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A Century of the American Woman Voter: Sex Gaps in Political Participation, Preferences, and Partisanship since Women's Enfranchisement

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The November 2020 presidential election will be the twenty-sixth in which American women will have been eligible to vote. The Nineteenth Amendment to the US Constitution, adopted a century ago this August, entitled women to cast ballots—for many in their first election—on November 2, 1920. Before 1920, 15 states had granted women equal voting rights, and an additional 24 states had granted partial voting rights (Keyssar 2009; Lott and Kenny 1999). The scope of partial voting rights varied widely across states and municipalities, covering local school board elections to the national presidential election. But a constitutional guarantee that sex could not be used as a basis of exclusion from the vote represented the crowning achievement—the "sacred right to the elective franchise," as laid out in the Declaration of Sentiments at the celebrated Seneca Falls convention of 1848.

But paradoxically, there was a great deal of speculation back in 1920 that women might not have much political influence even with the right to vote. As the story went, women would be inclined to "duplicate" the male vote, if they turned out at the polls at all. Some argued that any other outcome would be too disruptive to household harmony and also disrespectful of the "separate spheres" that men and women had historically occupied. As late as 1940, pollster George Gallup mused, "How will [women] vote on election day? Just exactly as they were told the

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night before" (as quoted in Berinsky 2006, 506). Others believed that other aspects of a woman's identity—her social class, race, or immigrant status—would be more critical than her sex to her political choices. Because women were similarly distributed across these other groups, so too would be women's votes—and public policy would be little affected.

A growing literature looking at a number of outcomes challenges this narrative. A series of studies using area-by-time variation has examined the impacts of women's enfranchisement on levels of state and municipal spending (Lott and Kenny 1999; Miller 2008), the distribution of spending across priorities, like public health and education (Miller 2008; Moehling and Thomasson 2012; Carruthers and Wanamaker 2015; Kose, Kuka, and Shenhav 2019), electoral outcomes (Morgan-Collins forthcoming), and downstream impacts on human capital in the short and long term (Miller 2008; Kose, Kuka, and Shenhav 2019). The findings are consistent with survey, lab, and field evidence from a variety of settings and time periods suggesting women place higher priorities on child welfare and redistribution (for reviews, see Duflo 2012; Croson and Gneezy 2009). Thus, the evidence suggests that the women's vote translated into real impacts on policy and social welfare, even at a time—as we will show—that women participated less in the electoral process relative to the present day.

Our goal in this paper is not to revisit the immediate impacts of the Nineteenth Amendment. Rather, we aim to describe how women as political actors have evolved over the past century, a period when women have had de jure—even if not always de facto—full voting rights. We will focus on three sets of outcomes: *political participation* is involvement in the political process, *issue preferences* are preferences over policy outcomes, and *partisanship* is identification with specific political parties and candidates. We posit that women's potential for political influence is an increasing function of their participation and how much both their issue preferences and partisanship differ from men's. When relatively high political participation intersects with relatively different issue preferences and there is sufficient party polarization along divisive preferences, the so-called "women's vote" may become pivotal to the candidates elected and the policies enacted.

To describe the evolution of the female voter in the United States, we bring together data from a variety of data sources. For the elections immediately after 1920, we do not have survey data on voting patterns by sex, but we can draw inferences about voting behavior of women from overall changes in voter turnout. We also compile a range of survey data from Gallup polls and other sources on patterns of men and women voting back to 1940. Wolbrecht and Corder (forthcoming) contemporaneously use a similar scope of data to analyze time trends in the sex gap across a wide breadth of voting-related outcomes. To the extent that our analyses overlap, we find consistent results. However, the scale and detail of our data allow us to explore the drivers of change in data-intensive, novel ways. Paralleling analyses of the growth in women's labor force participation over time (for example, Goldin 1990; Bailey 2006), we bring a new focus on the contributions of cohort- and time-specific factors in shaping voting outcomes.

We arrive at two key sets of findings. First, we show that the female-male gap ("sex gap") in voter turnout grew substantially over the last 80 years, from a deficit of almost 10 percentage points in 1940 to a surplus of over 4 percentage points in the 2016 election. This shift has been driven primarily by an increase in women's relative turnout across cohorts, which we find is associated with the accompanying rise in education, particularly high school graduation. Second, we show that the sex gap in identification with the Democratic Party rose from roughly parity in the late 1940s to almost 12 percentage points in 2017. This shift in partisanship permeated all cohorts, but did not coincide with a significant shift in issue preferences. We present survey evidence consistent with observations by political scientists (for example, Layman and Carsey 2002; Gillion, Ladd, and Meredith 2018) that party polarization across recent decades has contributed to a widening gulf in party affiliation by sex.

While we will not attempt to provide new estimates of the real policy and economic impacts of the female voter, we provide new descriptive evidence on when and how women's potential for political influence changed since the Nineteenth Amendment. However, we urge caution in drawing strong inferences from these descriptive patterns. After all, despite the higher voter turnout rates and greater Democratic partisanship of women as a whole, Republican Donald J. Trump won the 2016 presidential election. Post-election analyses have emphasized the role of divisions within women, particularly by race, which serves as a reminder that the notion of a "woman voter" is a vast simplification, as is the notion of a "man voter."[1] Exploring long-term trends in women's relative political behavior in subpopulations defined by race, education, marital status, geography, and so on is beyond the scope of the present paper, but an important area for future research.

