http://journals.sagepub.com/doi/suppl/10.1177/0361684321992046*

State legislatures in the United States (U.S.) are vital career entry points for women in politics, allowing them to gain both the experience and the social and economic capital required to advance through the pipeline of higher political office holding (Mariani, 2008; Palmer & Simon, 2001). Improving women's representation at this level is therefore not only crucial in its own right, impacting policies that affect women at the state level, but is significant for accelerating women's representation overall across the U.S. political spectrum.

However, although record numbers of women have run for state legislative office in the United States over the past decade, and a record number have won (Center for American Women and Politics [CAWP], 2020), enthusiasm for these gains must be measured. Despite continued efforts to recruit and encourage their political careers (Carroll & Sanbonmatsu, 2013; Lawless & Pearson, 2008), women remain largely underrepresented. Currently, only 29.3% of all state legislative seats are occupied by women (CAWP, 2020). Although a

marked improvement from 2016, where less than a quarter of state legislators were female (Beitsch, 2015; Dittmar, 2017), these gains remain incrementally small and have barely improved upon trends in the early 1990s, when the rate of advancement for women in state legislative office noticeably plateaued (Beitsch, 2015; Sanbonmatsu, 2018).

Understanding the factors that account for this plateau is complicated by variation in this trend between the two major U.S. political parties and variation in women's legislative office holding across the states. Starting from 2002, gains

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in women's representation have been driven exclusively by the Democratic (liberal or progressive) party and have even decreased for the Republican (conservative or traditional) party (Carroll & Sanbonmatsu, 2013; Elder, 2012; Sanbonmatsu, 2018). Female Democratic legislators now outnumber Republican by more than 2 to 1, a partisan gap that began to emerge in the late 1980s to early 1990s (Elder, 2012). In addition, there is sizable state variation in women's representation overall, as well as variation within and between parties across the states (CAWP, 2020). Improving women's representation at the state level in both parties thus requires attention to the conditions and causal factors shaping variation at multiple levels in order to tailor interventions and policies to context.

Past studies comparing the rates at which women versus men win elections in the United States have supported the conventional claim that when women run for office, they are just as likely to win as men (Lawless & Pearson, 2008; Pearson & McGhee, 2013). Removing barriers to (or encouraging) women's participation in politics has therefore been regarded as the main key to improving representation in the long run (Carroll & Sanbonmatsu, 2013; Fox, 2018; Lawless & Pearson, 2008). However, concerted multi-decade efforts to energize women to run for office have had disproportionate success for Democratic versus Republican women. In the search for explanations for this gap, several studies have pointed to the impact of several party-specific or state-level factors (Bucchianeri, 2008; Dittmar, 2015; Sanbonmatsu, 2002), including increasingly polarized party ideologies, which exaggerate cultural distinctions that foster participation of Democratic women but inhibit Republican women's participation (Elder, 2012).

Our research carries these investigations forward by considering these party distinctions in an examination of whether and why female candidates, who have broken through glass ceiling barriers to compete for political office, may find themselves on a glass cliff (Ryan et al., 2016), that is, whether they are more likely to run in harder-to-win districts compared to their male colleagues. We then examine the importance of this factor in accounting for party and state specific variation in the total proportion of women serving in state legislatures.

The Glass Cliff

Originating in research on the rise of women to positions of corporate governance, the term *glass cliff* describes patterns in the advancement of women and minorities to positions of leadership where there is a disproportionate chance of their failure (Ryan & Haslam, 2005; Ryan et al., 2016). A recent review and meta-analysis of glass cliff effects from 74 independent studies affirmed that these conditions arise in a large variety of domains, including politics (Morgenroth et al., 2020).

As defined, a glass cliff in politics emerges when women, or ethnic, racial, or immigrant minority candidates disproportionately run for office in conditions of crisis or scandal, or disproportionately face worse elective odds compared to their majority male colleagues. The *winnability* of a seat describes these elective odds. Winnability is the degree to which a candidate is favored to win in their district based on prior elective outcomes for their party in that locale. It is the probability of electoral success for a political party in a district given prior results. A glass cliff then occurs when women or other minorities disproportionately run for office in districts with lower winnability.

Past political research in the United States provides some evidence for the occurrence of party specific political glass cliffs for female candidates. Van Hightower (1977) interviewed female candidates for state or national office in New York who were "expected to lose, either because of a strong incumbent, a strong machine, or a combination of both in the opposition" (p. 302). She found Democratic women more likely to self-recruit to more winnable districts and win and Republican women more likely to be party-recruited to throwaway contests and lose. Gertzog and Simard (1981) investigated the nomination of women to "hopeless" federal races for the U.S. House from 1916 to 1978, finding that women both disproportionately faced incumbents and ran for seats where their party lost the prior election by more than 10%.

More recent studies of election results in countries with party platforms characterized similarly to the United States as conservative (traditional) or right-leaning, versus liberal (progressive) or left-leaning, also show party-dependent glass cliffs. In the United Kingdom 2005 general election, female Conservative, but not Labor, candidates were more likely to contest hard to win seats (Ryan et al., 2010), a pattern also found for ethnic minority candidates (Kulich et al., 2014). Analysis of Canadian federal elections from 2004 to 2011 showed a glass cliff for women as well in three of the four parties studied, but an advantage for women in the fourth (Thomas & Bodet, 2013). This suggests that the importance of gender within more broadly conceptualized evolving political agendas may shape the appearance and strength of glass cliff conditions faced by minority candidates.

Multiple Motives for Glass Cliffs

The processes that generate glass cliff conditions have been primarily examined using experimental designs for the corporate context (Ryan et al., 2016). In these studies, hostile motives, in which women are subject to discrimination in order to protect the gender status quo, are considered in contrast to more benign motives, where women are appointed because they are associated with change (Kulich et al., 2015; Morgenroth et al., 2020). Although both hostile and benign motives can lead to higher risks for minorities, an understanding of when and how these different motives come into play is

of particular interest in the search for tailored and therefore more effective solutions.

Traditional stereotypes of men as more competent, assertive, and independent match the common expectation of what is required of a good leader (Eagly & Karau, 2002). In the hostile case, the strong activation of this stereotype can reinforce a "think manager-think male" association (Schein, 1973), leading to decisions that protect the male image in defense of the stereotype. Disproportionate pairing of women with leadership assignments where failure is imminent also tends to reinforce traditional divisions in gender roles, where men are assumed to be competent in leadership capacities and women are not (Acar & Sümer, 2018; Cook & Glass, 2014; Rink et al., 2013; Ryan et al., 2011).

Alternatively, in the benign case, crisis conditions can lead to female appointments due to an activation of feminine stereotypes of warmth, concern, or capacity to relate to others. Women are judged to have more of the ideal communal traits perceived as essential for rehabilitating poor conditions (Ryan et al., 2011). Several studies provide evidence that women are preferred in hiring decisions because stereotypical feminine qualities are believed to be more effective in times of organizational trouble (Bruckmüller et al., 2014; Haslam & Ryan, 2008), a preference shown to be specifically linked to feminine gender stereotypes (Bruckmüller & Branscombe, 2010). Because stereotypes of women contrast with those of men, their selection may also symbolically communicate organizational investment in change after the poor performance of male leadership (Bruckmüller & Branscombe, 2010; Kulich et al., 2015).

Glass Cliff Motives in Politics

In election studies, explanations of political party behavior often assume strategic utilitarian aims, "rooted in the assumption that parties are motivated, at the very least in part, by the desire to maximize the party's share of the vote" (Zingher & Farrer, 2016, p. 8). Although party affiliation remains the most salient cue used to infer voter preference, demographic cues, such as race, ethnicity, and gender, are also often used by voters to make political decisions (Juenke & Shah, 2016). These cues can even transcend party affiliation as the most salient candidate criteria (Sanbonmatsu & Dolan, 2009). Elective losses or local political scandals may similarly trigger an increased reliance on gender stereotypes, inciting political actors or the electorate to consider women more fit for the situation, either as expendable (Ryan et al., 2007) or, alternatively, as embodying the necessary qualities to facilitate change (Kulich et al., 2015). However, political glass cliffs are also likely to depend on both the structure of political career paths and the anchoring of gender stereotypes in party-based ideologies with traditional versus progressive leanings.

In American state legislatures, candidates run for office to represent a defined population in a geographically demarcated district, and careers are candidate-centered; individuals interested in political careers enter primary campaigns in a specific geographic locale and are largely responsible for coalition building, fundraising, and campaign strategy (Lawless & Pearson, 2008). Voters are then instrumental in selecting party front runners, and candidates advance through a pipeline of incremental office holding. However, the nomination of women is constrained by a range of factors impacting entry and continued participation, and despite a candidate-centered structure, the active persuasion and support of political party leaders, elected officials, and local organizations remains instrumental in the decision of women to run for office (Sanbonmatsu, 2018). In this context, the decisions of multiple actors (candidates, voters, and party leaders) can promote or prevent glass cliff conditions and their consequences due to shared priorities in conjunction with in-group dynamics. Relying on this perspective, we suggest that party divergences in glass cliff effects likely arise due to group prototype matching of gender stereotypes and political party agendas in link with party ideological differences, particularly in relation to attitudes toward women's suitability for office and efforts aimed at gender equality. These dynamics can lead to differential exposure of female candidates to ambivalent sexism, presenting distinct challenges when it comes to managing role conflicts. We discuss each of these elements in turn.

Party Agendas and Prototype Matching of Gender Stereotypes

Recent Pew Research (Doherty et al., 2017) shows that the U.S. partisan gap in values is more divided than ever before and has grown wider on a variety of issues. Over time, the Republican agenda has become increasingly weighted toward issues that are considered stereotypically more masculine, such as defense, spending, and reducing crime, and the Democratic agenda more aligned with issues considered stereotypically feminine, such as social programs, peace, and the environment (Winter, 2010). Americans are six times more likely to mention female versus male traits when they are thinking of the Democratic versus the Republican Party, contributing to the argument that political parties are gendered in the United States (McDermott, 2016; Winter, 2010). Female candidates more closely match the Democratic group prototype, and male candidates more closely match the Republican group prototype. According to Hogg's (2001) social identity theory of leadership, we would expect party leaders and ingroup voters to be more likely to nominate or vote for individuals who match the group prototype more succinctly.

Ideologies, Attitudes, Sexism, and Role Conflicts

Republicans and Democrats also differ dramatically with regard to their beliefs about women's suitability for politics and about the need (or lack thereof) for increased

representation. Recent Pew Research (Horowitz et al., 2017) shows a widening partisan gap with regard to beliefs about gender equality. Democrats believe that "more work is needed to bring about gender equality," while more Republicans think that the amount of work done "has been about right" and that efforts toward gender equality have even "gone too far" (Horowitz et al., 2017, p. 3). Another Pew study reports that although around three quarters of people in both parties believe that women and men make equally good political leaders, the remaining quarter of Republican respondents (both men and women) state that men make better political leaders, and the remaining quarter of Democrats choose women (Parker et al., 2015). There are also large party differences in the attitudes of women themselves, with 69% of Democratic women, but only 20% of Republican women, saying they hope a female president is elected in their lifetime (Parker et al., 2015).

