

Women's Representation and the Gendered Pipeline to Power

Abstract

The leading explanation for the underrepresentation of women in American politics is that women are less likely to run for office than men, but scholars have given less attention in recent years to the gender makeup of the pipeline to elected office. We examine the gendered pipeline to power across three potential candidate pools: individuals in lower-level office, those named in newspapers as likely candidates, and lawyers who made political contributions. We find some evidence that women are less likely to seek elected office; however, the dearth of women in the pipeline plays a much greater role in the lack of women candidates. For the gender disparity in candidates to close, women have to be *far more likely* to run for office than men, particularly on the Republican side. Our results highlight the need to consider the gendered pipeline to power alongside rates of entry in studies of women's underrepresentation.

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Despite notable gains in 2018, women are underrepresented across offices in the United States: 76 percent of members of Congress, 82 percent of governors, 71 percent of state legislators, and 78 percent of mayors are men (CAWP 2019). Why there are so few women in office has been one of the most prominent questions in the gender and politics literature. The first wave of research on women's underrepresentation pointed to the political opportunity structure and the absence of women in the careers that feed into politics, in large part due to the finding that "when women run, they win" at equal rates as their male counterparts (Burrell 1994; Carroll 1994; Darcy et al. 1994; Duerst-Lahti 1998; Seltzer et al. 1997; Thomas and Wilcox 1998).¹ The expectation was that as more women entered the pipeline professions and ran as incumbents, women's representation would increase. However, the number of women in office instead stagnated, and scholars collectively turned to the study of candidate entry.

For the past two decades, the leading explanation for female underrepresentation in American politics has been that women are less likely to run for office than similarly situated men. Political scientists have uncovered a variety of reasons for why this is the case. The most prominent of these emphasizes a gender disparity in levels of political ambition. Lawless and Fox (2005, 2010; Fox and Lawless 2010, 2014) have been at the forefront of ambition research.

¹ Although women win as often as men, others have also cast doubt on the notion that elections are gender neutral. Fulton (2012) uncovers a gender difference in vote share once quality is taken into account, and Pearson and McGhee (2013) show that women candidates are more experienced than men but only equally likely to win. In office, women outperform their male counterparts due to perceived gender biases and electoral vulnerability (Anzia and Berry 2011; Lazarus and Steigerwalt 2018). Sanbonmatsu (2002) finds that voters have a "baseline gender preference" for male or female candidates, and Mo (2015) identifies implicit gender biases that voters have. A host of stereotype studies highlight the various ways in which voters perceive women candidates through a gendered lens (Bauer 2015; Cassese and Holman 2018; Ditonto et al. 2014; Holman et al. 2016; Schneider and Bos 2014).

In a two-wave study of nearly 4,000 men and women in the most common careers that feed into politics, including law, business, education, and political activism, they find that women are less likely to consider running for office and less likely to be encouraged to run than their male counterparts. They describe a persistent winnowing effect that occurs over multiple stages of the candidate emergence process, which ultimately results in fewer women who run.

The second explanation for why women are less likely to run points to gender differences in recruitment patterns. Party leaders fail to recruit women as often as men, and they screen ambitious women out of seats they believe women cannot win (Crowder-Meyer 2013; Fox and Lawless 2010; Niven 1998; Sanbonmatsu 2006). Gender biases in recruitment may have a particularly adverse effect on female candidacies. In an analysis of state legislators, Carroll and Sanbonmatsu (2013) show that for women, the decision to run for office is influenced more by their relationships and interactions with others, including party leaders, elected officials, family, and friends. As a result, gendered disparities in recruitment efforts would disproportionately depress women's candidacies.

The third explanation for gender differences in candidate entry is that women are more averse to elections than their male counterparts (Kanthak and Woon 2015; Preece and Stoddard 2015). Kanthak and Woon (2015) use a unique experimental design and find that women are equally likely to volunteer as a candidate when the representative is chosen randomly but less inclined to do so when the representative is chosen by an election. This gender difference in candidate entry arises not from disparities in abilities, risk aversion, or beliefs, but rather from the competitive nature of campaigns. Preece and Stoddard (2015) additionally find that priming individuals to consider political competition has a negative effect on women's interest in politics

but not on men's interest. Moreover, Schneider et al. (2016) demonstrate that women are more likely to be ambitious when a political career is framed in terms of communal goals.

All of these factors likely play a role in women's absence from politics. Yet by comparison, the gender makeup of the pipeline to office has received virtually no attention in recent studies of female underrepresentation. There are several reasons why the shift toward candidate entry has not been followed by a similar emphasis on the gender makeup of the pool. For one, most samples of potential candidates are intentionally gender balanced. For example, Lawless and Fox (2010, 37) disproportionately stratified their sample by sex to include equal numbers of women and men. Their goal was to study gender differences in ambition among those in the professions that most often precede political candidacies, not to replicate the gender makeup of these professions (Lawless 2012, 25; Lawless and Fox 2010, 177), and the sample allowed them to make important comparisons within and between subgroups of men and women. Kanthak and Woon (2015, 597) similarly recruited gender-balanced groups in their experimental study of election aversion and candidate entry. While gender-balanced pools increase the number of women in our samples (and reflect the makeup of the public), this sampling choice has also hindered our ability to examine gender disparities in supply alongside gender disparities in entry.

In addition, the few studies that use gender-imbalanced samples of eligible candidates give little attention to the gender skew and focus instead on rates of entry. Mariani (2008) examines the decision to run for Congress among state legislators in five states from 1993 to 2002 and finds that 4 percent of men and 2 percent of women sought higher office. He also explores how the traits and attributes that are associated with running, such as age and marital status, are gendered. Yet the emphasis is on whether women are less likely to run and less likely to be older or married, for example, rather than on the gender imbalance in the sample or in those

who have the traits and attributes associated with running. In a recent analysis of state legislators, Maisel and Stone (2014) find that women are no less likely to run for Congress than men, but gendered patterns of representation are beyond the scope of the article.

Finally, scholars who consider disparities in the pool either do not explore the decision to run or do not address how much more likely to run women would need to be to reach parity with men. Crowder-Meyer and Lauderdale (2014) use a novel empirical design and identify potential male and female candidate pools based on the characteristics of high-level officeholders. They show that the proportion of women in the Democratic pool of potential candidates is now two to three times larger than the proportion of women in the Republican pool. However, they do not analyze who actually runs for office and are thus unable to look at rates of entry within the gender and partisan makeup of the pool. Thomsen (2017) examines the decision to run for Congress across state legislators but focuses on ideology and does not consider the level of entry that would be needed for parity (see also Elder 2008). Brown et al. (2019) study the effect of state legislative service on running for Congress, but they also do not address the rate of entry that would result in equal numbers of male and female candidates.