Political Participation

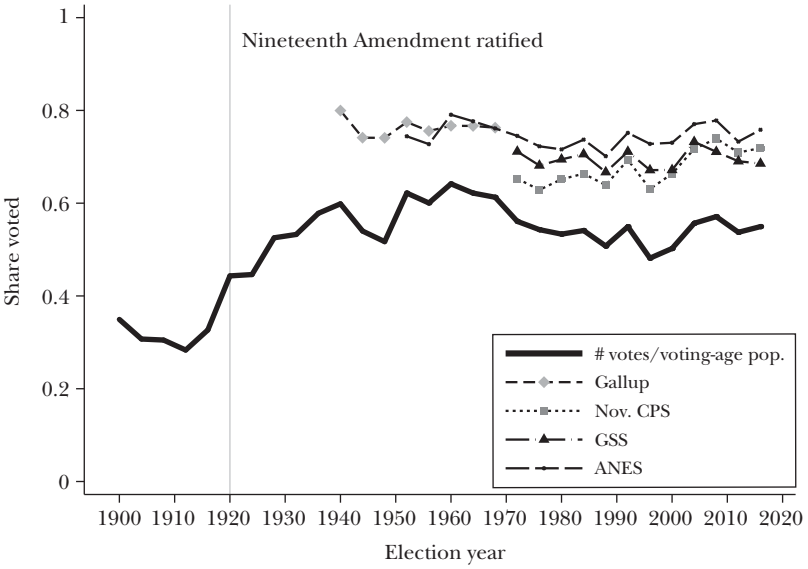
We begin with a new investigation of women's relative political participation since 1920. We focus on voter turnout in presidential elections, the measure of turnout that can be most consistently observed over the longest time horizon. Presidential elections also have the highest voter turnout, allowing us to observe the frontier of voter turnout for men and women alike. We consider the extent to which other participation metrics for women moved along with their turnout in a supplemental analysis to follow.

National Trends

There is not any direct data on voter participation of men and women in the 1920 election, or for the several elections that follow. Thus, researchers have sought to infer the voter participation rates of women based on overall voter turnout.

[1] See Cassese and Barnes (2018) for analysis of the 2016 election and broader discussions in Wolbrecht and Corder (forthcoming).

Figure 1
Voter Turnout in US Presidential Elections: Survey and Administrative Data, 1900–2016



Source: The numerator of the series represented by the solid black line is the US presidential vote count, constructed by the authors from state-level vote tallies available at http://uselectionsatlas.org. The denominator of this series is the US voting-age population (ages 18 and up for 1972 forward+ and ages 21 and up in all earlier years) for the subsample of states in a region with election returns, estimated from Decennial Census (1900–2000) and American Community Survey (ACS) (2005–2016) Public Use Microdata Samples (Ruggles et al. 2019). We compile Gallup microdata from polls conducted from 1940–1970 by the Gallup Organization and November CPS Voter Supplement microdata (for 1972; from US Census Bureau 1992) and IPUMS CPS (for 1976–2016; from Flood et al. 2018). General Social Survey data are drawn from the General Social Survey 1972–2018 Cross-Sectional Cumulative Data file (Release 1) (for 1972–2016; from Smith et al. 2019) and American National Election Studies data from the American National Election Studies Time Series Cumulative Data File (for 1952–2016; from American National Election Studies 2019). See online data Appendix.
Note: We weight statistics from the Gallup microdata using weights that we construct from the census, which adjust Gallup demographics to the year × region × education × race × sex × birth cohort level. (Birth cohorts are defined as described later in the paper.) We weight statistics from the November CPS, General Social Survey, and American National Election Studies using survey-provided weights. All weights are re-normed so as to average to one within each survey-year.

The bold line in Figure 1 plots national voter turnout in presidential elections based on aggregation of state-level vote counts. We divide the number of votes cast in a presidential election nationally by an estimate of the total voting-age population in states with election returns.[2] We thus allow the denominator to include both

[2] The Twenty-Sixth Amendment extended the franchise to 18–20 year-olds in 1971. Thus, the voting-age population consists of persons aged 21 and older in elections through 1968 and persons aged 18 and older in 1972 and later.

men and women, even during the pre-1920 period when women were generally not eligible to vote in presidential elections. We also include noncitizens in the denominator, since a citizenship question was not consistently asked in the census from 1900 forward.

Some states granted women the right to vote in presidential elections prior to 1920: six states in 1912 and twelve states in 1916.[3] However, these states were concentrated in the sparsely populated West and therefore comprised a small share of the total population. If women voted at the same rate as men, women's suffrage should then have led to a near-doubling of voter turnout. Measured against this standard, women entered the electorate slowly. Between 1916 and 1920, voter turnout increased by only 35 percent, from 32.7 to 44.3 percent. However, over the next 20 years, voter turnout continued to increase basically unabated, reaching 59.8 percent in 1940.

The descriptive pattern from overall voting totals is consistent with other indirect methods. Using variation in the timing of state suffrage initiatives in addition to ratification of the Nineteenth Amendment, Kose, Kuka, and Shenhav (2019) find that women's suffrage increased voter turnout in the short term by 56 percent. Taking a Bayesian approach to data from ten states, Corder and Wolbrecht (2016) also find substantial, and generally shrinking, sex gaps in turnout across the five presidential elections from 1920 to 1936.