Socially conservative values are prioritized by many in the Republican Party. Traditional gender roles of both men (as breadwinners and leaders) and women (as mothers and caretakers) are emphasized in party rhetoric and political advertising. These roles are often framed as being central to the maintenance of the nuclear family. Republicans are less likely to support candidates who are mothers, especially of young children, and candidates who are women are more likely to be described in terms of feminine toughness or as conservative supermoms (Schreiber, 2016). Female Republican candidates must therefore display both an adherence to traditional gender roles and a commitment to conservative toughness, overcoming the contradiction inherent in the contrast of gender and their party. One can argue that Democratic women do not completely avoid this hurdle, but the conservative burden of managing role conflicts in this regard is likely more acute (Carroll & Sanbonmatsu, 2013; Gervais & Hillard, 2011).

These more traditional views also correspond with a tendency toward benevolent sexism, where women are regarded as warmer and more compassionate, but also as incompetent and dependent compared to men, requiring paternalistic care. These views are positively related to hostile sexism, the negative evaluation of women who violate gender expectations (Glick & Fiske, 1996). Women exposed to benevolent sexism are less likely to recognize these attitudes as sexist, less likely to experience associated anger, and are therefore less likely to engage in collective action for social change (Becker & Wright, 2011). Overt ideological adherence to traditional gender stereotypes may thus render Republican women especially vulnerable to the negative consequences of ambivalent sexism and the burden of managing conflicting roles.

In contrast, Democratic party adherence to a modern progressive view of gender positions women as liberal prototypes, as more representative of platform priorities (equality particularly), and as more capable of managing the stress of an uphill race. Because Democratic party ideologies lean toward pro-equality views of women in conjunction with a platform that prioritizes these issues, women may be more encouraged to run by party influencers. Female Democratic candidates, more concerned about issues of equality and more cognizant of sexist attitudes, may also be more disconcerted in response to hostile sexism and more likely to recognize benevolent sexism as problematically sexist. This may elicit more anger for these women, leading to greater personal motivation for political action (Becker & Wright, 2011; Hoyt et al., 2010; Hoyt & Murphy, 2016). Democratic voters may also infer that women (or other minority) candidates running in conservative districts have more strength or tenacity, given their willingness or persistence to run despite obstacles to minority advancement, and therefore judge them more capable contenders in difficult contexts. Recent experimental research supports this notion, showing left-leaning participants as more likely to choose minority candidates to represent their political party when confronting a difficult to win situation (Aelenei et al., 2020).

Female candidates for both parties may then be disproportionately confronted with situations where failure is likely, but for different reasons. For Democrats, leaders and voters may see women as more prototypically representative of party issues viewed as more feminine and believe that the stereotypical communal traits and tenacity of women in times of difficulty will effect change. For Republicans, leaders and voters are likely to see women as less prototypically representative of party issues viewed as more masculine and believe they are unlikely to persuade voters with more traditional perspectives on gender roles. In this case, women may be more likely to face unwinnable contests due to a desire to mitigate losses because they are less valuable political agents or are more expendable (Ryan et al., 2007).

Finally, although we have argued that opposing motives could plausibly contribute to glass cliff conditions for female candidates in both political party contexts, if these differences in motives are structured by traditional versus progressive party leanings, variation in the appearance or particular shape of glass cliffs and their consequences for electoral successes may also arise, further providing clues to the origin of different motives and a lens on implications for the political sphere.

The Present Study

In order to investigate the role of political party-contingent glass cliffs in women's continued underrepresentation in U.S. state legislatures, we examined whether female candidates for each major party, Republicans versus Democrats, faced a glass cliff in the election years 2011–2016 and measured the impact of glass cliff conditions on electoral outcomes for women versus men during this same time frame. We hypothesized that because glass cliffs can arise from divergent motives stemming from opposing ideological positions, that female candidates in both major political parties would face a glass cliff, or run in less winnable districts compared to

male candidates in their party (Hypothesis 1). However, congruent with past research in other contexts with similar party-based (conservative vs. liberal) election structures, and due to our suspicion that the ideological differences that underlie these motives could explain the growing chasm between the parties in women's representation, we hypothesized that party differences in the overall impact of glass cliff conditions on electoral outcomes would be found, negatively impacting Republicans more than Democrats (Hypothesis 2).

Because state legislatures are distinct institutions, and because the proportion of female legislators for both parties differs dramatically by state, in an extension of these analyses, we investigated party by state variation in the glass cliff effects found in our test of H1. We then examined the importance of these party by state variations in accounting for the large variation seen in the proportion of women legislators serving in office for their parties across the United States.

Finally, we aimed to determine the ecological relevance of one type of benign motive, derived from corporate research, to the political context. We reasoned that strategic motives relying on gender contrasts to persuade voters of the potential of a candidate to change the status quo would lead to a particular patterned result. Drawing on Bruckmüller and Branscombe's (2010) research in the organizational context showing a glass cliff only when past management was male, we hypothesized that if women were employed to communicate and rally for change where past efforts had failed, then in less winnable districts, a Democratic female candidate should be more likely to be nominated when the previous election same-party losing candidate was male versus when female (H3). If successful as a strategy, we reasoned also that the nomination of female candidates in less winnable districts after the loss of a male candidate would result in vote share increases for the strategizing party (H4). In the Republican case, we did not expect to find a similarly patterned outcome, as Republican women would not be similarly situated as catalysts for change and therefore would be just as likely to confront poor conditions whether the prior losing candidate was male or female.

Method

To test these expectations, we compiled general election data for every district at the U.S. state legislative level in all 50 states (excluding U.S. territories and the District of Columbia) for every year from 2011 through 2016. Each of the legislative bodies in the U.S. states is similar to the federal legislature in being bicameral, comprised of an upper chamber (Senate) and a lower chamber (House or Assembly). State legislative chambers differ in their governmental roles and responsibilities, with the upper chambers composed of fewer officeholders representing a larger portion of the population in each district and possessing more seniority and legislative power compared to those in the lower chambers. Potentially

significant chamber differences therefore warranted separate consideration in the analyses of our hypotheses.

During the study period, 32,981 candidates ran for state legislative office in 6,851 districts (4,912 lower and 1,939 upper). We selected this time frame with the aim to register election outcomes in the most recent presidential election year and to capture and compare the results for at least one election prior for every state legislative district in the United States for both chambers. Because districts were redrawn after the 2010 census, we excluded elections before 2011 for lack of comparability. The time frame we selected was also guided by distinct state election structures and time lines. Although most districts (71.8%) hold elections every 2 years, a smaller percentage (28.2%) hold elections in odd years, every 4 years, both, or staggered (half of the districts up for election at any one point). To manage this comparability problem, most prior research excludes a large number of states from analysis. Because we were interested in the generalizability of glass cliff effects at the state level, we chose a time line that mitigated the number of districts excluded, allowing us to capture both the most recent election together with a prior election result for every district in 47 states. Nebraska was excluded due to the designation of candidates as nonpartisan operating in a unicameral legislature. Results from Maryland and Alabama were included in basic descriptives and time line comparisons but not represented in analyses relying on prior election results due to prior election data for their most recent election (in 2014) being outside of the study period (in 2010).

Data Collection and Sources

We compiled two data sets for analysis. We organized Data set 1 to allow for a preliminary descriptive examination of the number of women running for election over time and the relative odds of women winning over time compared to men by party. Due to the need for adequate comparability between election years while including districts with irregular election cycles, we designated three election time periods. In 2011–2012, 11,404 candidates ran for legislative office in 6,173 districts, in 2013–2014, 10,626 candidates ran in 5,782 districts, and in 2015–2016, 10,951 candidates ran in 6,044 districts.

We organized Data set 2 to allow for an analysis of the impact of prior election factors on the most recent election outcome for each district, with each case representing a major party candidate running in the last (most recent) election for their district (239 candidates in 146 districts in 2013–2014, and 10,115 candidates in 6,006 districts in 2015–2016). Cases where the district had no prior election to refer to in these data were excluded (1,317 candidates in 669 districts), as well as all third-party candidates, or candidates not running on the Republican or Democratic party tickets (7.7% of cases). Third-party candidates are routinely excluded in election

Table 1. Variables and Codes.

Variable	Label	Coding
Chamber	Chamber	0 = lower, 1 = upper
Year	Year	1 = 2011–2012, 2 = 2013–2014, 3 = 2015–2016
Election success	Won	0 = lost, 1 = won
Prior election success	pWon	0 = lost, 1 = won
Candidate gender	Gender	0 = male, 1 = female
Prior candidate gender	pGender	0 = male, 1 = female
Party	Party	0 = Democrat, 1 = Republican
Incumbency	Incumbent	0 = non-incumbent, 1 = incumbent
Margin of victory or defeat	MOVOD	−100 to 100 (continuous)
Prior margin of victory or defeat	pMOVOD	−100 to 100 (continuous)
Change in vote margin	MarginChange	0 = margin decrease, 1 = margin increase
Same candidate as prior election	PriorLastName	0 = different, 1 = same
Seat type		Unopposed incumbent, I = incumbent, C = challenger, OpS = open seat, UOpS = unopposed open seat

research due to lack of uniformity in official reporting, low numbers, and little impact on results.

Election results for 2011–2012 were obtained from Klarner's (2013) 2011–2012 addendum to the Inter-university Consortium for Political and Social Research 1967–2010 state legislative election returns data set (Klarner et al., 2013). Election results for years 2013, 2014, 2015, and 2016 were obtained by scraping election results from each state legislature webpage of *Ballotpedia: The Encyclopedia of American Politics* for the desired year, a source that relies on official state election outcomes (Ballotpedia, n.d.-c). Candidate gender was obtained by matching candidate names in election results data with gender data from the CAWP (2019). This was verified and completed by matching again with multi-year data from two data sets from the Reflective Democracy Campaign (2015, 2017). Discrepancies were inspected and corrected by hand, privileging Ballotpedia as the authoritative reference and utilizing other sources as required (i.e., news articles, social media, obituaries, etc.). Because 13.9% of candidates remained with no gender match using these sources, candidate first names were ultimately cross referenced with data obtained from governmental records of the most popular first names given for boys and girls from the years 1930–2016 (defined as names given to more than 400 children in a given year; U.S. Social Security Administration, n.d.). Remaining non-matches as well as gender ambiguous names (e.g., Bobby, Chris, Kelly, Lynne, Terry) were individually inspected and corrected by hand.