In sum, there are no studies that place the actual decision to run for office in the context of the actual gender makeup of the potential candidate pool. The central problem with this is that the representational implications of gender disparities in rates of entry are closely tied to gender disparities in the eligibility pool. For example, Lawless and Fox (2010) find that 7 percent of women and 12 percent of men in their sample ran for office, and Mariani (2008) finds that 4 percent of men and 2 percent of women in his sample did so. Yet we might wonder what these averages are a percentage of. If women comprise 20 percent of the pool, these gaps have very different consequences for the number of female runners than if women comprise 40 percent of

the pool. Moreover, even across studies of candidate entry, the outcome of interest is rarely the actual decision to run for office. Scholars have mostly focused on disparities in the precursors to and correlates of running for office, such as the consideration of a candidacy or attraction to a political career, but we know less about actual rates of entry across eligible or likely candidates. As a result, we lack satisfactory answers to basic but important questions like whether the gender gap in candidates would close if women were as likely to run as their male counterparts.

In this article, we seek to spark a renewed discussion of how the pipeline to office matters at least as much as rates of entry, if not more, for future prospects of gender parity. We examine the gender makeup of the pipeline across three pools of potential candidates: individuals in lower-level office, those named in newspapers as likely candidates, and lawyers who have donated to political campaigns. The main strength of these datasets is that we can analyze actual rates of entry in conjunction with the gender composition of the pool. Another advantage is that our data capture traditional and non-traditional pathways to office and include individuals with different propensities to run. We find some evidence that women are less likely to run than men; however, the dearth of women in the pipeline plays a much greater role in the lack of women candidates. Depending on the office, women have to be at least *three times* more likely to run for office than men for the gender disparity in candidates to close. Given the particularly stark gender imbalance in the GOP bench, Republican women have to be *five or six times* more likely to run than Republican men.

Scholars of comparative politics have given more attention to how women's labor market participation shapes political selection (see Iversen and Rosenbluth 2008 for a review). Several studies in the 1980s and 1990s examined the relationship between labor patterns and women's representation (i.e., Matland 1998; Moore and Shackman 1996; Oakes and Almquist 1993; Rule

1987). Kenworthy and Malami (1999) find that the share of women in professional occupations is positively related to the proportion of women in office, but the share of women in the general labor force is not. In an analysis of the British Parliament, Norris and Lovenduski (1993, 1995) similarly argue that the traditional occupational pathways to office hinder the entry of women since they are often concentrated in low-paying skilled and semi-skilled occupations.

Importantly, these occupations are less likely to provide the time, flexibility, financial security, public networks, social status, and skills that enable political careers (i.e., Jacob 1962; Ranney 1965; see also Carnes 2018).² The electoral system plays a sizeable role as well, with candidate-centered systems tempering the impact of women's labor force participation (Iversen and Rosenbluth 2008, 2010). While the decision to run for office is less relevant in contexts where parties control nominations, one insight from this research—that the selection of men into the typical pathways to office works in favor of the election of male candidates—remains applicable in the U.S. context as well.

Over the last two decades, most of the gender research in American politics has focused on the various reasons for the ambition gap between men and women and the ways in which women's political ambition can be fostered. There is substantial evidence across studies that recruitment and support from party and community leaders is a crucial mechanism for the advancement of women in politics. Candidate training programs have emerged within the U.S. and abroad to help translate women's political interest into candidacies. These efforts are

² Sociologists have also considered the cultivation of resources through the workplace and the asymmetries that arise due to social networks and social capital, which can disadvantage women and minorities in their career development (e.g., Lin 1999, 2001; see also Burns et al. 2001). Particularly relevant for our research given their status as common pipelines to office, others have quantified the impact of gender stereotypes and preferences in hiring decisions at law firms and in business (Cohen and Huffman 2007; Gorman 2005; Yang and Aldrich 2014).

invaluable for encouraging the near runners to throw their hats in the ring. However, we think the hurdles to gender equality in legislative institutions also extend beyond the ambition deficit.

Women do not comprise half of the individuals in what are currently the main paths to office, and the gender skew is evident when the pipeline is measured in professional or non-professional terms. For women to reach parity with men, it is necessary to increase the level of ambition among women in the pipeline to office, but our article sheds new light on how the winnowing out of women from politics is closely tied to the gender skew within the pipeline as well.

The Male Eligibility Pool

The main reason why the gender makeup of the pipeline deserves renewed attention is that the vast majority of potential candidate pools that feed into elected office remain heavily skewed by gender. Even if women were as likely to run as men, the likelihood that a candidate would be a woman is low due to the much smaller number of women in the pool. For one, lower-level offices, a common stepping stone to higher office, are overwhelmingly male and have changed only minimally over the last two or three decades. Men have comprised between 75 and 80 percent of state legislatures, a typical pathway to Congress, since the early 1990s. Even after the electoral gains in 2018, men still make up 71 percent of state legislatures. At the local level, more than 78 percent of mayors of U.S. cities with populations over 30,000 are men (CAWP 2019). Figures from the National League of Cities show that, in 2001, men made up 75 percent of city council members in small cities and 64 percent in medium and large cities, and there was no more gender diversity in 2001 than in 1979 (NLC 2018).

Men are overrepresented in the careers that feed into politics as well. The legal profession has long been a common career path to politics. Bonica (2017) shows that, even when compared to other professionals, lawyers are much more likely to run for office and much more likely to

win. While female enrollment in law schools has been near parity with male enrollment since the late 1990s, the legal profession is still majority male (ABA 2000, 2017). Data from the American Bar Association show that men make up 64 percent of practicing attorneys (ABA 2017). Among judges, men comprise 67 percent of federal district court judges and 69 percent of state court judges (ABA 2017; NWLC 2016). Besides law, many candidates have business backgrounds. The same pattern holds: data from the 2016 Annual Survey of Entrepreneurs show that about 80 percent of businesses nationwide are owned by men (U.S. Census 2018). The figures are also dismal in the military, which has historically been an avenue to politics, where men constitute 84 percent of the enlisted forces and 82 percent of the officer corps (Reynolds and Shendruk 2018).

Apart from these professional pathways to office, men are more prominent actors in electoral politics too. Although women are as likely to vote as men and report similarly high levels of political interest, men are more likely to give money to candidates, and they donate far more than women (Burns et al. 2001; Lawless and Fox 2010; Thomsen and Swers 2017). At the congressional level, male donors give more than twice as much money to incumbent Democrats and three times as much to incumbent Republicans as female donors (Thomsen and Swers 2017). In a recent analysis of lawyers, Bonica and Sen (2017) find that 31 percent of female lawyers have donated to candidates, compared to 49 percent of male lawyers. And because men are already overrepresented in the legal profession, the disparity in donations results in a much larger number of male lawyers who are engaged in elite-level electoral politics.

To be sure, the occupational pathways to some offices do differ for men and women. Carroll and Sanbonmatsu (2013, 23) show that 18 percent of female state representatives had backgrounds in education and 9 percent of women had backgrounds in law. By comparison, 11 and 14 percent of male state representatives had backgrounds in education and law, respectively.