To describe the evolution of the female US voter in more detail, we turn to survey data. We provide an overview of the data here, with further details in a Data Appendix available with this paper at the journal website. Scholars of American politics interested in long-term trends in political behavior typically rely on data from the American National Election Studies or the General Social Survey. These surveys are detailed—and we will also use them—but have sample sizes of only around several thousand per election and start later than ideal for our purposes (1952 and 1972, respectively). To extend backward in time and obtain more data for the 1950s and 1960s, we turn to historical polling data collected by the Gallup Organization's American Institute of Public Opinion (AIPO). These data have been used on a limited but growing basis by economists (for example, Fogli and Veldkamp 2011; Kuziemko and Washington 2018; Farber et al. 2018). The standard question on voter participation first prompts respondents about whether they are certain they voted (few say no), then asks about candidate chosen. The Gallup data begin in 1936, but we start our series in 1940, the first year in which respondents are asked about their education.

[3]These included Washington, California, Idaho, Utah, Wyoming, and Colorado, each of which passed full suffrage by 1912; and Oregon, Arizona, Montana, Nevada, Kansas, and Illinois, which either passed full or presidential suffrage by 1916. See Kleppner (1982) and Corder and Wolbrecht (2016) for discussions of turnout in these early elections. An additional 16 states, including North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Minnesota, Iowa, Wisconsin, Michigan, Indiana, Ohio, Tennessee, New York, Rhode Island, and Maine, passed presidential or full suffrage prior to the adoption of the Nineteenth Amendment. See Teele (2018) for a mapping of the timing of these and other voting rights (like voting in primary elections) that were passed during this period.

With the addition of data from the November Voter Supplement of the Current Population Survey (CPS), starting in 1972, we have microdata on voting in presidential elections that span nearly 80 years: 1940 to 2016.[4] Focusing on Gallup polls conducted within two years after a given presidential election, we obtain sample sizes at least an order of magnitude higher than those available in the American National Election Studies and the General Social Survey. The November CPS similarly offers large samples that allow us to explore the drivers of trends in the sex gap in data-intensive ways.

Figure 1 includes national trends in voter turnout based on these four survey sources: Gallup polls, the American National Election Studies, the General Social Survey, and the November CPS. We use weights provided in the last three surveys to generate nationally representative statistics. For the Gallup data, we create weights from census microdata to adjust Gallup demographics to match the distribution of the population across cells defined by year, region, education, sex, and birth cohort. Weighting of the Gallup data is especially important because the sampling approach used by Gallup into the 1950s had a goal of representing the "engaged public," rather than the population at large (Berinsky 2006). Thus, the unweighted Gallup data in early years will underrepresent those with less education, the South, the nonwhite population, and women.[5]

Regardless of the survey source or year, self-reported voter turnout is consistently higher than the administrative measure—a well-known feature of self-reports of voting (for example, Bernstein, Chadha, and Montjoy 2001; Ansolabehere and Hersh 2012). The administrative and survey series nevertheless move together, suggesting that the survey data capture important margins of change in voter turnout from election to election. There are also less pronounced but still noticeable differences in levels of voter turnout across surveys. American National Election Studies and Gallup data consistently produce higher turnout estimates than the General Social Survey and November CPS. However, focusing on the *sex gap* in turnout—our measure of interest—will eliminate survey effects that are the same across sex. In addition, a recent validation study (Ansolabehere and Hersh 2012) suggests that women have similar levels of misreporting as men in the American National Election Studies.

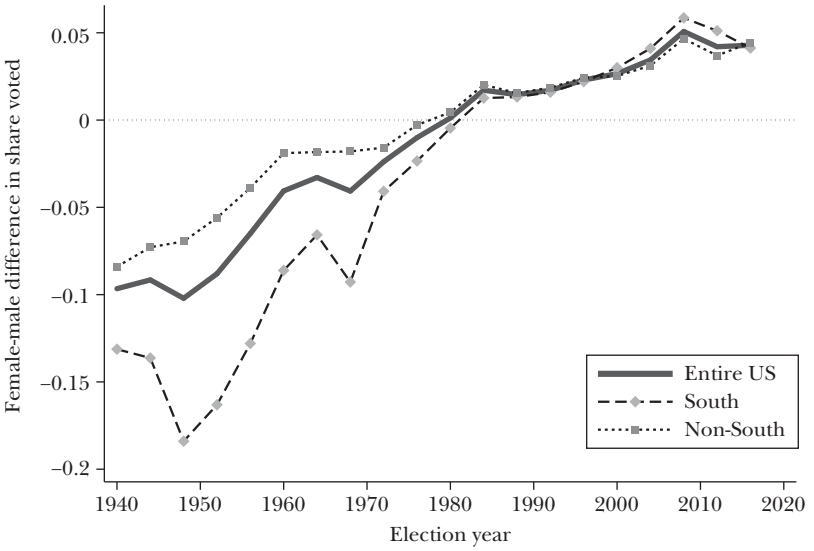
The Sex Gap in Participation

The solid line in Figure 2 plots the difference between female and male turnout combining data from our four survey sources. Overall, the figure shows a stunning story of change. While aggregate voter turnout varied from election to election, the sex gap in turnout was roughly constant at about 10 percentage points during the 1940s and 1950s. In other words, women were consistently about 10 percentage

[4] As we mentioned above, contemporaneous work by Wolbrecht and Corder (forthcoming) assembles a similar dataset to ours; however, while we pool together information from overlapping data sources to gain additional precision, Wolbrecht and Corder analyze each data source separately.