Variables and Analysis

A list of variables and their coding is provided in Table 1. We first descriptively assessed trends in candidate gender and the proportion of elections won over time (Data set 1) and compared gender in relation to party and chamber, as well as by party and seat type for the most recent election in each district (Data set 2). In order to investigate H1 and H2, we employed a multigroup structural equation model (MG-SEM) approach

with mediation using AMOS SPSS Version 25.0 (Arbuckle, 2017). SEM allows the incorporation of latent variables via confirmatory factor analysis (CFA) in a regression structure (Byrne, 2016). For H3 and H4, we conducted permutation tests of conditional independence using dedicated packages in R (Data set 2; Meyer et al., 2006, 2020; Zeileis et al., 2007). All other data compilation, cleaning, and analyses were completed using R and associated packages (R Core Team, 2020). An α level of .05 was used for all statistical tests, and all confidence intervals (CIs) reported are at 95%. Reported risk ratios rely on Wald's unconditional maximum likelihood estimation with normal approximation for CIs. Complete data, codebooks, and replication materials for this study are available online (Robinson & Kulich, 2021).

Results

Descriptive and Preliminary Analyses

Party representation and female candidates over time. From 2011 to 2016 (Data set 1; $n = 32,981$), the majority of candidates (92.3%) ran for a major party; 45.7% (15,067) were Democrats and 46.6% (15,384) were Republicans. A minority of candidates ran for third parties, as independents, or as non-party affiliated (7.7% or 2,530). Over this period, the proportion of women running for elected office for a major party increased from 25.2% in 2011–2012, to 26.8% in 2013–2014, and to 27.8% in 2015–2016 (Figure 1a). These differences may appear small, but they represent non-trivial increases. Proportionally, compared to 2011–2012, 8.9% more women ran in 2014–2015 and 14% more in 2015–2016, $\chi^2(2, n = 30,451) = 18.18, p < .001$. In total, 175 more women ran during the 2015–2016 election period compared to the presidential election period 4 years prior.

In the last decade, although the proportion of women versus men running for state legislative office has gone up significantly, increases in the quantity of female candidates have not translated into more elective successes. Women became more likely to lose over the same time frame (Figure 1b). An

Figure 1. Proportion of Women Running for Office by year (a) and Predicted Probability of Winning the Election for Each Year by Gender (b).
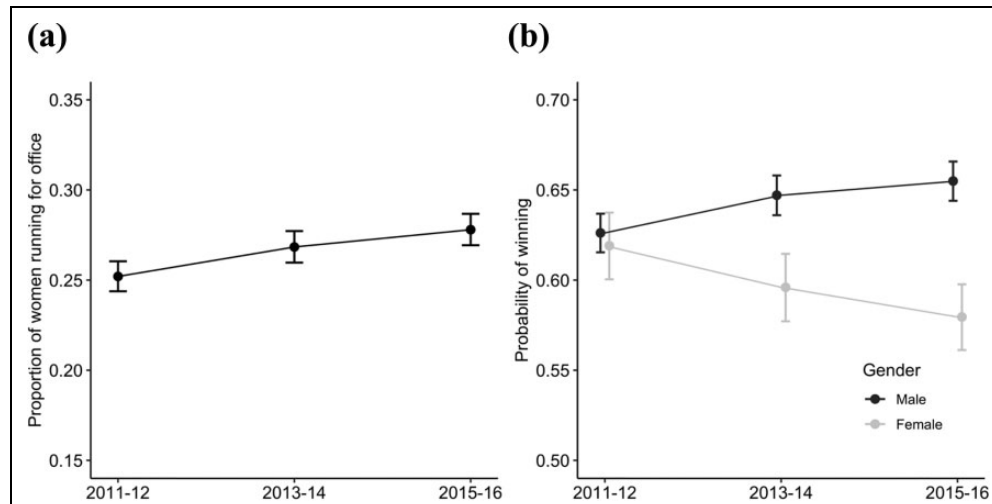
Note. $n = 30,451$.

analysis of relative probability showed male candidates as 7.4%, CI [5.30, 9.70], more likely to win overall compared to females. This effect was also structured significantly by year. A binary logistic regression, *Election Success = Candidate Gender + Year + (Candidate Gender × Year)*, showed that women were not more likely to lose compared to men in 2011–2012 ($B = -0.03$, $SE = 0.05$, $p = .52$, $OR = 0.97$, CI [0.89, 1.06]) but were significantly more likely to lose in 2013–2014 ($B = -0.19$, $SE = 0.07$, $p = .004$, $OR = 0.83$, CI [0.73, 0.94]) and in 2015–2016 ($B = -0.29$, $SE = 0.06$, $p < .001$, $OR = 0.75$, CI [0.66, 0.85]).

Gender in the most recent election for each district. In order to understand women's losses despite an increase in the number of women running for office over time, we looked at the returns for the most recent election for every district (Data set 2). In the most recent election, 2,875 (27.8%) candidates for office were female and 7,479 (72.2%) were male. Although male candidates in both parties outnumbered women, 36.6% of Democrats were women (1,893), but only 18.9% of Republicans (982). A gender (male vs. female) by party (Democrats vs. Republicans) χ^2 test showed a significant relationship between gender and party, $\phi = .20$, $\chi^2(1, n = 10,354) = 398.76$, $p < .001$. The number of candidates for each gender in each party and deviation from expected values is shown in Figure 2.

Finally, an analysis of candidate gender by the category of seat type faced for each party showed that in the most recent election for each district, after controlling for the overall difference in the number of men versus women nominated by party, women and men did not run for significantly different seat types, with three notable exceptions: (a) Democratic and Republican women ran less than expected as Unopposed Incumbents, that is, for both parties, women

incumbents were less likely than men to run unopposed, (b) Incumbent Republican men were more likely to run unopposed compared to other candidates, and (c) Republican women ran significantly more than expected for open seats (Figure 3).

Hypothesis Testing: Do Female Candidates Encounter a Glass Cliff?

To test our expectation that female candidates from both parties would be more likely to run in less winnable districts (H1), and whether or not this variable mediated the effect of gender on election outcome for each party (H2), we proposed a mediation model using MG-SEM. This approach allowed us to rely on multiple indicators to model district winnability as a latent factor, which permitted us to more precisely capture district variability in the probabilities of election success, that is, to more accurately reflect party-specific differences in district winnability for a candidate while managing the multicollinearity of these measures.

Winnability as a latent construct. As a construct, winnability is similar, but not identical to, the concept of competitiveness used in U.S. election analytics to describe the likelihood of one party winning versus another in a given district. Although the factors that can impact district competitiveness are diverse (Abramowitz et al., 2006), a few easily captured measures are commonly utilized as objective indicators.

Prior election success. Whether or not a party wins or loses an election in a district coincides strongly with the voter partisan composition of the district and the variable tendency of voters to identify strongly or weakly with their party. Voter party identification is one of the most enduring factors in election behavior, with partisan ties argued to be similar to

Figure 2. Candidates by Gender and Party (above) and Deviation From Expected Values (below).
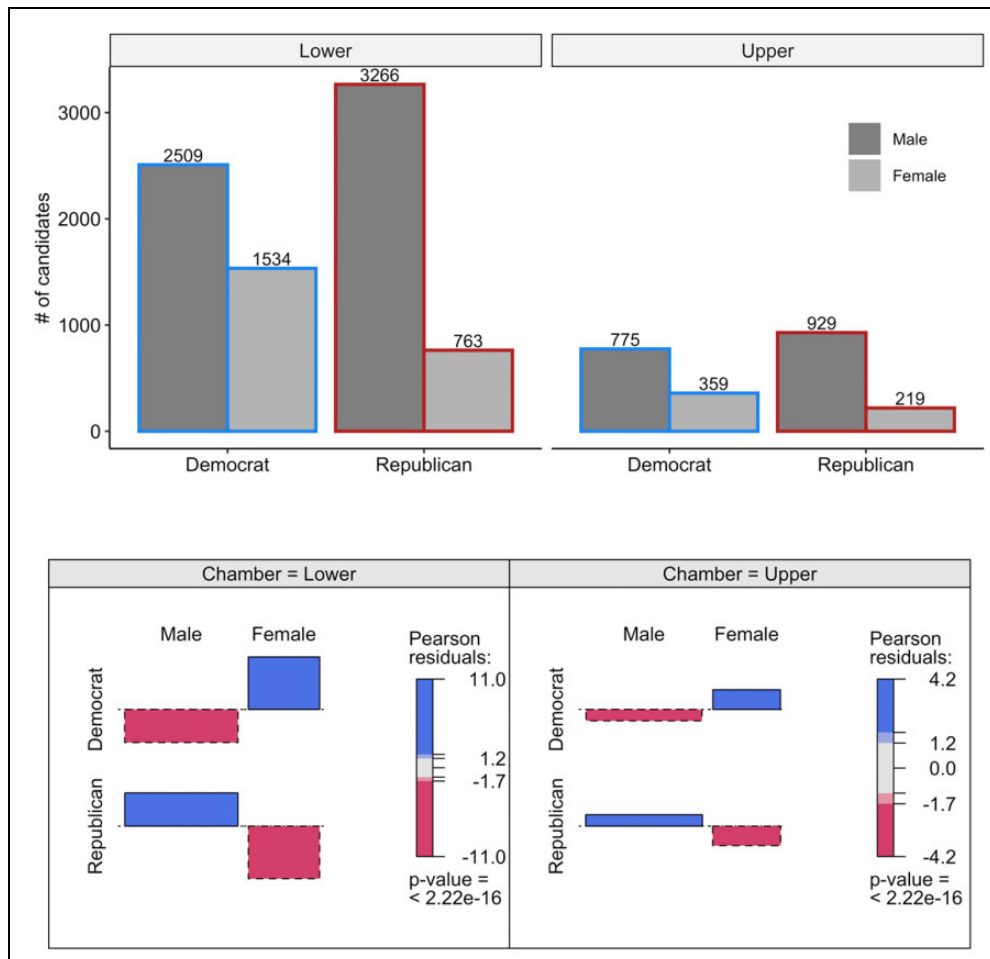
Note. The lower graph shows the direction (− dotted; + solid), magnitude (size), and significance (shade) of deviation of residuals from expected, Senate, $n = 2,282$; House, $n = 8,072$.

social class identification or other identity relevant social groups, with profound cognitive and affective underpinnings producing feelings of loyalty and long-term attachments (Dalton, 2016). Like other identity-based divisions, the personal importance or strength of party identification varies between voters, influencing variation in voter willingness to cross party lines on any given issue. Whether or not a party won or lost in the election prior provides a good proxy for winnability based on partisan leaning (Donovan et al., 2014). For this study, prior election success was defined as a binary measure (pWon) that refers to whether the candidate's party lost (0) or won (1) the most recent prior election for their district.