Deckman's (2007) survey of school board members also finds that 21 percent of women are educators, compared to 12 and 11 percent who are executives and professionals, respectively. However, women teachers outnumber women lawyers in the workforce *nine to one* (U.S. Department of Labor 2017), and across samples of officeholders and candidates, the ratio of women teachers to lawyers does not come close to this margin. Among current U.S. House members, more women have backgrounds in law than education (33 versus 26; Chinoy and Ma 2019), despite the disparity in workforce patterns. We fully expect the pipeline to vary by office, and in contexts where more legislators do come from female-dominated professions, we would expect to see more women in office than in contexts where more legislators come from male-dominated professions. This is consistent with Crowder-Meyer's (2013) finding that women are more likely to be recruited when elites look outside of traditional pathways. We leverage state variation in occupational pathways to office later in the article to explore this possibility.

In short, while the route to some offices differs for men and women, male-dominated professions are common pathways to office for men and women alike (Chinoy and Ma 2019). Moreover, the percentage of women in state legislatures with law or business backgrounds has increased since the 1980s (Carroll and Sanbonmatsu 2013) and so has the percentage of women in Congress with state legislative backgrounds (Elder 2008). As a result, we think it is worth examining the decision to run for office in what we call the gendered pipeline to power. The vast majority of elected officials come through tried and true pathways. One common pipeline includes those in lower-level positions who are well situated to seek higher office. Another pipeline includes individuals who work in the professions that commonly feed into politics, particularly law. Other pipelines include those who are influential actors in elections. Women are

grossly outnumbered in all of these, and the gender disparity across a variety of potential candidate pools has important implications for the number of men and women who run.

The disproportionate selection of men into the traditional pathways to office may in part reflect the gender differences in political ambition that Lawless and Fox (2010) uncovered. It is plausible that young people select into careers and activities based on their latent desire to hold office, and Fox and Lawless's (2014, 511) own research highlights a gendered winnowing of career interests in college. In this way, our argument is compatible with a variant or extension of the ambition argument that emphasizes the screening out of women from politics before they enter the pipeline rather than once they are there. Yet as it is currently stated, the ambition model gives little attention to any implications of its argument for the supply of women and men in the eligibility pool, which, notably, is reflected in the use of gender-balanced samples of potential candidates. And perhaps most importantly, we depart from the main expectation that underlies ambition research—that equal rates of entry will close the gender gap in candidates—precisely because of the gender skew in the pipelines to office which we seek to emphasize here. If there is good reason to believe that women select into different occupational pathways than men, this should be directly incorporated into studies of women's underrepresentation.

Data and Method

We draw on three distinct potential candidate pools to examine rates of entry within the gendered pipeline to power. While each has strengths and weaknesses, we leverage these data to better understand how the gender makeup of the potential candidate pool continues to matter for women's underrepresentation. The first pool includes 30,000 state legislators who are, by virtue of their current position, well situated to run for the U.S. House. We use Bonica's (2014) data to identify the sample of state legislators from 2000 to 2010. This design is typical in studies of

candidate entry, as serving in lower-level office often provides individuals with the skills and resources to run for higher office (Jacobson and Kernell 1983). State legislatures are the most common stepping stone to the House, and more than half of House members came through this pathway (Manning 2016). There is no significant gender or party difference in the percentage of MCs with state legislative backgrounds either: 50 percent of men and 55 percent of women, and 51 percent of Democrats and 52 percent of Republicans, have held state office (Carnes 2012).

The pool of state legislators offers insight into progressive ambition, or the decision to run for higher office (Schlesinger 1966). Yet it is also the case that elected officials enter through other avenues, and we seek to examine gender differences beyond officeholders as well (Carroll and Sanbonmatsu 2013). Our second pool includes 3,000 individuals, all non-incumbents, who are identified in local and statewide newspapers as potential U.S. Senate candidates for all 611 primary elections from 1994 to 2010 (King 2017). The local knowledge that journalists have of the political landscape results in a unique pool of potential candidates who are much closer to the actual decision to run, and this sample allows us to uncover gender disparities in the critical late stages of candidate entry. These individuals come from a variety of backgrounds, ranging from novices to career politicians. Specifically, 55 percent of these potential candidates have held elected office and 45 percent have not, which shows journalists' coverage of potential candidates extends beyond well-known political figures. This sample is valuable for examining women's underrepresentation in the Senate because female senators are less likely than male senators to have prior experience in the U.S. House, which is a traditional path to the Senate.³

³ In the past five congresses (112th to 116th), 53 percent of male senators have U.S. House experience compared to 37 percent of female senators.

These potential candidates offer a window into those who are among the most likely to run for Congress. However, because these women already have an interest in running, these pools may flatten gender differences in rates of entry. Thus, we seek to examine the decision to run for office and the gender makeup of the pool in another sample of men and women who are still more likely to run for office than an average voter. Our third pool includes nearly 400,000 lawyers who have made political contributions (Bonica and Sen 2017). Lawyers are 100 times more likely to run for office than the average American, and lawyer-donors are particularly important because they provide early money that signals candidate viability (Bonica 2017). Law is a common pipeline to Congress for both men and women: 40 percent of men and 30 percent of women who were elected from 2010 to 2014 had law degrees ($p < 0.05$; Bonica 2017), but there is no significant difference in the number of men and women with law degrees in Congress today (38 and 32 percent, respectively; Chinoy and Ma 2019). Moreover, male and female lawyers are more likely to win than non-lawyers (Bonica 2017), and among non-incumbent winners from 2010 to 2014, 36 percent of men and women had law degrees. We use the sample of lawyer-donors in the 2012 Martindale-Hubbell directory that Bonica and Sen (2017) combined with FEC records, and we merged them with Bonica's (2014) dataset of state and federal candidates from 2000 to 2016 to identify whether they ran for state or federal office during this time.⁴

Descriptive statistics of the three pools are provided in Table 1. Rates of entry and the total number of individuals are shown by party. The variation in rates of entry reflects the nature of the samples, but the bivariate gender differences within each pool are not especially large.

⁴ Offices are coded by the FEC. State-level offices include state-level executive and legislative offices; judicial offices are excluded because not all judicial candidates need to raise money so their coverage in the DIME data is more limited. Federal-level offices include the presidency, the U.S. House, and the U.S. Senate. In Appendix A, we provide a full discussion of how we validated this measure.