[5] Application of the weights tends to bring these characteristics in line with national averages, as shown in Appendix Figure 1. See online Data Appendix for a complete description of the weights and their creation.

Figure 2
Sex Gap in Voter Turnout, US Overall and by Region: Pooled Survey Data, 1940–2016



Source: Survey data pool the Gallup, November CPS, General Social Survey, and American National Election Studies series described in the notes to Figure 1.
Note: Statistics are weighted by survey-provided weights (for the CPS, General Social Survey, and American National Election Studies) or author-constructed weights (for Gallup), with all weights re-normed to average to one within each survey-year. More details are in the online data Appendix. The figure plots the difference in estimated voter turnout rates between women and men by year, nationally, and separately by region, with South representing the southern census region.

points less likely to vote than men. The gap dramatically narrowed thereafter, however, reaching about a 3 percentage point deficit for women in 1964. Though the gap re-expanded somewhat in 1968, women's voter turnout rates fell relatively less over the 1970s than men's, enough that women's and men's turnout basically reached parity by 1980. Women's voter turnout continued to gain in relative terms after 1980. In the last three presidential elections, women have been about 4 to 5 percentage points *more* likely to vote than men. Because women make up more than half of the voting-age population, they became the majority of voters earlier—in 1960, according to our data.

American women thus appear to have become increasingly comfortable exercising their right to vote. Is this pattern of convergence and eventual female dominance in political participation apparent in other metrics? Table 1 summarizes a series of political interest and mobilization variables available both in the 1950s and more recently in the American National Election Studies. The sex gap in some—but not all—of these measures shows a similar pattern as for voter turnout. For example, women on average used to care less about which party won an election and were less

Table 1

Trends in the Sex Gap in Voter Participation: Measures from the American National Election Studies

	1950s		*2010s*	
	Mean	*Sex gap*	*Mean*	*Sex gap*
A. Turnout				
Voted in last presidential election	0.735	–0.112	0.746	0.017
B. Political interest				
Cares a lot about which party wins presidential election	0.649	–0.047	0.813	0.000
Somewhat or very interested in elections	0.702	–0.064	0.844	–0.019
Very interested in elections	0.334	–0.073	0.443	–0.066
C. Mobilization				
Tried to influence someone's vote	0.278	–0.121	0.435	–0.041
Displayed candidate button/sticker during campaign	0.155	–0.060	0.139	–0.008
Donated money to party candidate during campaign	0.072	–0.031	0.120	–0.024
Attended political meetings/rallies during campaign	0.069	–0.020	0.063	–0.008
Worked for party or candidate during campaign	0.032	–0.011	0.033	–0.010

Source: Data are from the American National Election Studies (American National Election Studies).
Note: Data for the 1950s pertain to the 1952 and 1956 elections (with the exception of the variable "displayed candidate button/sticker during campaign," which is only available for 1956). Data for the 2010s pertain to the 2012 and 2016 elections. Statistics are weighted by American National Election Studies sampling weights. Sex gap is the female-male difference in the outcome.

interested in elections; they also used to be less likely to try to influence someone's vote or to display campaign paraphernalia. Sex differences in these attitudes and behaviors are now largely gone. However, sex gaps in rarer measures—being "very interested" in elections, making political donations, attending campaign rallies, and working for campaigns—have remained largely unchanged over time.

These findings thus seem to suggest a relatively dramatic narrowing of the sex gap in mass, but not extreme, political participation. At the same time, however, women's participation as elected officials—another extreme participation metric—*has* increased over time, though the sex gap still strongly favors men.[6] For example, nearly one-quarter of current members of the Senate and House of Representatives are women, compared to 10 percent following the 1992 election ("the year of the woman") and less than 3 percent in the early 1950s. These statistics closely track the increasing propensity of women to run in a congressional primary (Lawless and Pearson 2008).

[6]The persistence in this gap could reflect gender differences in preferences or in socialization around political careers. A recent survey of college students suggests that women are less likely to have political ambitions but are also less likely to have received parental encouragement to run for political office (Lawless and Fox 2013). See also Wasserman (2018), which shows that women are less likely to run again for political office after a loss.

Sex, Race, and Persistence of Limits on the Franchise after 1920

Not all women actually gained the franchise in 1920: in particular, black women in the South were largely excluded. Although black men were granted the right to vote after the Civil War via ratification of the Fifteenth Amendment, southern states subsequently designed a series of electoral devices—poll taxes and literacy tests at voter registration in particular—to disenfranchise them (Keyssar 2009; Valelly 2004). Historical evidence suggests that these devices similarly limited southern black women's entrée into voting booths in 1920; for example, voter turnout estimated as a ratio of votes cast to voting-age population shows a weak response to the Nineteenth Amendment in the South, relative to other regions like the Northeast and the Midwest. However, poll taxes were eliminated by a combination of state action and ratification of the Twenty-Fourth Amendment in January 1964, and literacy tests were removed via passage of the Voting Rights Act of 1965. Civil rights activism may have also helped register southern blacks and get them to the polls, even before structural barriers to participation were removed.[7]