Incumbency. Incumbency is a binary measure of whether (1) or not (0) a candidate is currently the recognized office holder, and is both a crucial parameter in predicting electoral success for a party, and important in terms of name recognition (familiarity) and financial backing. Incumbents in U.S. elections win around 90% of the time, and an open seat,

where neither candidate is an incumbent, is widely recognized as improving the chances of an upset (Carroll & Sanbonmatsu, 2013; Fox, 2018; Palmer & Simon, 2001). However, although this category is often relied upon as a single index of differential election odds, research has also acknowledged that incumbency, on its own, does not account for variation in women's elective successes. Concentrating solely on the nomination of women to open seats, or implementing policies that limit incumbent terms, is not a sufficient remedy for women's underrepresentation (Carroll & Sanbonmatsu, 2013; Thomas & Bodet, 2013).

Margin of victory or defeat. In addition to these two variables, the margin of win, or victory (MOV), is often used as an indicator of district competitiveness. Whereas the two prior variables are categorical binary predictors of election success, MOV is an index of the magnitude of the win for a party. It indicates how close a race was for a winner, measured by the percentage of votes (points) by which a winner won with respect to the closest loser

Figure 3. Candidates by Gender and Seat Type (above) and Deviation From Expected Values (below).
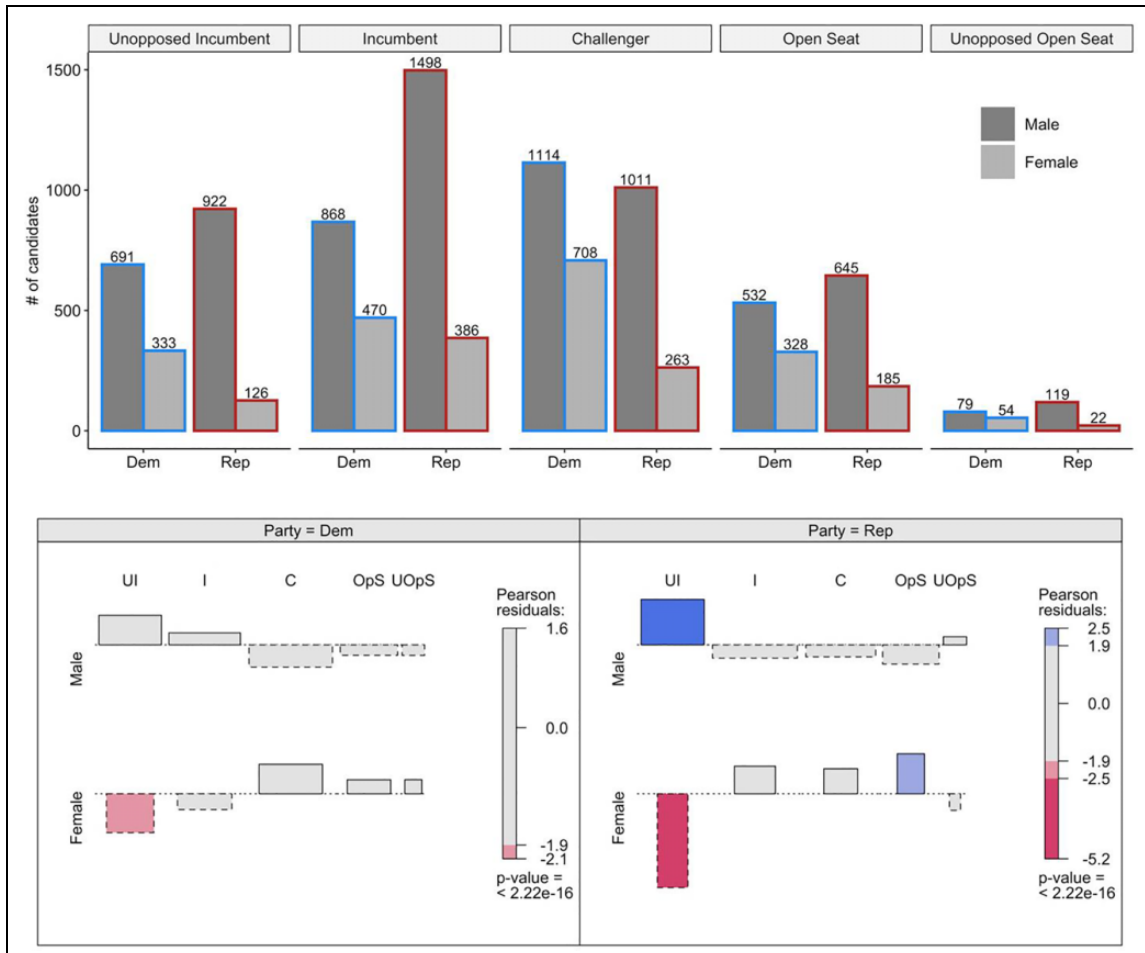
Note. Democrat (Dem), Republican (Rep), Unopposed Incumbents (UI), Incumbents (I), Challengers to incumbents (C), running for an Open Seat (OpS), or Unopposed running for an Open Seat (UOpS). The lower graph shows the direction (− dotted; + solid), magnitude (size), and significance (shade) of deviation of residuals from expected, *n* = 10,354.

(Ballotpedia, n.d.-a). This measure recognizes more nuanced variability with regard to prior wins versus losses. A prior win by 10 percentage points versus 1 provides more specific information about the composition of an electorate in a district, and is a gauge, for example, for not just whether a district is hard-to-win, but how hard-to-win. This measure contains both partisan and numerical information; for example, a district with an MOV of D + 7 is a district where Democrats previously won by seven points. We calculated a similar, but amended measure, a margin of victory or defeat for the prior election (pMO-VOD), capable of capturing the district margin from the perspective of each party. For the prior winning party, the pMOVOD is calculated as the percentage points of vote share above the closest loser. For the losing party, it is the percentage points of vote share below the closest winner. From the previous example, the Democratic pMOVOD for

a district would be +7, while the Republican pMOVOD for the same district would be −7.

The three variables described (incumbency, prior election success, and prior margin of victory) are strong predictors of election success, communicating somewhat different information about probable outcomes, but they are also highly correlated. Strong associations between these proxy measures become problematic in an analysis of the mediating effects of these variables on the link between gender and election outcomes. We therefore used CFA to model winnability as a latent factor in the measurement portion of an SEM, with the three variables described as indicator variables. We configured the structural portion of the SEM as a mediation, with the most recent election success dependent on gender (paths *c* and *c'*), as well as on winnability (path *b*), and winnability dependent on gender (path *a*). The schematic for the model proposed is shown in Figure 4.

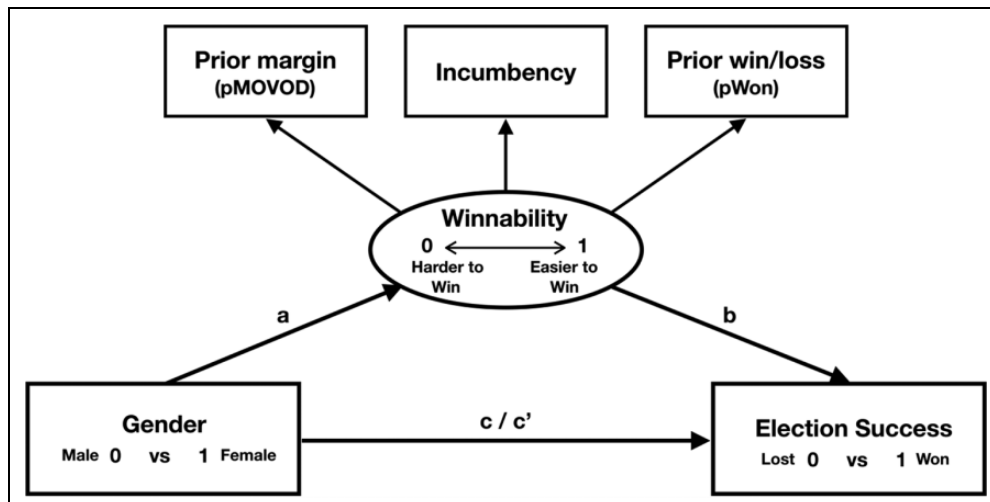**Figure 4.** Proposed Structural Equation Model Mediation Model With Winnability Modeled as a Latent Factor.

Table 2. Comparison of Goodness of Fit Indices of Nested Structural Equation Models.

Senate, $n = 2,282$

	χ^2	df	χ^2/df	RMSEA	AIC	BIC	CFI	SRMR	$\Delta\chi^2$	Δdf	Threshold ($\alpha = .05$)
Model 1	49.997	8	6.250	.048	93.997	94.230	.993	.0156			
Model 2	**54.384**	**10**	**5.438**	**.044**	**94.384**	**94.595**	**.993**	**.0174**	**4.387**	**2**	**5.99**
Model 3	60.491	13	4.653	.040	94.491	94.671	.993	.0228	6.107	3	7.81

House, $n = 8,072$

	χ^2	df	χ^2/df	RMSEA	AIC	BIC	CFI	SRMR	$\Delta\chi^2$	Δdf	Threshold ($\alpha = .05$)
Model 1	65.508	8	8.188	.030	109.508	109.573	.998	.0093			
Model 2	**67.803**	**10**	**6.780**	**.027**	**107.803**	**107.863**	**.998**	**.0099**	**2.295**	**2**	**5.99**
Model 3	81.004	13	6.231	.025	115.004	115.005	.997	.0113	13.201	3	7.81

Note. Model 2, in bold, was retained as the best fitting model for each chamber.
RMSEA = root mean square error of approximation; AIC = Akaike information criterion; BIC = Bayesian information criterion; CFI = comparative fit index; SRMR = standardized root mean square residual.

Model goodness of fit and winnability estimates. We investigated specific party differences (Republican vs. Democrat) using multigroup analysis of the proposed SEM. For each chamber, we compared the adjustments of three nested models: Model 1, a configural model, with parameters unconstrained or free to vary between groups; Model 2, a measurement invariance model, estimating factor loadings for the winnability construct constrained to be equal (or invariant) between parties, with structural paths free to vary between groups; and Model 3, structural regression weights constrained to be equal (or invariant) between groups in addition to constrained invariance of factor loadings (Byrne, 2016). All parameters were estimated using bootstrapped maximum likelihood with bias corrected CIs. A comparison of model fit (for each chamber and by party) is given in Table 2. The measurement invariance model, Model 2, was judged to be the best representation of the data for both parties in both chambers. A more detailed description of model comparison and reasoning for selection of Model 2 is provided in the online supplementary material (Supplement A).