Among the state legislators, 1.4 percent of women and 1.5 percent of men ran for the House, and no statistically significant gender differences emerge by party.⁵ Because the potential Senate candidates have been named as likely candidates, their rates of entry are much higher. The gender disparity is statistically significant but not especially large—49 percent of women and 56 percent of men ran—and it is not significant among Democrats. Among lawyer-donors, women are less likely to run for state or federal office than men, but again, the difference is not overwhelming: 0.5 percent of women and 0.7 percent of men ran for state or federal office. Had female lawyer-donors run at the same rate as men, this would have resulted in 195 more women candidates across this 16-year period, or about 20 per cycle. *But male candidates still would have outnumbered women nearly fourfold.*

Gender differences, or a lack thereof, in average rates of running can obscure gender and partisan disparities in the raw number of men and women in each pool. Among the state legislators, there are 11,899 Democratic men and 11,984 Republican men, compared to 4,646 Democratic women and 2,453 Republican women. Women make up an even smaller proportion of likely Senate candidates. In this sample, there are 1,160 Democratic men and 1,398 Republican men, compared to 243 Democratic women and 189 Republican women. Men dominate the pool of lawyer-donors as well: of the 379,538 lawyer-donors in the sample, 190,520 are Democratic men, 105,199 are Republican men, 67,005 are Democratic women, and 16,814 are Republican women. In the sections that follow, we discuss the impact of the enormous gender disparity across these pools and the dearth of Republican women in particular.

⁵ This differs from the finding in Brown et al. (2019), who use an RDD to show that the effect of state legislative service on running for Congress is twice as large for men as women. However, their sample is limited to mixed-gender close elections and is not reflective of the gender makeup of state legislative candidates. Importantly, they are unable to consider how much more likely to run women would need to be to reach parity with men.

Table 1: Rates of Entry and Number of Potential Candidates Across Pools and By Party

Sample: Source: Office Sought:	(1) State Legislators Thomsen (2017) U.S. House		(2) Named in Newspapers King (2017) U.S. Senate		(3) Lawyer-Donors Bonica and Sen (2017) State or Federal Office	
<i>All</i>	Women	Men	Women	Men	Women	Men
Rate of Entry (%)	1.4	1.5	48.6**	56.2	0.5**	0.7
Raw Number	7,099	23,883	432	2,558	83,819	295,719
Total Candidates	101	349	210	1,437	392	2,109
<i>Democrats</i>	Women	Men	Women	Men	Women	Men
Rate of Entry (%)	1.2	1.1	50.2	55.2	0.4**	0.6
Raw Number	4,646	11,899	243	1,160	67,005	190,520
Total Candidates	56	126	122	640	285	1,195
<i>Republicans</i>	Women	Men	Women	Men	Women	Men
Rate of Entry (%)	1.8	1.9	46.6**	57.0	0.6**	0.9
Raw Number	2,453	11,984	189	1,398	16,814	105,199
Total Candidates	45	223	88	797	107	914

Note: **p<0.01, *p<0.05, †p<0.10.

Given the recent emphasis in the literature, we start by examining the relationship between gender and candidate emergence. Unlike most studies, the dependent variable in all models is the actual decision to run for office. In the sample of state legislators, we focus on the decision to run for the House from 2000 to 2010. In the sample of those who have been named as potential Senate candidates in newspapers, we focus on the decision to run for the Senate from 1994 to 2010. The lawyer-donor pool includes one observation per individual, and the dependent variable is whether they ran for office at the state or federal level from 2000 to 2016. The main independent variable is the sex of the potential candidate. A crucial extension of our work is that after we examine patterns of candidate emergence, we explore the interplay between rates of entry and the gender composition of the pool and consider the implications for representation.

Across models, we account for party, ideology, and experience.⁶ We use Shor and McCarty's (2011) scores to measure the ideology of state legislators, and we use Bonica's (2014) CFscores to measure the ideology of the potential Senate candidates and the lawyer-donors.⁷ We expect that ideological moderates are less likely to run for office at the federal level, but not necessarily at the state level. To measure state legislator experience, we use the number of terms they served in office; for the Senate pool, we coded whether they previously held office

⁶ Lawyer-donors are coded as Republicans or Democrats if they give more than half of their donations to Republican and Democratic candidates, respectively. The vast majority of lawyer-donors contribute to one party; the lawyer-donors who are coded as Democrats give, on average, 96 percent of their donations to Democrats, and those who are coded as Republicans give 94 percent of their donations to Republicans. About 12 percent of the lawyer-donors who ran did so as Independents, but they are coded as Democrats or Republicans if they fit the criteria above. The results remain the same when they are excluded.

⁷ Including this variable reduces the number of observations as not all potential candidates have CFscores. The models without ideology are provided in Appendix B.

(Jacobson 1989); and for the lawyer-donors, we measure career experience as the number of years since they were admitted to the bar.

Fewer electoral variables are included in the lawyer-donor models because the data are pooled over time. The year of the donation is not available across individuals so we do not know, for example, whether they were donors before or after a seat was open. We are thus interested in whether the lawyer-donors ran for office at all during this period rather than whether they ran in a given year.⁸ However, in the non-lawyer-donor analyses, we do account for seat type and the size of the potential candidate pool as well as this value squared.⁹ We use Cook's Partisan Voter Index (PVI) to measure the partisan tilt of the district or state, with higher values indicating same party favorability. We include district demographics in light of recent findings that women are more selective in where they run (Elder 2008; Lazarus and Steigerwalt 2018; Ondercin 2019). We use Palmer and Simon's (2012) measure of women-friendly congressional districts to account for districts with demographic profiles that are more favorable to the election of women, namely more urban, diverse, and wealthier districts.¹⁰ For the analyses of potential Senate candidates, we collected state-level sociodemographic measures of percent urban, percent

⁸ Other pools that are based on professional attributes also do not account for electoral factors.

⁹ We considered whether the number of potential women candidates in the pool was related to the entry of female candidates, but the interaction was not significant. The number of potential female candidates was highly correlated with all potential candidates so we did not include it in the models.

¹⁰ We also interacted women-friendly district with gender to see if women were more likely to run in these districts, but the interaction is insignificant across models (see Appendix B). However, women make up a greater proportion of the samples in women-friendly districts. For example, women comprise 29 percent of the sample of state legislators in more women-friendly districts (measured as the median and above), versus 17 percent in less women-friendly districts. As a result, the pool of likely women candidates is much larger, which lends additional support to the argument that the gender makeup of the eligibility pool plays a key role in patterns of women's representation.

college educated, percent African American, and median household income from U.S. Census data (see Appendix B). In all models, we include state fixed effects to account for state-level factors that influence candidate entry like state legislative term limits and legislative professionalism, and the non-lawyer-donor models also include year fixed effects.

Finally, we add other variables in the lawyer-donor models that likely shape patterns of candidate entry in this sample. We include measures of whether the individual is employed by the government or as a prosecutor or district attorney, as these career paths likely attract more lawyers who are interested in public service. We include a variable for whether they graduated from a “Top 14” law school or from a law school that was not ranked in the top 100. It is unclear whether the type of law school is related to running for office, but this disparity would contribute to class inequalities in legislative institutions (Carnes 2018).