How might this history have contributed to the evolution of the national sex gap in voter turnout? The answer to this question will depend on whether there were sex differences in the efficacy of both the disenfranchising measures and the remedies. Anti-suffragists in the South worried that it would be more difficult to use the tactics that had been applied to black men to staunch the vote of black women. One Mississippi senator said: "We are not afraid to maul a black man over the head if he dares to vote, but we can't treat women, even black women, that way" (as quoted in Keyssar 2009, 169). By this reasoning, southern black women would have been more likely to vote than southern black men, potentially narrowing the sex gap in turnout in the South relative to the rest of the country even early in the period. Contrary to this hypothesis, Figure 2 shows that the sex gap was actually much larger in 1940—and male-female convergence in voter turnout thereafter much more dramatic—in the southern census region. Further exploration of the data shows that the sex gap in voter turnout in the South from the 1940s through the early 1960s was roughly the same for whites and nonwhites, suggesting that forces that were unique to the region—but not necessarily to any particular race—contributed to the marked closure in the sex gap over this same period.

[7] See online Appendix Figure 2 for the time series of turnout by region. Voter turnout in the South did not converge to that in the rest of the country until after poll taxes and literacy tests were removed. See Cascio and Washington (2014) and Filer, Kenny, and Morton (1991) for causal evidence on this link using historical voting records and geographic variation in the black share of the population. We see similar patterns in our data, which affords us voting information by race (see online Appendix Figure 3).

Preferences over Policies and Parties

Background: Theory and Evidence

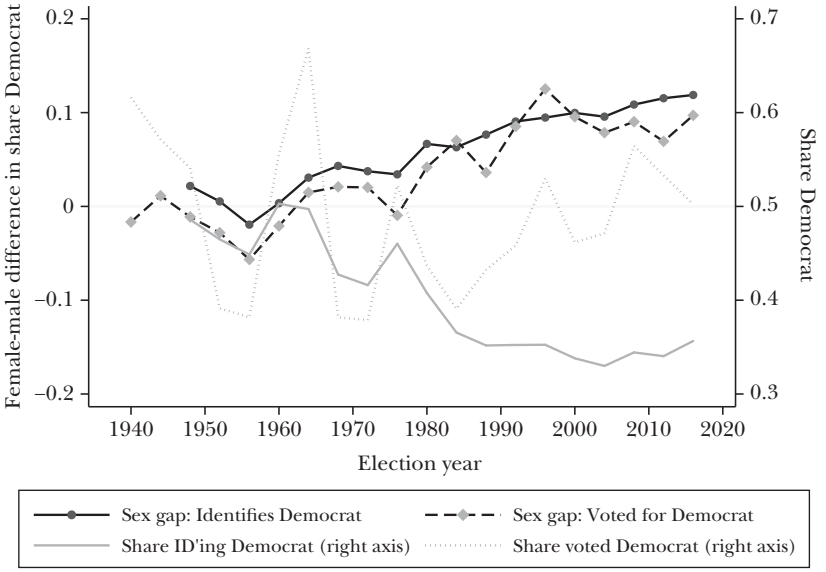
Over the past 80 years, women's political mobilization has not only steadily converged with men's, but has overtaken it. Does this mean that women have been increasingly influential for political outcomes over time? Theoretical models suggest that the implications of women's political participation for policy may depend on not just women's turnout and policy preferences relative to men's (Downs 1957; Cox and McCubbins 1986), but also the nature of political competition. If politicians are able to implement their preferred policies (Osborne and Slivinski 1996; Besley and Coate 1997), for example, having an impact on policy would require voting for candidates with shared ideology, which could be captured by party affiliation.

In the years leading up to and following passage of the Nineteenth Amendment, women had different issue preferences than men—valuing policies that benefited children and public health and welfare and more government spending—but not dramatically different party alignment. Studies using variation in the timing of state laws enabling women to vote in state and local elections prior to the Nineteenth Amendment find impacts on policy and real economic outcomes at the federal, state, and local levels that move toward women's preferences (Lott and Kenny 1999; Miller 2008; Moehling and Thomasson 2012; Carruthers and Wanamaker 2015; Kose, Kuka, and Shenhav 2019). However, Corder and Wolbrecht (2016) show that, in the first five presidential elections in which women could vote, their votes went toward parties much the same way as those of the men in their state. This seeming contradiction may be explained by the political environment: historically, the two major parties were not well sorted on the dimensions of public opinion along which men and women tend to differ systematically (Gillion, Ladd, and Meredith 2018). While this was particularly the case before the 1930s (Gerring 1998), our data suggest this pattern held as recently as the 1970s, as argued elsewhere by political scientists.

What has happened over the past 50 to 60 years? Literature from across the social sciences suggests that the sex gap in public opinion on various issues has been fairly stable in the face of dramatic social and cultural change (Shapiro and Mahajan 1986; DiMaggio, Evans, and Bryson 1996; Bolzendahl and Myers 2004; Clark 2017). And yet, the sex gap in party identification has not been stable: instead, there has been a dramatic relative shift of women toward the Democratic Party as men have increasingly been drawn toward the Republican Party (Kaufmann and Petrocik 1999; Edlund and Pande 2002; Box-Steffensmeier, De Boef, and Lin 2004; Gillion, Ladd, and Meredith 2018). Other advanced industrialized countries also experienced a relative shift of women toward more liberal political parties over the latter half of the twentieth century (Inglehart and Norris 2000).