Estimates of path coefficients for the CFA portion of the SEM, centering on the composition of winnability as a construct and its comparability between groups, are given in Table 3. All item weights for winnability were large, significant, and distributed evenly for each party, contributing to overall confidence in the construct as composed. Group differences in these estimates were not considered significant, indicating that winnability as a latent construct can be considered as similarly defined for both the Democratic and Republican parties, allowing further investigation of structural differences in the mediation portion of the model.

Path coefficients for the structural portion of the model, framed as a mediation with election success dependent on gender and winnability, and winnability dependent on

Table 3. Standardized Coefficients of Observed Variables for the Confirmatory Factor Analysis of Winnability as a Latent Factor in the Retained Structural Equation Model for Each Chamber.

Senate, $n = 2,282$			β [95% CI]	p	R^2 [95% CI]
Republican		Winnability → Prior margin	.780 [.767, .796]	.002	.61 [.59, .63]
		Winnability → Incumbency	.722 [.692, .751]	.005	.52 [.48, .56]
		Winnability → Prior win/loss	.938 [.922, .953]	.005	.88 [.85, .91]
Democrat		Winnability → Prior margin	.803 [.792, .814]	.002	.64 [.63, .66]
		Winnability → Incumbency	.804 [.777, .835]	.004	.65 [.60, .70]
		Winnability → Prior win/loss	.954 [.939, .966]	.006	.91 [.88, .93]
House, $n = 8,072$			**β [95% CI]**	**p**	**R^2 [95% CI]**
Republican		Winnability → Prior margin	.769 [.761, .776]	.004	.59 [.58, .60]
		Winnability → Incumbency	.743 [.728, .760]	.005	.55 [.53, .58]
		Winnability → Prior win/loss	.960 [.952, .967]	.005	.92 [.91, .94]
Democrat		Winnability → Prior margin	.798 [.792, .805]	.003	.64 [.63, .65]
		Winnability → Incumbency	.819 [.804, .833]	.006	.67 [.65, .69]
		Winnability → Prior win/loss	.965 [.959, .971]	.007	.93 [.92, .94]

Note. Item weights are large, significant, and distributed fairly evenly. Multiple squared correlations (R^2) show shared item variance as accounting for a large part of the individual variance of each measured variable. These elements together contribute to overall confidence in the construct of winnability as composed. CI = confidence interval.

Table 4. Standardized Path Coefficients for the Effect of Gender on Election Success Mediated by Winnability, With Direct, Indirect, and Total Effects.

Senate, $n = 2,282$		Path	β [95% CI]	p
Republican	Path c/total	Gender → Won	−.064 [−.130, −.010]	.016
	Path a	Gender → Winnability	−.057 [−.115, .005]	.082
	Path b	Winnability → Won	.819 [.778, .850]	.006
	ab/indirect	c − c′ = ab	−.047 [−.094, .004]	.087
	Path c′/direct	Gender → Won	−.017 [−.060, .016]	.316
Democrat	Path c/total	Gender → Won	.001 [−.061, .061]	.994
	Path a	Gender → Winnability	−.004 [−.065, .051]	.914
	Path b	Winnability → Won	.851 [.822, .885]	.002
	ab/indirect	c − c′ = ab	−.003 [−.055, .043]	.914
	Path c′/direct	Gender → Won	.004 [−.026, .035]	.735
House, $n = 8,072$		**Path**	**β [95% CI]**	**p**
Republican	Path c/total	Gender → Won	−.054 [−.084, −.021]	.004
	Path a	Gender → Winnability	−.049 [−.077, −.020]	.003
	Path b	Winnability → Won	.852 [.831, .866]	.012
	ab/indirect	c − c′ = ab	−.042 [−.066, −.017]	.003
	Path c′/direct	Gender → Won	−.013 [−.032, .005]	.157
Democrat	Path c/total	Gender → Won	−.023 [−.053, .008]	.180
	Path a	Gender → Winnability	−.047 [−.078, .016]	.003
	Path b	Winnability → Won	.886 [.871, .900]	.007
	ab/indirect	c − c′ = ab	−.042 [−.069, −.014]	.003
	Path c′/direct	Gender → Won	.019 [.003, .037]	.016

Note. Multigroup structural equation model analysis was performed separately for each chamber. Parameters were estimated using bootstrapped maximum likelihood with bias corrected confidence intervals. CI = confidence interval.

gender, are given in Table 4. The rejection of Model 3 in favor of Model 2 indicates that parties significantly differed with regard to the relationship between these variables. Standardized coefficients and their *p*-values are also shown schematically in Figure 5.

Tests of hypotheses H1 and H2. Coefficients for path *a* show that women from both Democratic ($\beta = -.047, p = .003$) and Republican ($\beta = -.049, p = .003$) parties ran in significantly (and similarly) less winnable districts in House races. In Senate races, Democratic women were not, however, exposed to

Figure 5. Structural Equation Models With Standardized Path Coefficients for Each Party in Each Chamber.

n.s. = non significant, p-values: ~ = < 0.10; * = < 0.05; ** = < 0.01; *** = < 0.001
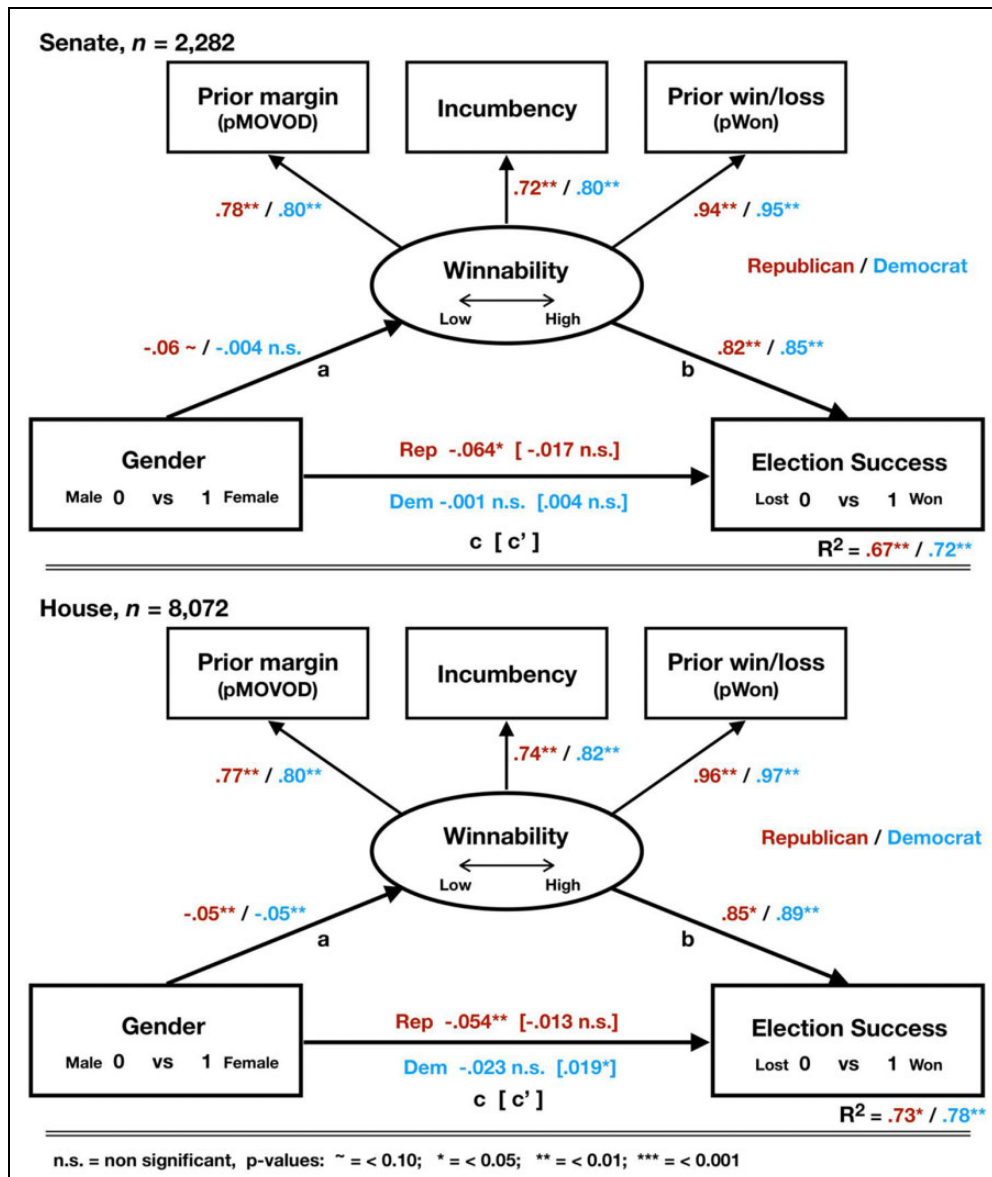
less winnable seats ($\beta = -.004$, $p = .914$), while Republican women appeared to continue to run in less winnable districts ($\beta = -.057$, $p = .082$), though the significance of this effect does not meet the .05 threshold criteria. H1 was therefore supported for the House but not for the Senate. Coefficients for path *b*, the effect of winnability on election success, showed a strong positive effect for each party in both chambers. Coefficients for path *c* represent the non-mediated (total) effect of gender on election success, not accounting for winnability effects. They show that before accounting for seat winnability, Republican female candidates were more likely to lose in both Senate ($\beta = -.064$, $p = .016$) and House contexts ($\beta = -.054$, $p = .004$). Democratic women were not

more or less likely to win or lose in either chamber (Senate: $\beta = -.001$, $p = .994$, House: $\beta = -.023$, $p = .180$).

Finally, in support of H2, the effect of mediation on outcomes differed by party. Running in less winnable races mediated negative election outcomes for Republican women, rendering them non-significant in both Senate ($\beta = -.017$, $p = .316$) and House contests ($\beta = -.013$, $p = .157$). Republican women were less likely to win elections because they faced less winnable races compared to men, with winnability mediating 73% of the negative effect of gender on election outcomes for Senate Republicans and 78% of the negative gender effect for House Republicans. In contrast, we found no evidence for a gender effect for Democrats running for

Table 5. Four-Way Contingency Table of Prior Candidate and Current Candidate Gender, Conditioned on Prior Election Success and Party Belonging.