To be sure, scholars draw on many potential candidate pools to study political ambition and candidate emergence. The main strength of the pools here is that they allow us to look at gender differences in the actual decision to run across individuals with traditional and non-traditional backgrounds and those with varying likelihoods of running for different offices. Although we do not delve into why these pools are male dominated, the numerical disparity varies predictably by age. In the lawyer-donor sample, for example, women make up 35 percent of Democrats under 55 but only 17 percent of those over 55. Similarly, women comprise 21 percent of Republican lawyer-donors under 55 and a mere 8 percent of lawyer-donors over 55. However, we are unable to say how much of this is due to women exiting the legal profession and how much reflects changes in occupational patterns over time. We also examined cohort differences in entry by splitting the sample in Table 1 to lawyer-donors over and under 55, and women’s lower rate of entry is driven entirely by young women. Even so, we think the increase

in the number of female lawyer-donors bodes much better for women's representation despite their lower rates of entry. In short, there are a variety of structural and historical reasons why fewer women are in the pipeline, but we are more interested in how the gender makeup of *any typical pathway to office* interacts with gender disparities in candidate emergence.¹¹

The Decision to Run for Office

Our first question is whether women in these pipelines are less likely to run for office than men. The results for the state legislators and potential Senate candidates named in newspapers are presented in Columns 1 and 2 in Table 2, respectively. The results for the lawyer-donors are presented in Columns 3 through 5. The dependent variable in Column 3 is whether they ran at the state or federal level, and the dependent variables in Columns 4 and 5 are whether they ran for state or federal office, respectively.

¹¹ In the Senate potential candidate pool, we considered the possibility that journalists are more likely to name men than equally qualified women. We examined whether male U.S. House members in a state were more likely to be named in newspapers than female House members, but we found no indication of gender differences.

Table 2: The Decision to Run for Office Across State Legislators, Potential Senate Candidates, and Lawyer-Donors

Sample: Office Sought:	(1) State Legislators U.S. House	(2) Named in Papers U.S. Senate	(3) Lawyer-Donors State or Federal	(4) Lawyer-Donors State	(5) Lawyer-Donors Federal
Woman	-0.07 (0.12)	-0.22 (0.15)	-0.38** (0.06)	-0.60** (0.07)	-0.53** (0.13)
Moderate	-0.42** (0.14)	-0.70** (0.14)	0.04 (0.05)	0.12* (0.06)	-0.46** (0.10)
Experience	0.31** (0.04)	-1.51** (0.12)	-0.02** (0.00)	-0.02** (0.00)	-0.01** (0.00)
Republican	0.56** (0.12)	-0.12 (0.11)	0.25** (0.04)	0.24** (0.05)	0.37** (0.09)
Women-Friendly District	0.55 (0.84)	—	-3.52** (0.33)	-4.28** (0.40)	-3.06** (0.63)
Open Seat	2.58** (0.11)	0.19 (0.13)			
Same Party Advantage (PVI)	-0.01 (0.01)	-0.01 (0.01)			
Size of Potential Candidate Pool	-0.10** (0.02)	-0.16** (0.03)			
Size of Candidate Pool Squared	0.00** (0.00)	0.00** (0.00)			
Top 14 Law School			0.17* (0.07)	0.18* (0.08)	0.40** (0.13)
Not Top 100 Law School			0.01 (0.05)	0.06 (0.05)	-0.26* (0.11)
Government Lawyer			0.42** (0.12)	0.45** (0.14)	0.85** (0.21)
Prosecutor or District Attorney			-0.03 (0.16)	-0.08 (0.19)	0.16 (0.32)
Constant	-5.57** (0.63)	-1.37 (3.49)	-4.23** (0.18)	-4.32** (0.21)	-6.31** (0.41)
Observations	30,835	2,020	356,588	356,588	356,588

Note: Entries are logistic regression coefficients with standard errors clustered by individual in parentheses. The dependent variable is coded 1 if the individual ran for the specified office and 0 if not. Models 1-2 include state and year fixed effects, and Models 3-5 include state fixed effects. Model 2 includes the women-friendly sociodemographic variables identified above but they are not shown here (see Table B6). **p<0.01, *p<0.05, †p<0.10.

Among state legislators and those named in newspapers, the relationship between gender and the decision to run for office is not statistically significant in the full models.¹² Yet as discussed above, these data may obscure disparities that would appear in broader pools of potential candidates. Indeed, we see in the lawyer-donor models that women are less likely to run for office than their male counterparts, which is consistent with previous research. The predicted probability of running for either state or federal office is 0.4 percent for women and 0.5 percent for men.¹³ The predicted probability of running for state-level office is 0.2 percent for women and 0.4 percent for men, and the predicted probability of running for federal-level office is 0.1 percent for men and 0.1 percent for women. The gender disparities are not especially large, but they are statistically significant. Still, the on-average differences tell us little about what these values are a percentage of, and we turn to the gender makeup of the pipeline in the next section.

In terms of the control variables, moderates are less likely to run for the House and Senate than conservative Republicans and liberal Democrats. In the lawyer-donor sample, moderates are more likely to run for state-level office, but they too are less likely to run for federal office, which suggests that institutional contexts shape patterns of candidate entry (Aldrich and Thomsen 2017). State legislators who have served more terms in office are more likely to run, but potential Senate candidates who have held office previously and lawyer-donors

¹² We ran separate models for experienced and inexperienced likely Senate candidates, and the results are the same. We also ran the models by party and interacted gender with each variable to explore whether the context mattered in different ways for women and men and whether women enter more strategically than men (i.e., Fulton et al. 2006; Lazarus and Steigerwalt 2018; Ondercin 2019; Palmer and Simon 2012; Pearson and McGhee 2013). None of the interactions between gender and the electoral context are statistically significant (open seat, partisan favorability, and size of the candidate pool) (see Appendix B).

¹³ All other variables are set at their mean or mode.

with more career experience are less likely to do so. Lawyer-donors are also less likely to run in women-friendly districts. The likelihood of running decreases as the size of the potential candidate pool increases, but this relationship is non-linear as indicated by the positive coefficient on the squared term. State legislators are more likely to run when the seat is open, and Republicans are more likely to run for office than Democrats in four of the five models. Lawyer-donors who work for the government and those who graduated from a “Top 14” law school are also more likely to seek office. Conversely, those who graduated from law schools that are not ranked in the top 100 are less likely to run for federal office, which likely has implications for the class makeup of Congress (Carnes 2018).