In this section, we consider the evolution of the sex gap in party affiliation and in policy preferences, and then ask: how can the sex gap in party affiliation have widened without a change in the sex gap in preferences?

Figure 3
The Sex Gap in Democratic Partisanship: Pooled Survey Data, 1940–2016



Source: Microdata on Democratic Party identification are from the replication archive of Gillion, Ladd, and Meredith (2018) (for 1953–2012), Gallup polls spanning 1948–1952 and 2013–2017 that we collected from the Roper Center, the American National Election Studies Time Series Cumulative Data File (1948–2016), and the General Social Survey Cross-Sectional Cumulative Data 1972–2018 (Release 1). Microdata on voting for the Democratic presidential candidate are from Gallup polls spanning 1940–1970, the American National Election Studies Time Series Cumulative Data File (1948–2016), and the General Social Survey Cross-Sectional Cumulative Data 1972–2018 (Release 1).
Note: Statistics are weighted by survey-provided weights (for the General Social Survey and American National Election Studies) or author-constructed weights (for Gallup), with all weights re-normed to average out to one within each survey-year.

The Sex Gap in Party Affiliation

Our core analysis of the sex gap in party affiliation is based on polling microdata, primarily from the Gallup Organization, on party identification spanning from 1953 to 2012, generously provided by Gillion, Ladd, and Meredith (2018). For consistency with our study of the sex gap in voter turnout and in party of the candidate chosen, we limit attention to polls taken within two years after an election, summarizing these polls with an election-year average. Applying this constraint, we use Gallup data to extend the series both backward in time to the 1948 election and forward in time to the 2016 election (as described in the online Data Appendix).

Figure 3 shows national trends in the sex gaps in identification with the Democratic Party and, for comparison, in vote share for the Democratic candidate. Estimated population shares voting for the Democratic candidate and identifying

with the Democratic Party are shown for context (right axis).[8] The voting series is naturally punctuated by election years with Democratic victories, but overall, there is a clear reduction in Democratic Party identification between the 1960s and early 1980s, driven by political realignment in the South (Kuziemko and Washington 2018).

The figure shows that women have been increasingly more likely to affiliate with the Democratic Party—or rather, less likely to leave the Democratic Party (Kaufmann and Petrocik 1999)—than men. While a divergence in party preferences of American women and men emerged in the 1960s, it took off starting in the 1980s.[9] Following the 2016 election, women were almost 12 percentage points more likely than men to consider themselves Democrats, compared to a sex gap hovering around zero in the late 1940s and 1950s. Past work using the American National Election Studies (Kaufmann and Petrocik 1999), other polling data (Box-Steffensmeier, De Boef, and Lin 2004), or the same polling data used here but with different weighting (Gillion, Ladd, and Meredith 2018) has also documented an increasing partisan sex gap in the United States, though over shorter time horizons. While we focus on average gaps between men and women, recent work has shown that these gaps are often less pronounced among white voters than nonwhite voters (for example, Cassese and Barnes 2018).

The Sex Gap in Issue Preferences

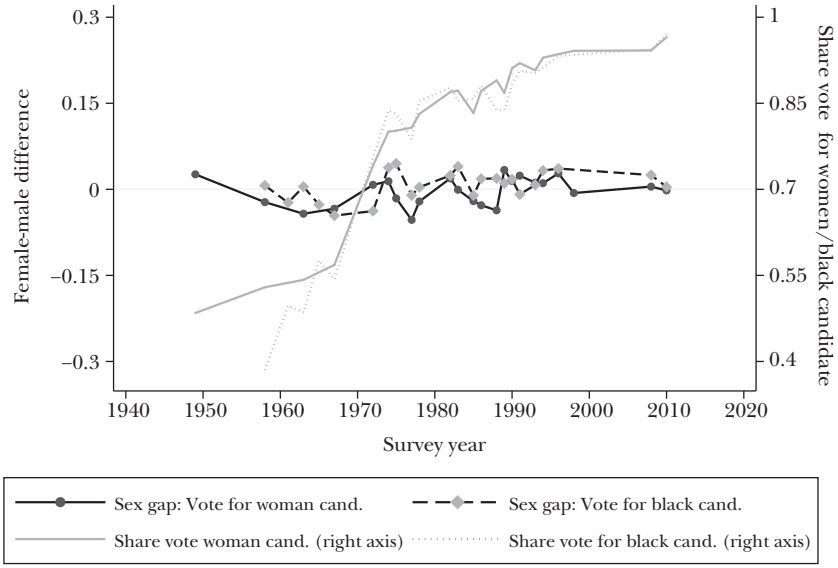
Political parties and political preferences do not necessarily align. There are no large-scale microdata asking consistent public opinion questions over the same time frame as represented in Figure 3. However, every few years starting in the 1940s, Gallup polls fielded questions concerning traits of hypothetical presidential candidates: for example, whether one would vote for a qualified woman if she were the nominee of one's party (starting in 1949), or for a qualified black man (starting in 1958). To these data, we add responses to a similar set of questions from the General Social Survey in more recent years (until 2010). The answers provide some insight into both the magnitude of social change over the period of interest and sex differences in reactions to it.