Senate, n = 919					House, n = 3,116				
			Current Candidate Gender					Current Candidate Gender	
Prior Election Success		Prior Candidate Gender	Male	Female	Prior Election Success		Prior Candidate Gender	Male	Female
Democrat	Lost	Male	138	69	Democrat	Lost	Male	569	248
		Female	76	43			Female	198	275
	Won	Male	61	26		Won	Male	167	117
		Female	26	15			Female	86	64
Republican	Lost	Male	179	43	Republican	Lost	Male	543	118
		Female	39	18			Female	97	73
	Won	Male	125	36		Won	Male	365	83
		Female	21	4			Female	87	26

Senate seats. Female candidates were not shown to suffer a gender disadvantage in election outcomes and were not more (or less) likely to face less winnable races when compared with their male colleagues. In House contests, Democratic women were found to face less winnable seats, but because mediation, by definition, requires a significant effect to be mediated (attenuated or rendered non-significant) by the incorporation of a third variable, the non-significant effect of gender on election success for Democratic House candidates was not mediated in the classic sense. However, the model indicates that for Democrats, when winnability is accounted for, the effect of being a woman on election success is significantly positive ($\beta = .019$, $p = .016$).

To determine whether these party-specific findings were robust to state variation in the number of women running for office and women's seat winnability, we drew on the latent factor estimates of district winnability for each chamber and party and used Bayesian mixed-effects logistic regression (Chung et al., 2013) to incorporate party by state group effects in modeling the impact of seat winnability on candidate gender. Detailed methods and results for these extended analyses are provided in the online supplementary material (Supplement B). Outcomes upheld the party-specific generalizability of our findings (Figure S1 and Table S1). On average, female candidates in both House and Senate contests remained significantly less likely to run compared to men in both parties, but even significantly less so for Republicans. Chamber differences for seat winnability were also maintained, with female candidates in both parties facing worse seats for House, but not Senate races.

Although our main findings were confirmed, the mixed model also highlighted important party by state variation in the proportion of female candidates and their seat winnabilities in both House (Figure S2) and Senate (Figure S3) contexts. In a final step, we inquired whether this variation could account for the large variation seen for both parties in the proportion of women holding legislative office at the state level. From the mixed model, we obtained the party by state-

specific estimated coefficients of the proportion of women running and women's seat winnability and used multiple regression to determine their importance in accounting for variation in the proportion of women legislators in each state for 2017, data obtained from the Center for American Women and Politics (CAWP, 2017). Detailed methods and outcomes for these analyses are again provided in the online supplemental material (Supplement C). Even in the presence of potentially important covariates from various sources (Ballotpedia, n.d.-b; Institute for Women's Policy Research [IWPR], 2015; National Conference of State Legislatures [NCSL], 2015, 2017), for Democratic women, the only significant explanatory factor in predicting the proportion of women legislators in state Houses was the proportion of women who ran for office (Table S2). However, for Republican women, the proportion of women serving in Houses of state legislatures was not predicted by the proportion of women running, but by women's seat winnability, an opposite pattern to the Democrats (Table S3). The more women's seats were winnable in a state, the higher the proportion of Republican female legislators, whereas state differences in the proportion of women running for the Republican party did not contribute to explaining state variation in the proportion of Republican female legislators. In the Senates of state legislatures, the same pattern was found for Democrats as in House races (Table S4). Again, when more Democratic women run, more Democratic women win, but this pattern was again not found for Republicans (Table S5).

Tests of Hypotheses H3 and H4: Utilitarian Motives Using Gender Contrasts

Finally, in an effort to examine the relevance of one subset of motives, meaningful in the corporate domain, to the political context, we hypothesized that if female candidates ran for office as a gender contrast with prior male candidates as a utilitarian political strategy to improve vote share, then districts where the party lost previously would be more likely to

have a current female candidate when the prior candidate was male (Hypothesis 3). We also reasoned that if this strategy was successful, it would persuade voters such that vote shares would increase (Hypothesis 4). For each chamber, we used a permutation test of conditional independence to determine the significance of deviation from expected values in a four-way table of candidate gender in the prior election (male vs. female) by candidate gender in the more recent election (male vs. female), conditional on party belonging (Democrat vs. Republican) and prior election success (lost vs. won; Table 5). We removed incumbents, who are necessarily the same gender (Senate, $n = 1,143$; House, $n = 4,128$), and cases where the district held a prior election but there was no prior candidate for the party (Senate, $n = 220$; House, $n = 828$).

For the Senate, we found no clear relationship of prior and current candidate gender conditioned on party and prior win, $\chi^2(4, n = 919) = 5.31$, $p = .260$. That is to say, current candidate gender was not associated in any way with prior candidate gender when conditioned on prior win or loss and party belonging. Chi-square tests for each stratum showed similarly non-significant findings, except where Republicans lost in the prior election. In this condition, more women ran than expected when a woman ran beforehand and lost, $\phi = .12$, $\chi^2(1) = 3.96$, $p = .047$, a result opposite of that expected in H3. For House candidates, a permutation test of conditional independence showed a significant relationship of prior and current candidate gender conditioned on party and prior win, $\chi^2(4, n = 3,116) = 145.27$, $p < .001$, but deviations were again in the opposite direction of that expected. More women ran in districts where a female candidate had run previously and lost, and less women when a male candidate had run previously and lost, for both Democrats, $\phi = .27$, $\chi^2(1) = 95.94$, $p < .001$, and Republicans, $\phi = .24$, $\chi^2(1) = 48.09$, $p < .001$. Our third hypothesis (H3) was therefore not supported.

In an effort to understand these results, we questioned whether political career exigencies made it more likely that candidates themselves would run again after a loss and that this could account for these outcomes. In an ad hoc exploration of this inquiry, we found that 22% of House candidates who ran in a district where their party lost previously were, in fact, the very same candidates as before. With these cases removed, the effect of a similar prior candidate gender on current candidate gender in House contests was no longer significant, $\chi^2(4, n = 2,628) = 8.30$, $p = .085$, neither for Republicans, $\phi = .06$, $\chi^2(1) = 3.75$, $p = .123$, nor Democrats, $\chi^2(1) = 3.70$, $p = .054$. Although these outcomes affirmed that there was no gender contrast effect, further probing of these results showed that whether female candidates for House seats ran again after losing was significantly associated with party. Only Republican women were significantly less likely to run again after losing an election compared to other candidates, $\chi^2(4, n = 2,155) = 6.14$, $p = .039$ (see Figure 6). That is to say, our data showed that Republican women were more likely than other candidates to drop out after losing an election.

Finally, our hypothesis that vote margin would be positively influenced by a contrast in candidate gender when the party lost in a district previously (H4) was also not upheld. A permutation test of conditional independence for gender-matched versus gender-unmatched prior and current candidates by negative versus positive vote margin change, conditional on party and prior election success, showed no significant relationship of candidate gender similarity or difference and margin change for either party, whether or not the party won or lost the prior election, Senate, $\chi^2(4, n = 919) = 3.60$, $p = .458$; House, $\chi^2(4, n = 3,116) = 2.81$, $p = .627$. Instead, we found positive versus negative vote change to be significantly associated with gender conditional on party, regardless of prior party win or loss in a district or prior candidate gender, $\chi^2(4, n = 7,899) = 9.64$, $p = .009$. Democratic female candidates were more likely to positively versus negatively influence the vote, $\phi = .035$, $\chi^2(1) = 4.44$, $p = .030$, and Republican women more likely to negatively versus positively influence the vote, $\phi = .035$, $\chi^2(1) = 4.91$, $p = .027$, compared to men (Figure 7).

Discussion

We examined whether political party differences in the likelihood of female candidates facing glass cliff conditions in state legislative contests in the United States could account for persistent party differences in women's overall elective successes. Using election data from 2011 to 2016, we compared Republican versus Democratic candidacies and election outcomes at the House and Senate state legislative levels.

The descriptive election results for the time frame we studied echo those reported elsewhere (Dittmar, 2017; Sanbonmatsu, 2018). Data clearly showed that male candidates in U.S. state legislative races for both Republican and Democratic parties continue to outnumber women in terms of candidacy and office holding, reflecting the masculine politician gender stereotype. Party differences were also apparent in the number of women who ran, as well as the number who won. Democratic female candidates were nominated at nearly twice the rate of Republican female candidates and won more often. We suggest that this global party difference in the number of women running and winning is underpinned, at least partially, by the convergence of group social identity prototype matching and gendered party ideological agendas, which have become increasingly polarized in the United States (Hogg, 2001; McDermott, 2016; Winter, 2010). Democratic priority issues are considered "feminine," coinciding more typically with female gender stereotypes, while Republican priority issues are considered "masculine," conflicting with female stereotypes (Winter, 2010). Based on the social identity theory of leadership, in-group members, such as party leaders and voters, should be more apt to support candidates who match the party prototype more succinctly (Hogg, 2001). It is therefore not surprising that Democratic female candidates generally outnumber Republican female

Figure 6. House Candidates by Gender for Each Party Who Lost But Ran Again (Same), Versus Those Who Were New Candidates (Different) (above), and Deviation From Expected Values (below).
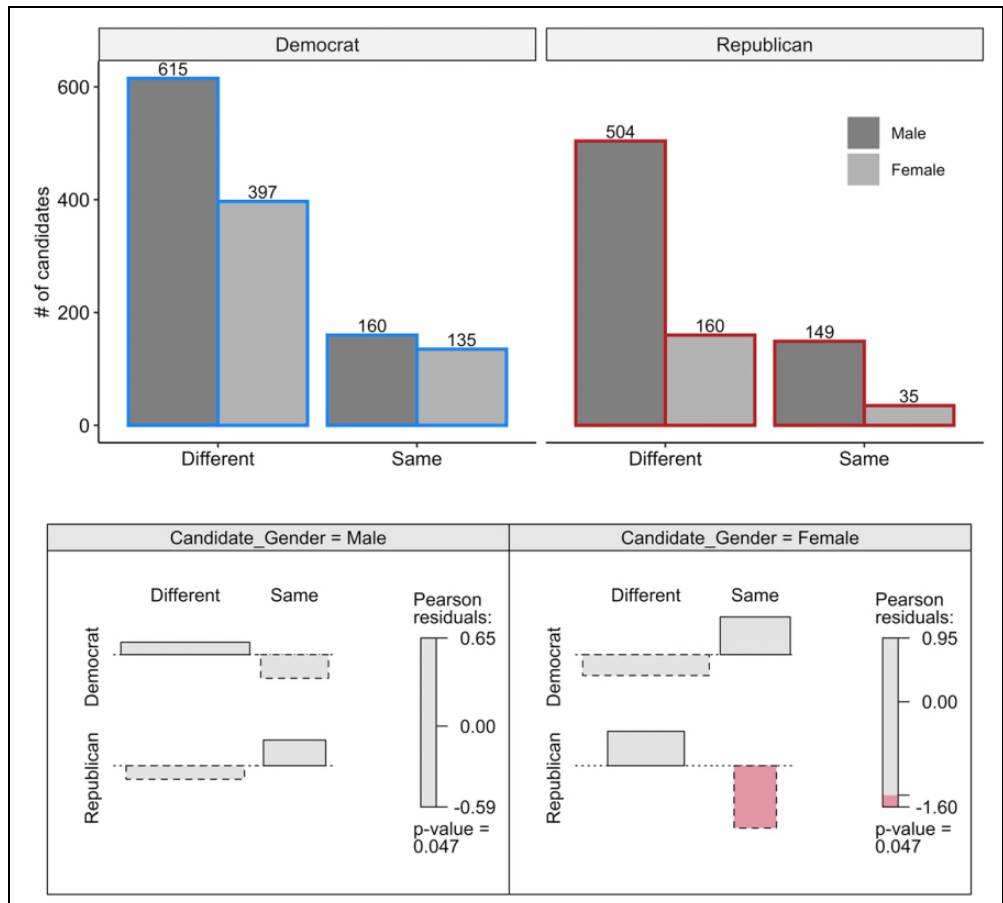
Note. The lower graph shows the direction (− dotted; + solid), magnitude (size), and significance (shade) of deviation of residuals from expected, *n* = 2,155.

candidates. Polarized issues and prototype matching, however, also contribute to an understanding of why women in both parties can face similar glass cliff conditions, yet the consequences of these conditions on women's election outcomes differ.