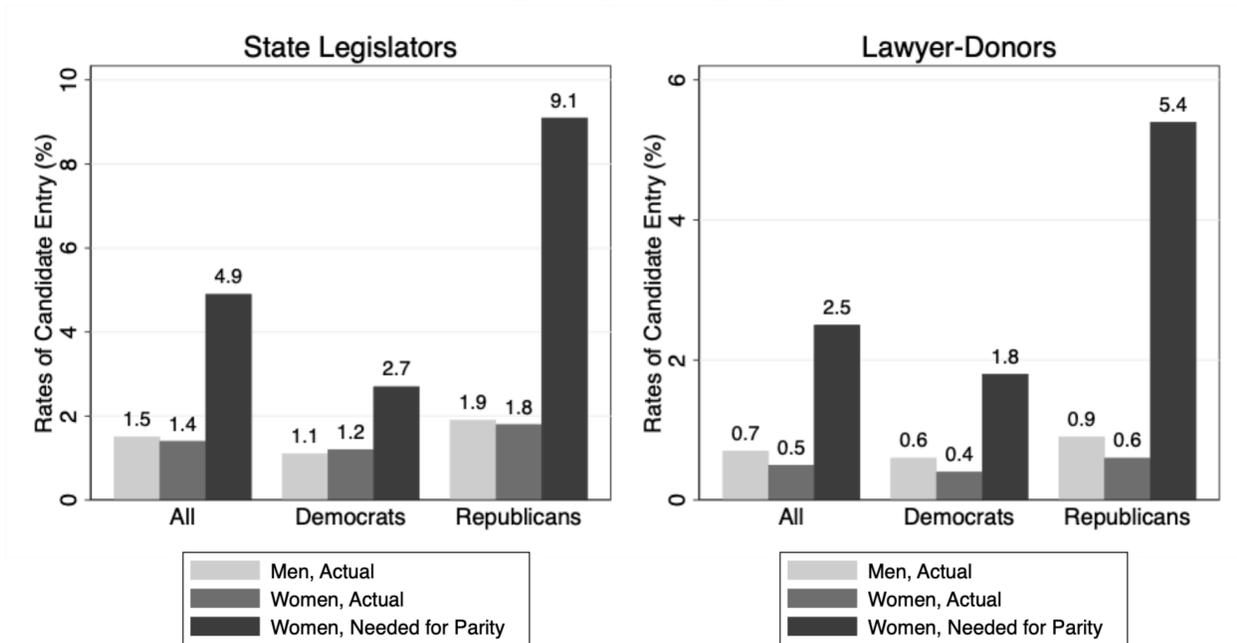
Women Have to Be *Far More Likely* to Run Than Men

One benefit of using samples that reflect the actual gender makeup of the pipeline is that we can examine the interaction between the gender makeup of the pool and rates of candidate entry, and in particular, the rate at which women would need to run to match the number of male candidates. The gender and partisan imbalance in the pools of state legislators and lawyer-donors was reported in Table 1 as well, with Republican men outnumbering Republican women around five or six to one and Democratic men outnumbering Democratic women nearly three to one. Our point is that this gender skew has serious implications for the number of male and female runners, above and beyond statistically significant gender differences in rates of entry.

The gray bars in Figure 1 show the rates of entry for male and female state legislators (left panel) and lawyer-donors (right panel), for the full sample and by party. The black bars depict the rate at which women would need to run to reach parity with men given the gender

makeup of the pools.¹⁴ In the sample of state legislators, 1.5 percent of men and 1.4 percent of women ran for the U.S. House, which resulted in 349 male candidates and 101 female candidates. If women had run at equal rates as men, the number of women candidates would have increased to 106, but this falls far short of the number of men. In fact, women would have to be *three times* more likely to run than men to match the number of male candidates (4.9 vs. 1.5 percent). The partisan disparities are even starker due to the dearth of GOP women. To reach parity with men, Republican women would have to be nearly *five times* more likely to run than their male co-partisans (9.1 vs. 1.9 percent), whereas Democratic women would have to be nearly *two and a half times* more likely to do so than Democratic men (2.7 vs. 1.1 percent).

Figure 1: Female Potential Candidates Have to Be More Likely to Run than Men to Equal the Number of Male Candidates, Especially Among Republicans



Note: Rates of entry are calculated from the samples of state legislators and lawyer-donors used in Table 1.

¹⁴ The potential Senate candidates are not shown in Figure 1 because even if all 432 women had run, the number of male candidates still would have tripled the number of female candidates.

In the sample of lawyer-donors, 0.7 percent of men and 0.5 percent of women ran for state or federal office, which amounted to 2,109 male candidates and 392 female candidates. Here, too, women would have to be *three and a half times more likely* to run than men to match the number of male candidates (2.5 vs. 0.7 percent). If we split the sample by party, we see the same trends as in the sample of state legislators: among Democrats, 0.6 percent of men and 0.4 percent of women ran for office, which totaled 1,195 men and 285 women. They would have to be *three times* more likely to run than Democratic men to reach parity (1.8 vs. 0.6 percent). Among Republican lawyer-donors, 0.9 percent of men and 0.6 percent of women ran, which totaled 914 male and 107 female candidates, but women would have to be *six times* more likely to run than their male co-partisans to equal the number of men (5.4 vs. 0.9 percent).

The size of the “return” on equal rates of entry—i.e., the number of additional women who would run—varies depending on the actual disparity in rates of entry and the number of women in the pipeline. Again, the advantage of the design here is that we are able to measure both of these. Table 3 shows how the overall number of women candidates would change in these pools if women’s rates of entry were the same as men’s. For state legislators, if women had run at equal rates as men, the number of female House candidates would have increased only minimally, from 101 to 106. By comparison, the returns are larger in the Senate pool and the lawyer-donor pool. In the Senate pool, equal rates of entry would have resulted in an increase of 32 women candidates (from 210 to 242). In the lawyer-donor pool, if women had run at the same rate as men, the number of women would have risen by 195, from 392 to 587. Yet we should emphasize that, in all of these scenarios, equal rates of entry would still result in dramatically more male candidates than female candidates. Table 3 also illustrates how the number of women candidates would change if women ran *at the same rate as in our samples* but instead constituted

half of each pool. In all three pools, the number of women candidates would double, triple, or quadruple the number of actual women candidates, regardless of whether women were less likely to run than men. One implication is that women’s organizations and candidate training programs could focus their attention on, for example, the kinds of legal careers that attract more women, because even small increases in entry would translate into larger numbers of women candidates.

Table 3: How Rates of Entry and Supply Impact the Number of Women Candidates

Sample: Office Sought:	(1) State Legislators U.S. House	(2) Named in Papers U.S. Senate	(3) Lawyer-Donors State or Federal Office
<i>All</i>			
Women Candidates, Actual	101	210	392
If Rate of Entry Equaled Men’s	106	242	587
If Women Comprised Half of Pool	217	732	949
<i>Democrats</i>			
Women Candidates, Actual	56	122	285
If Rate of Entry Equaled Men’s	51	134	402
If Women Comprised Half of Pool	99	351	515
<i>Republicans</i>			
Women Candidates, Actual	45	88	107
If Rate of Entry Equaled Men’s	47	108	151
If Women Comprised Half of Pool	130	373	366

For those concerned about gender parity in both parties, the findings here suggest that the dearth of Republican women candidates will be a persistent problem due to the lack of GOP women in the pipeline. The findings echo those in Crowder-Meyer and Lauderdale (2014), who similarly show that Republican women are dramatically outnumbered among potential candidates. For the most part, scholars have examined the growing partisan gap in women’s representation through the lens of fundraising patterns, regional realignment of the parties, and

ideological changes in national politics (i.e., Crowder-Meyer and Cooperman 2018; Elder 2008; Thomsen 2017; Thomsen and Swers 2017). Yet the sizeable disparity across pools sheds light on the distinct benches of the two parties and suggests that solutions to underrepresentation will likely differ by party as well. To elect Republican women, organizations may want to identify a number of targets and throw their support behind these individuals. On the Democratic side, resources could be more evenly distributed across women due to their larger numbers in the pool.