Even if the answers only represented changes in social desirability bias, the scope of social change represented in Figure 4 is breathtaking: the share of the population stating they are willing to vote for a female president rose from 47 percent in 1949 to 96 percent in 2010. Growth in the share of the population willing to vote

[8] National statistics on Democratic vote share from Gallup, General Social Survey and American National Election Studies data map fairly well to statistics based on historical voting records, though survey reports tend to favor the winning candidate, as shown in online Appendix Figure 4. Again, to the extent that this tendency is the same across sex, survey-based measures of the sex gap in partisanship should be representative.

[9] Online Appendix Figure 5 shows the parallel series for the Republican Party. Men are now more likely to identify as Republicans than women. However, unlike in the Democratic case, the population share identifying as Republicans is not that different today than in 1948. Unlike in the case of voter turnout, moreover, there are no significant regional differences in trends in the sex gap in Democratic Party identification, as shown in online Appendix Figure 6.

Figure 4
Sex Gap in Political Opinion: Preferences over Presidents, Pooled Survey Data, 1948–2010



Source: Microdata are from Gallup polls (1948–1969) and the General Social Survey Cross-Sectional Cumulative Data 1972–2018 (Release 1).
Note: Statistics are weighted by survey-provided weights (for the General Social Survey) or author-constructed weights (for Gallup), with weights re-normed to average to one within each survey-year.

for a black president has been even more striking, rising from 38 percent in 1958 to 97 percent in 2010. Yet the sex gaps in both measures have bounced around zero, showing no clear trend; indeed, men have more often than not exhibited *greater* support for the idea of a female president. This is consistent with existing evidence that suggests that women have historically not used the franchise to advance their own political or economic interests as a sex.

Table 2 presents a mixed pattern of changes in the sex gap in views on various policy topics reported in the General Social Survey from 1977 to 1986 and 2007 to 2016, the earliest and latest ten-year spans with consistent responses to our questions of interest. We summarize responses to 25 preference elicitations with seven indices, which are calculated as the mean of responses in a particular area (coded such that higher values always indicate more progressive views).[10]

[10] These questions and groupings strongly overlap with the questions and categories in DiMaggio, Evans, and Bryson (1996). Not all questions are asked in all years, but all of the questions in the indices appear both in the early and later periods (see online Appendix Table 1). Additional survey evidence from the American National Election Studies broadly confirms the patterns discussed here, in some cases with polls reaching back to the 1950s and 1960s (for results and details, see online Appendix Table 2).

Table 2

Trends in the Sex Gap in Issue Preferences: Evidence from the General Social Survey

	1977–1986		*2007–2016*	
	Mean	*Sex gap*	*Mean*	*Sex gap*
Voted in last presidential election	0.701	–0.009	0.698	0.024
Identifies as a Democrat	0.388	0.050	0.325	0.072
Voted for Democrat in last presidential election	0.418	0.047	0.554	0.112
Sexuality Attitudes Index	***0.281***	***–0.066***	***0.512***	***0.022***
Homosexual relations not wrong	0.137	–0.004	0.457	0.097
Okay to have sex before marriage	0.392	–0.112	0.569	–0.048
Criminal Justice Index	***0.277***	***0.069***	***0.376***	***0.049***
Courts too harsh	0.032	–0.007	0.162	–0.039
Should need gun permit	0.723	0.125	0.737	0.110
Oppose death penalty for murder	0.248	0.100	0.351	0.088
Abortion Attitude Index	***0.646***	***–0.024***	***0.613***	***–0.033***
Abortion if serious defect	0.816	–0.013	0.739	–0.032
Abortion if married + don't want more	0.428	–0.040	0.458	–0.048
Abortion if mom health at risk	0.904	–0.022	0.879	–0.010
Abortion if very poor	0.475	–0.019	0.440	–0.023
Abortion if pregnant from rape	0.829	–0.022	0.772	–0.044
Abortion if single + don't want to marry	0.437	–0.027	0.417	–0.025
Women's Public Roles Index	***0.710***	***0.007***	***0.791***	***0.032***
Disagree women not suited to politics	0.565	0.018	0.751	0.041
Vote woman president	0.842	–0.020	0.951	0.003
Family Gender Roles Index	***0.481***	***0.097***	***0.697***	***0.099***
Disagree woman should stay home	0.453	0.043	0.676	0.050
Agree mom working doesn't hurt kids	0.574	0.133	0.743	0.122
Disagree pre-K kids suffer if mom works	0.419	0.121	0.676	0.128
Progressive Government Index	***0.307***	***0.026***	***0.323***	***0.029***
Govt. should help poor	0.311	0.022	0.301	0.035
Govt. should help sick	0.466	–0.006	0.478	0.043
Govt. should help blacks	0.181	–0.001	0.189	0.009
Govt. should equalize wealth	0.306	0.035	0.321	0.030
Race Equality Index	***0.533***	***0.022***	***0.569***	***0.026***
Race gap not due to ability	0.780	0.041	0.905	–0.007
Race gap due to access	0.524	0.003	0.463	0.023
Race gap not due to motivation	0.390	0.023	0.526	0.026
Race gap due to discrimination	0.437	0.027	0.372	0.056

Source: Data are from the General Social Survey (General Social Survey).
Note: Statistics are weighted by General Social Survey sampling weights. The years in the column headers refer to survey years for preferences and election years for voting outcomes. For voting outcomes shown in the first two rows of the table, we also include the 2018 General Social Survey in which individuals report on voting behavior in the 2016 election. Sex gap is the female-male difference in the outcome.