Glass Cliff Odds and Election Impacts

Our first hypothesis (H1), that female candidates from both parties would face glass cliff conditions or harder-to-win contests in U.S. state legislative races, was partially supported. Results for the lower chamber, or House contests, confirmed our expectations that female candidates for both parties would face glass cliff conditions. Both Democratic and Republican women were more likely to be exposed to harder-to-win contests compared to men. Our second expectation (H2) was also supported in the House. Party differences in the impact of glass cliffs on election outcomes appeared, even when female candidates from both parties faced similarly poor seat winnability compared to men. When poor seat

winnability for women was not accounted for at the outset, Democratic women in House races were not electorally disadvantaged compared to men, being just as likely to win. However, when worse seat conditions were accounted for, the impact of being female on electoral success became positive. Female Democrats in House races were thus more likely to win compared to men when seat winnability was considered. For Republican women, in contrast, when poor seat winnability for women was not accounted for at the outset, they lost their elections more than men. This election disadvantage was found to be explained (or mediated) by their higher exposure to less winnable seats. Female Republicans in House races lost more than men because they were more likely to face less winnable conditions.

In upper chamber, or Senate contests, conditions were different. Party differences in whether glass cliff conditions were found and whether these mediated election results thus differed by level of competition. Democratic women did not disproportionately face less winnable seats in Senate contests and were also not disadvantaged electorally compared to

Figure 7. Number of Candidates by Gender Who Moved the Vote Share Positively Versus Negatively for Their Party (above), and Deviation From Expected Values (below).
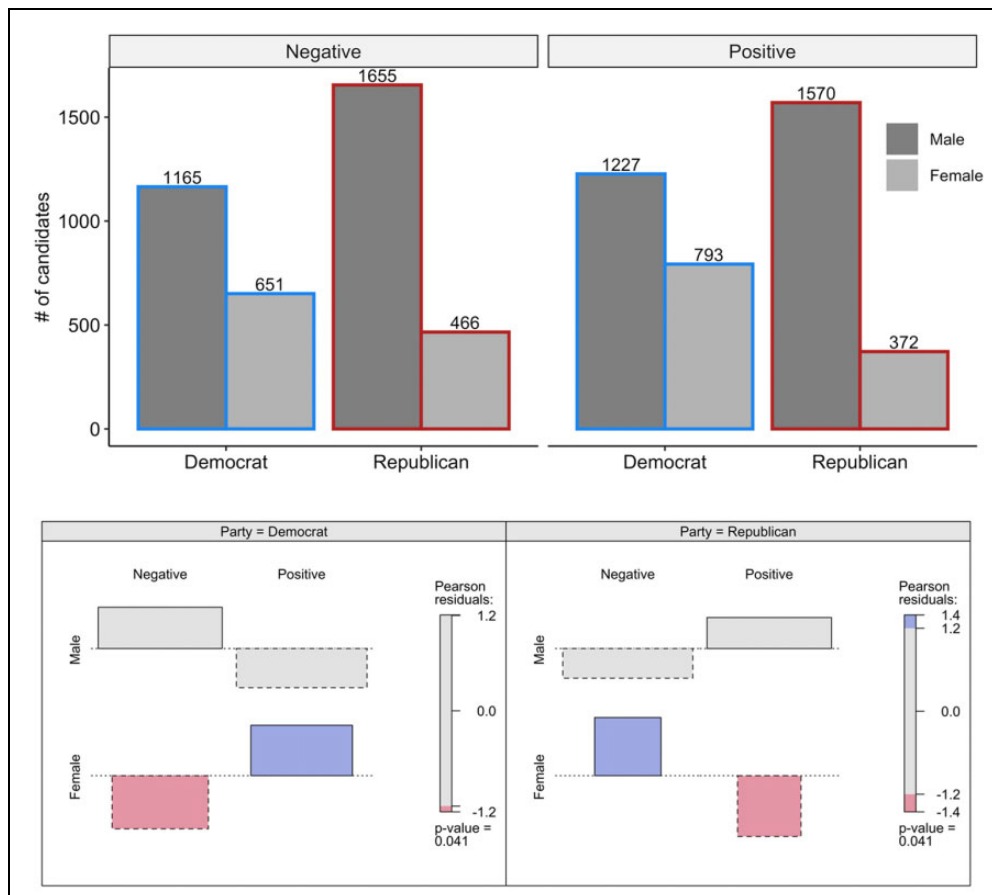
Note. The lower graph shows the direction (− dotted; + solid), magnitude (size), and significance (shade) of deviation of residuals from expected, $n = 7,899$.

men. In fact, we found no differences between male and female Democratic candidates at the Senate level. After accounting for party by state variation, on average, Republican women were also shown to face similar seat winnabilities at the Senate level compared to men in their party. Still, in Senate contests, Republican women lost significantly more of their election campaigns compared to men in their party, a result that continued to be mediated by seat winnability. Republican women in Senate contests were thus also shown to be less likely to win compared to men because they were exposed to worse seats. For Democrats in U.S. Senates, women's seat winnability did not matter, for Republicans, it did.

An extension of these analyses investigating the potential influence of party by state grouped variation on glass cliff outcomes upheld these effects. When we allowed both the proportion of women nominated and women's seat winnability to vary for each party in each state, the proportion of Republican women running for office continued to be significantly less overall compared to Democrats in both House and

Senate contexts. The mean winnability of women's seats also remained similarly and significantly worse compared to men's in the House for both parties, and not significantly worse in the Senate.

State variation in the proportion of women legislators. Because of large party differences in the number of women who run for office, efforts to improve women's representation have aimed almost exclusively at encouraging more women to run, for example, through gender-specific recruitment programs and improved support networks for women's candidacies (Carroll & Sanbonmatsu, 2013; Sanbonmatsu, 2018). These programs appear to have made a difference for Democrats, but Republicans have not equally benefited. In our supplemental analysis, we looked at the predictive role of women's candidacies and women's seat winnabilities on state variation in women's office holding. We found that Democrat-specific state level differences in the proportion of women serving in legislative Houses were shown to be significantly predicted by differences between states in the proportion of women running and

not by differences in women's seat winnability. In contrast, Republican-specific state level differences in the proportion of women serving in legislative Houses were predicted by differences in women's seat winnability and not by differences in the proportion of women running. These outcomes demonstrate plainly why recruiting more female candidates has benefited Democratic and not Republican women. The more Democratic women run, the more they win. In contrast, running does not predict winning for Republican women. It is essential, rather, that when they run, they run for equal or more winnable seats.

Gender Contrast Signaling in the Political Domain

In order to assess the potential relevance of one subset of benign motives proposed in the corporate context, where a gender contrast is strategically utilized to signal intent to change (Bruckmüller & Branscombe, 2010; Kulich et al., 2015), we indirectly examined one potential political analogue. We reasoned that if gender was being used by parties in this way, that the nomination of a woman would be more likely after a loss if the prior losing candidate was male (H3), and that if successful, nomination in this context would lead to an improved vote share for the party (H4). Our results did not support this scenario. This does not imply that benign motives are not active in this context but that this specific motive subset, the nomination of a woman in contrast to a prior losing man, is unlikely to be part of a benign signaling strategy for improving vote share in the political sphere. The limits of observational data unfortunately constrained our objective to identify data signatures (or patterns) that would reliably distinguish the relevance of other proposed mechanisms. Other indirect tests of the implications of benign versus hostile motives were therefore not possible. However, prior experimental research suggests that rival (benign vs. hostile) motives are likely applicable in the political context, with specific motives likely underpinned by party dependent ideological positions (Aelenei et al., 2020).

In sum, women in both parties were shown to disproportionately run in worse races compared to men in their parties. Although Republican women were evidently electorally disadvantaged, Democratic women overcame these worse odds. These results suggest, however, that they too would improve their election outcomes by running for better seats. On the whole, our results provide evidence that glass cliff conditions for female candidates for state legislative office for both parties in the United States are likely an important factor contributing to continued inequality for women in political leadership at the state level.

However, because the shape of these glass cliff conditions and their electoral consequences for women are also clearly contingent on party belonging, our results suggest that the causes for, or motives, underlying glass cliff conditions also likely vary. We argue that these divergent motives are underpinned by party divergent ideological positions, with important consequences for when and why women are likely to face glass cliff candidacies, for election outcomes, and for women's continued political careers. Our results also show differences by chamber. We argue that this reflects the nature of political career advancement in U.S. state legislatures. The emergence and maintenance of glass cliff conditions for women is likely to depend on the geographically tied pipeline trajectory of office holding, where the level of political competition plays a role in structuring the factors that impact women's representation. We present each of these arguments in turn.

Divergent Ideologies and Glass Cliff Motives

As detailed above, female candidates from both parties in our study were more likely to face glass cliff conditions in House contests, but the impact of this factor on women's electoral chances was decidedly different, penalizing Republican women and rewarding Democrats. For Democrats, running leads to winning, regardless of the quality of the seat. For Republicans, the quality of the seat is all that matters. Increasing the proportion of women running does not provide an advantage. This is further underscored by our finding that Republican women ran more than expected for open seats, but this did not improve their electoral chances. The quality of open seats differs, and this difference is important. Republican women were also significantly more likely to drop out after losing compared to other candidates. Democratic women, in contrast, were shown to stay in politics after a loss at the same rate as their male colleagues. From an economic decision standpoint, these outcomes make sense. Democratic women should stay in even if they lose because running in less winnable races can lead to a win. Republican women, however, only benefit from increased winnability, so they should not continue to waste their efforts on unwinnable races. Why, however, does running more, regardless of the seat quality, benefit Democratic women, but not Republican women?