In sum, the patterns demonstrate just how great an impact the gender makeup of the pool continues to have on prospects for gender parity in legislative institutions. The short story is that we are skeptical that equal rates of running will result in an equal number of male and female candidates. Rather, women have to be *far more likely* to run to reach parity with men, and this is especially true for Republican women. Given the current gender makeup of the potential candidate pool, the result is that women need to have higher levels of political ambition, lower levels of election aversion, and be more likely to be recruited than men for the gender gap in candidates to close. An additionally important note about our research design is that only by analyzing the actual decision to run for office within the broader context of the candidate pool were we able to show that women's ambition needs to be elevated well above that of men's for female candidates to approach the number of male candidates.

Expanding the Occupational Pathways to Office

There is an additional way to increase women's representation that extends beyond the analyses above, which is to change what the pipeline professions are. Over two decades ago, Darcy et al. (1994, 112) argued that "women's occupations and activities have not provided the

same sort of gateway to political office as prestigious male occupations.”¹⁵ Indeed, women and men alike still enter office through male-dominated professions, but there are important differences across legislative institutions with respect to occupational pathways. Some state legislatures have more teachers in office, while others have more lawyers and business owners. One implication of our argument is that women should make up a greater proportion of legislators in states where more officeholders come from female-dominated occupations like education and health care, and women should make up a smaller proportion of legislators in states where more officeholders come from male-dominated occupations like law and business.¹⁶

To examine this possibility further, we draw on occupational data from the National Conference of State Legislatures that extend over four years (1993, 1995, 2007, and 2015). The dependent variable is the percentage of women in state legislative office. The main independent variables are the percentages of legislators with backgrounds in education, homemaking, health care, law, business, and agriculture. State and year fixed effects are also included in the model. Other factors certainly play a role in these patterns as well, but the relationships in Table 4 conform to our expectations. Women’s representation is higher in contexts where more legislators are educators and homemakers, and lower in contexts where more legislators are lawyers and business owners.

¹⁵ Due to data limitations, we are not able to compare average rates of entry for teachers and lawyers. Teachers are less likely to run for office than lawyers given their numbers in office compared to their numbers in the workforce, but we are unable to evaluate how much more likely to run teachers would need to be for the gender gap to diminish.

¹⁶ Another implication is that women should make up a greater proportion of state and federal (congressional) candidates when they comprise a greater proportion of lawyer-donors (state legislators). We find preliminary support for this expectation. The results are not shown here due to space constraints but are provided in Appendix C.

Table 4: Occupational Pathways to Office and Women’s Representation

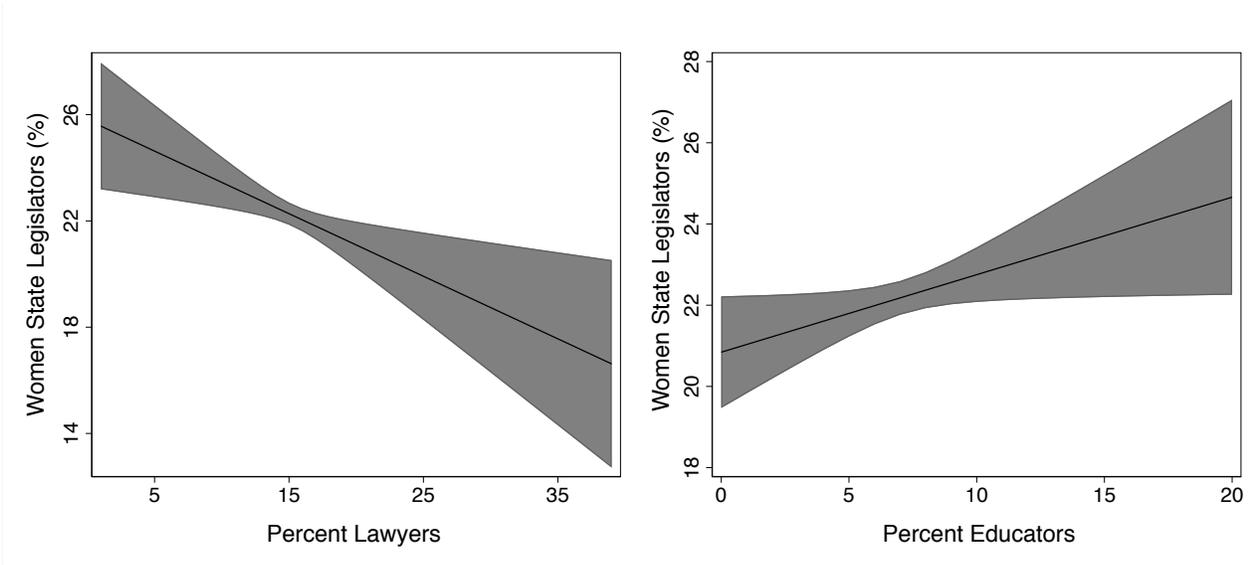
	Percentage of Women in State Legislature
Educators	0.20* (0.09)
Homemakers	0.94** (0.32)
Medical Professionals	0.21 (0.17)
Lawyers	-0.24** (0.08)
Business Owners/Executives	-0.12† (0.06)
Agriculture	-0.14 (0.11)
Constant	10.64** (3.14)
Observations	200
R-Squared	0.89

Note: Entries are OLS regression coefficients with standard errors in parentheses. The dependent variable is the percentage of women in state legislative office. NCSL occupational data are for all states in 1993, 1995, 2007, and 2015. The model includes state and year fixed effects. **p<0.01, *p<0.05, †p<0.10.

Figure 2 shows the predicted values of women’s representation in state legislatures with different percentages of lawyers and educators. An increase from the minimum to the maximum percentage of legislators with backgrounds in law corresponds to a nine percentage point decrease in the percentage of women in office. A similar increase in the percentage of legislators with backgrounds in education corresponds to a four point increase in the percentage of female legislators. To provide historical perspective, it has taken nearly three decades for the average level of women’s representation in state legislatures to increase by nine percentage points. With the exception of 2018, the largest single-year increase in women’s representation in state

legislatures since the early 1990s has been one percentage point (CAWP 2019). The historic 2018 elections resulted in a three and a half point increase in women’s representation in state legislatures and a three point increase in women’s representation in Congress (CAWP 2019).