Female candidates for both parties are disproportionately confronted with situations where failure is likely, but the motives underlying these glass cliffs diverge along party ideological lines, with important consequences for outcomes. Democrats believe that more should be done for women's equality, while Republican's believe enough has been done (Horowitz et al., 2017). Democrats tend to evaluate women as better political leaders compared to Republicans, who more strongly favor men (Parker et al., 2015). Republicans also hold socially conservative ideals that emphasize the importance of traditional gender roles. For Republican women, running for office thus requires balancing a series of contradictions (Schreiber, 2016). They must both adopt a posture in regard to Republican issues in order to adequately represent the masculine conservative prototype and continue to adhere to the traditional feminine

gender stereotypes valued by their party. These incongrui-
ties may prevent party leaders, voters, and female candi-
dates themselves from believing that women are suited for
office. Candidates may face more unwinnable contests
because they are less likely to challenge male colleagues
for desirable seats. Party leaders may be more likely to
encourage men in important races and be indifferent or
encourage women only when the race seems less valuable
or expendable. Living in left-leaning districts, conservative
voters may feel unmoved or even discouraged by a female
candidate, doubting her ability to adopt the agentic posture
required to win a tough contest. No matter a prior win or loss
for the party, our results showed that female Republican
candidates were more likely to inspire a reduction in vote
shares compared to men. In sum, subtle or overt hostility
toward women who participate in politics, due to heightened
sensitivity to role incongruity, could explain conservative
women's candidacies in worse seats, less fortunate elective
chances, and lower chances of running again after a loss. To
increase representation for female Republicans, intentional
steps by party leaders and the candidates themselves are
therefore required to ensure that the seats where women run
are equal or better in quality to where men run; simply
recruiting more women to run is not enough.

Democratic women, on the other hand, do not stare down
the same party platform and gender role contradictions. The
progressive agenda favors policy issues considered more
feminine. Female candidates more easily demonstrate group
prototypicality. Progressive ideals challenge traditional gen-
der roles, and concern for providing more equal opportunities
for women remains a central ideal. Sharing the pro-equality
views of their party, Democratic women may further demon-
strate their commitment to the Democratic agenda by running
in districts that are more conservative. Party leaders may be
more likely to encourage, promote, and support female can-
didates who run in these circumstances, believing not only in
their ability to capably represent feminine party interests but
also in their tenacity to fight an uphill battle. Ascribed agentic
or masculine traits of toughness in the face of potential loss
may also be more easily ascribed to these women, as they are
less likely to be boxed in by the need to conform to traditional
gender norms. Democratic women themselves may also be
motivated to run in conservative districts because in sharing
Democratic ideals, they are motivated to work to see more
women in office and judge themselves as equally suited.
They may also feel motivated to run in conservative districts
because they are more likely to feel anger when exposed to
ambivalent sexist attitudes and anger motivates activism
(Becker & Wright, 2011; Van Zomeren et al., 2012). Demo-
cratic voters appear to be more inspired by female candidates.
No matter a prior win or loss for the party, our results showed
that female Democratic candidates were more likely to
increase vote shares compared to men. In sum, Democratic
women do not appear to be impeded by difficult races, but
rather bolstered by them, because party leaders, voters, and

they themselves view women as more befitting to the chal-
lenge presented. Improvements for women's representation
for Democrats will continue to come from efforts at recruit-
ment. However, attention to seat winnability may also benefit
these candidates, accelerating the pace toward equality pur-
suant to Democratic goals.

Chamber Differences and the Structure of Political Career Paths

Finally, we argue that the differences we observed between
chambers (Senate vs. House contests) are likely due to the
specific contextual nature of candidate recruitment and career
trajectories in U.S. politics, where careers are organized geo-
graphically, in a pipeline format, importantly constraining
and guiding political nominations. The Senate is smaller, has
more seniority and power, and Senators often have more
political experience than House representatives. Senate dis-
tricts are larger, and candidates are better known to party
leaders and voters. Our ad hoc exploration for why House
candidates were more likely to share the same gender as the
previous losing candidate rather than the opposite found that
approximately one fifth of candidates in districts that lost
previously were, in fact, the same candidates as before. Polit-
ical candidates often run again, even when they lose. A
smaller, more experienced and more recognizable candidate
pool at this stage may fundamentally change the importance
of gender with regard to seat winnability or election
outcomes.

However, changes in the importance of factors based on
the level of office holding may also interact with the experi-
ences of women based on party belonging. After losses in the
House, Democratic women are just as likely as men to run
again, and at the Senate level, no winnability effects based on
gender are apparent. By staying in the game, female candi-
dates may, like their male colleagues, build name recognition
and garner the necessary coalition support to compete in the
long run. Increased candidate recognition and coalition sup-
port may reduce the salience of gender-based cues for deci-
sion making in these more advanced contests, buffering the
appearance of glass cliffs and their effects, at least for Dem-
ocrats. Because Republican women, on the other hand, are
more likely to drop out after loss at the House level compared
to other candidates, effects of gender and women's seat winn-
ability may remain influential. If this is the case, glass cliff
conditions would be more likely to appear in politics when
female candidates have less overall exposure or experience, a
factor to be explored in future work.

Practice Implications

Our study is novel in both its theoretical grounding and meth-
odological approach to understanding women's underrepre-
sentation in state legislatures. With origins in management
research, the glass cliff phenomenon describes the

disproportionate odds of failure that women and other minorities may face as they advance in domains traditionally occupied by White men (Ryan & Haslam, 2005; Ryan et al., 2016). Because the origins and motives of glass cliffs are diverse, their occurrence and consequences are contextually and historically dependent. Our research shows that the motives underlying glass cliff conditions for women in U.S. state legislative elections likely depend on divergent party ideological identities. Although women in both parties faced glass cliffs, being more likely to run for less winnable seats compared to men in their party, the consequences for women's election success differed, negatively impacting Republican but not Democratic women. These outcomes remained stable in an analysis assessing the importance of state level variation on these effects. State variation in the proportion of Democratic women running was also shown to predict state variation in the proportion of female Democratic legislators serving, while state variation in seat winnability for Republican women was shown to predict state variation in the proportion of female Republican legislators serving. These results are substantial for explaining the growing gap in women's representation between Democrats, where it is increasing, and Republicans, where it has stalled or is falling.

Glass cliff effects can be subtle, and even ephemeral, appearing in some contexts and not in others (Morgenroth et al., 2020; Ryan & Haslam, 2007; Ryan et al., 2016). District level state legislative elections data can also be unwieldy due to state variation in the structure and timing of elections, chamber differences, and variety of reporting sources. In light of these challenges, we developed a methodological approach to data collection and compilation that allowed us to capture, examine, and compare gender, election odds, and election outcomes for every district in 47 of 50 states, creating a unique database for future studies. In order to more precisely detect the presence and impact of glass cliff effects, we also adopted methods capable of discerning more nuanced differences in district seat winnability. Incorporating incumbency, partisan district leaning, and differential vote margins in prior elections, we modeled seat winnability as a latent mediating factor between gender and election outcomes using an MG-SEM approach.

Finally, our findings challenge the conventional notion that when more women run, more women win. This only appears to be true for one party, the Democrats. Republican women in U.S. state legislatures may face harder to win seats because they are not considered on par with the job, nor representative of Republican interests, and are therefore faced with more losing situations where they cannot, and do not, win. Democratic women may face harder to win seats because they are seen to embody the Democratic ideal and change and are therefore more motivated to run when the conditions are bad. By inspiring voters in this regard, they do, in fact, win more in these circumstances. These conditions shape the party-distinct factors that are significant in efforts to improve women's representation. Focusing primarily on encouraging more women to run benefits Democratic women. Republican women, however, would be benefited more by ensuring that they have the opportunity to face district races that are as winnable as those faced by their male colleagues. Understanding the impacts of distinct sources of variation on women's office holding is critical for tailoring interventions or solutions to improve women's representation for both parties in the political sphere.

Limitations and Directions for Future Research

Observational data are invaluable in discovering patterns and assessing the ecological validity of theoretical ideas. We have provided strong evidence for potential explanations for the party gap in trends in women's representation at the state level, improving for Democrats and worsening for Republicans. Our conclusions, however, are necessarily tentative given the limitations of observational research. Experimental designs are required to overcome the persistent limitations of inferring causality with archival data. Future experimental research should aim to understand glass cliff effects and motives specifically in the political context, with particular attention to the role and impact of varying party ideologies on the decisions of party leaders, voters, and female candidates themselves.

Our supplemental assessment of the importance of covariates in regression outcomes was also cursory. Other covariates are likely important for explaining state variation and should be included in future studies, for example, district differences in population size, or socioeconomic and racial composition may also provide insight. State or district level measures of population adherence to traditional gender roles would also be welcome, as well as measures of benevolent and hostile sexism, to assess more clearly the role of these attitude variables in shaping the emergence and consequences of glass cliff conditions in ecological context. Our study would be complemented additionally by an investigation of glass cliff conditions faced by ethnic minority candidates, as well as an intersectional study given the importance of women of color in accounting for the increased representation of women over time in U.S. politics (Carroll & Sanbonmatsu, 2013; Dittmar, 2015).

Conclusion

Glass cliffs lead to higher rates of failure for women and other minorities, slowing progress toward the goal of equal representation. Locating the mechanisms that interact with specific contexts to create and maintain these unequal outcomes thus remains a high priority. In the political sphere, glass cliff conditions for women may be particularly subtle and difficult to detect, and ephemeral depending on level of competition, but continue to significantly impede women's electoral success compared to men. The particular nature of political competition, where parties with competing ideological agendas

encourage, recruit, or nominate candidates, creates a platform of multiple decision makers, where diverse motives for glass cliff conditions can take hold. We have argued that ideologically based party differences in glass cliff motives give rise to party differences in the factors that drive variation in women's office holding. Although women in both parties would do better by running in equally winnable seats compared to men, for Republican women, this is paramount. Democratic women, in contrast, appear to overcome the unequal odds they face, even thriving in the face of them. Republican women face an uphill battle. Practical solutions therefore must be tailored to party. To overcome the growing gap in women's representation for both parties, current efforts to increase the quantity of women running, which has favored Democrats, would be complemented by a focus on improving the quality of contests women face, which would benefit Republican women.

Our research also suggests the need to further examine multiple origins and motives for glass cliffs in light of opposing ideological positions, especially with regard to how these ideologies articulate with attitudes toward women and other minorities. Continued research should also concentrate on these issues in reference to multiply situated decision makers such as party leaders, voters, and the candidates themselves. The chamber-specific results we found also underline the importance of considering changing obstacles for women as they advance through the pipeline of political career advancement. By taking a more detailed look at the particular factors that shape glass cliff conditions and their consequences, and the multiple sources of variation that impact gendered election outcomes, we can work more effectively toward improving women's representation by tailoring solutions to context, paving the way toward equality.

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