Figure 2: Lawyer-Legislators (Educator-Legislators) are Negatively (Positively) Associated with Women’s Representation



Note: Predicted values are calculated from the model in Table 4.

In light of the significant gains made in 2018, particularly among Democratic women, we briefly consider the 2018 election in the context of our argument about the gender skew in the pipelines to office. We examine whether 2018 was unique in terms of the occupational pathways to office for women candidates. If 2018 was distinct in terms of the professional backgrounds of women runners or winners, it may indicate either that the election was an outlier or that the traditional avenues to office have shifted. However, if the women who ran and were elected in 2018 had similar backgrounds as those in previous years, it would suggest that contextual factors like the election of Trump and the MeToo movement are a better explanation for the increase in women’s candidacies in 2018 than changes in the pathways to office.

We use data from Project Vote Smart to compare the occupational backgrounds of the women who ran for the U.S. House in 2018 with those who ran in the previous four elections (2010-16). We focus on non-incumbent Democratic women since the bulk of the 2018 gains were driven by this group, with occupations divided into education, law, business, and health care. The number of women increased across occupation types, but their professional makeup was not much different than in the previous four cycles. In 2018, 30 percent had backgrounds in education, 15 percent in law, 31 percent in business, and 11 percent in health care, whereas from 2010 to 2016, these percentages averaged 30, 20, 29, and 10 percent, respectively. Moreover, similar to other years, women lawyers were more likely to be elected than women non-lawyers (23 and 9 percent in 2018, compared to 15 and 6 percent in 2010-16). The makeup of female winners also did not differ in 2018. Newly elected women were not more likely to have backgrounds in education or health care than women elected prior to 2018, nor were they less likely to have law or business backgrounds. In fact, of the women currently serving in the House, 41 percent of women elected in 2018 have law degrees compared to 27 percent of women elected in other years (Chinoy and Ma 2019). These patterns make our argument even more compelling in light of our emphasis on the dearth of women in the traditional pathways to office.

One key factor that shaped women's success in 2018 was that Democratic women were far more likely to win than all other non-incumbent groups. Indeed, the primary victory rate of Democratic women doubled that of Democratic men (CAWP 2019). Among lawyers in our occupational data, women were twice as likely to be elected as men (23 and 11 percent, respectively) and also more likely to be elected than women lawyers in previous years (23 and 15 percent, respectively). Among Democratic non-incumbents, the number of women lawyers elected in 2018 actually surpassed the number of male lawyers elected in 2018 (14 and 12,

respectively; Chinoy and Ma 2019). While more women ran, it is clear that demand-side factors favoring the election of women contributed to their successes as well. Despite these gains, we think a more reliable path to gender parity in legislatures is one in which the number of male and female candidates is equal.

In sum, it is important to note that we are not arguing that legislators should have backgrounds in law or business rather than education. To the contrary, we think the traditional pathways to office are a hindrance to the election of women. Moreover, there is ample evidence of the representational and policy drawbacks of the overrepresentation of lawyers and white-collar professionals in politics (Bonica 2017; Carnes 2013, 2018). Our argument is instead that since many male and female candidates do come through male-dominated pipelines, especially at the congressional level, we need to more seriously consider gender disparities within these pathways to understand the continued underrepresentation of women and of Republican women in particular. Even in a year in which women made historic gains, their occupational backgrounds largely reflected the breakdown in previous years. In light of the persistent gender skew in the traditional pathways to office that we have focused on here, the upshot is that equal rates of entry are unlikely to be enough to close the gender gap in candidates.

Conclusion

Our findings suggest that scholars should revisit how the gender makeup of the pipeline to power continues to matter for women's underrepresentation. While the number of women earning advanced degrees and entering the legal profession has increased in recent decades, the pipeline to elected office remains overwhelmingly male. The diverse set of candidate pools examined here allows us to situate rates of entry within the makeup of the candidate pool to analyze how these forces interact. We are not arguing that there is one right potential candidate

pool or that our candidate pools cover the full range of pathways through which men and women enter political life. Rather, our point is that scholars should leverage the diverse array of candidacy decisions, particularly in the U.S. context, to better understand why women are underrepresented across offices. One question for future research is whether potential candidate pools should be based on those who are most likely to run, those who are more numerous in the legislature (but may be less likely to run, on average), or those who are most likely to win. These answers are sometimes the same, but not always and not across all institutions.

This article makes two main contributions to the study of women's underrepresentation. First, we draw on three potential candidate pools to examine the decision to run for office. Each pool has strengths and limitations. One advantage of the pool of state legislators is that we can examine gender differences in candidate emergence in what has long been understood to be the traditional pipeline to the U.S. House. Still, many elected officials enter through non-traditional avenues, and the pool of likely Senate candidates allows us to examine gender differences in candidate emergence across a different sample of individuals who are closer to a decision to run. The pool of lawyer-donors enables us to look at gender differences in candidate entry in an even broader sample of potential candidates. Our study departs from previous research in that we analyze the actual decision to run for office at both the state and federal level across a diverse set of individuals who are well situated to run for several different offices.

Second, a core aspect of our argument is that the gender makeup of the pipeline needs to be included in studies of women's underrepresentation. We leveraged a variety of datasets across offices at the individual and aggregate level to shed new light on how gender disparities in the eligibility pool continue to matter for the number of women on the ballot and in office. A related methodological implication is that "on-average" effects may not always be the best way to

understand macro-level trends. With respect to women's representation, we need to look beyond whether women are simply more or less likely to run for office than men. Even if there are no gender differences in rates of entry, we may still see very slow changes in the election of women to office due to the continued dearth of women in the pipeline. Given the current gender makeup of various eligibility pools, women have to be *far more likely* to run for office than men, particularly on the Republican side. Future research should investigate additional ways to increase women's representation that extend beyond gender parity in candidate emergence.

One goal of this article is to generate a new conversation about *how* to study women's underrepresentation. Scholars should engage more directly with the actual decision to run for office. There is substantial empirical distance between considering a candidacy and running for office, and we need to know more about gender differences in the decision to run itself. In addition, the gender makeup of the potential candidate pools in our research should more closely mirror the gender makeup of actual potential candidate pools. The typical pathways to office remain heavily male, and the forces that hinder women's entry into the pool mean that equal rates of candidate entry will not result in equal numbers of male and female candidates. We are certainly not the first to highlight the gender skew in the pipeline, but we are the first to consider how rates of entry interact with the pipeline to power and matter for the number of women who run. We hope that our findings offer a compelling starting point for a renewed discussion of the gendered pipeline to power. Recent empirical advances and the availability of more data across offices make this an increasingly feasible endeavor for scholars of gender and politics.

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