In the earliest decade, 70 percent of respondents reported voting in the last election, with an immaterial gap across sexes; and 39 and 42 percent reported identifying with or voting for a Democrat, with a 5 percentage point sex gap favoring women. The sex gap in issue preferences varied in size and direction. The largest absolute sex gaps were in sexuality attitudes, where women espoused more conservative views (owing to less approval of premarital sex), and in the criminal justice and family gender roles index, where women were more progressive. There were somewhat smaller gaps in abortion attitudes and in the progressive government and race equality indices and opinions on the women's public roles index.

Over the next four decades of the survey, women's voting rates and propensity to identify or vote for a Democrat increased relative to men's by 3, 2, and 7 percentage points, respectively. In terms of preferences, we find a striking increase in the gap in the sexual attitudes index (9 percentage points), which includes more favorable views towards the gay community (Fernández, Parsa, and Viarengo 2019) as well as towards premarital sex. But otherwise, the changes are minor, with inconsistent signs. To a limited degree, women have become relatively more supportive of women's public roles and less supportive of reform of the criminal justice system. We do not see any meaningful change in relative views towards abortion, racial equality, support for government services (although women's relative support for government services to the sick does rise), or perceptions of the role of women as mothers first. These results align with previous research over somewhat shorter time horizons showing little movement in the sex gap in policy preferences (Clark 2017; DiMaggio, Evans, and Bryson 1996).

Party Polarization as Reconciliation

How can the sex gap in party affiliations have widened without an underlying change in preferences? Gillion, Ladd, and Meredith (2018) posit that the rise in Democratic identification among women since the 1970s represents a change in *sorting* across political parties, influenced by the increasing party polarization, driven by elites, and by growing public awareness of that polarization (Carsey and Layman 2006). In support of this hypothesis, they show in data from the American National Election Studies that the gender partisan gap is larger among those who are college-educated and more aware of the polarization across parties. They also show that the weight placed on social welfare and other preferences in the partisan identification decision has increased. Thus, they argue that (1) more educated groups would be in the best position to sort into political parties based on each party's current positions, and (2) changes in these issue weights would be predicted to induce a larger response by women, given existing gaps in preferences.

In a similar spirit, we turn to the General Social Survey to investigate the scope of changes in polarization over this period and their relevance for the sex gap in partisanship. In particular, we examine the total change in the gap in policy preferences between individuals that identify as Democrats and Republicans ("party gap"), within and across sexes. This reduced-form approach is purely descriptive, but provides a transparent look into these patterns over time in a wide variety of

Table 3

Trends in Party Polarization within and across Sex: Measures from the General Social Survey

	1977–1986		*2007–2016*	
	Dems.	*Party gap*	*Dems.*	*Party gap*
A. Women				
Voted in last presidential election	0.723	–0.079	0.824	–0.022
Voted for Democrat in last presidential election	0.739	0.660	0.944	0.839
Sexuality attitudes index	0.257	0.068	0.581	0.217
Criminal justice index	0.330	0.075	0.479	0.210
Abortion attitude index	0.628	–0.021	0.681	0.213
Women's public roles index	0.721	0.073	0.847	0.104
Family gender roles index	0.524	0.030	0.786	0.096
Progressive government index	0.403	0.214	0.464	0.319
Race equality index	0.551	0.051	0.644	0.144
B. Men				
Voted in last presidential election	0.734	–0.078	0.770	–0.060
Voted for Democrat in last presidential election	0.736	0.681	0.912	0.837
Sexuality attitudes index	0.313	0.057	0.539	0.147
Criminal justice index	0.263	0.065	0.440	0.225
Abortion attitude index	0.641	–0.029	0.679	0.139
Women's public roles index	0.687	0.018	0.813	0.097
Family gender roles index	0.399	–0.006	0.680	0.081
Progressive government index	0.381	0.189	0.450	0.321
Race equality index	0.505	0.008	0.617	0.145

Source: Data are from the General Social Survey (General Social Survey).
Note: Statistics are weighted by General Social Survey sampling weights. The years in the column headers refer to survey years for preferences and election years for voting outcomes. "Dems." refers to individuals that report identifying as a Democrat, strongly or not strongly. "Party gap" is the difference between views of those that identify as Democrats and those that identify as Republicans (strongly or not strongly).

domains. Our calculations exclude independents (which have been increasing over this time period), but we find similar patterns when we include independents who lean towards either Democrats or Republicans.

Table 3 shows that the party gap in attitudes has grown significantly in every domain for both men and women. For example, in the 1970s, the party gap in the abortion attitude index for both sexes hovered around 2 percentage points, while in the 2010s the party gap grew to 21 and 14 percentage points for women and men, respectively. The party gap in attitudes towards sexuality similarly increased more for women. On both of these issues, a substantial 22 percentage point chasm has opened across Democratic and Republican women, compared with a 15 percentage point gap for men. On other issues, women and men have essentially converged to the same party gap, which now stands at two to three times the level of the 1970s.

Particularly striking are the 20 and 30 percentage point party gaps in the criminal justice and progressive government indices, respectively.

It thus appears that the profile of the Democratic and Republican voter, regardless of sex, is quite distinct from the past. This provides suggestive evidence in line with the hypothesis in Gillion, Ladd, and Meredith (2018) that changes in party sorting across sexes can reconcile the trends in the partisan sex gap and preferences that we observe.

Drivers of Sex Gaps and the Growing Political Influence of Women

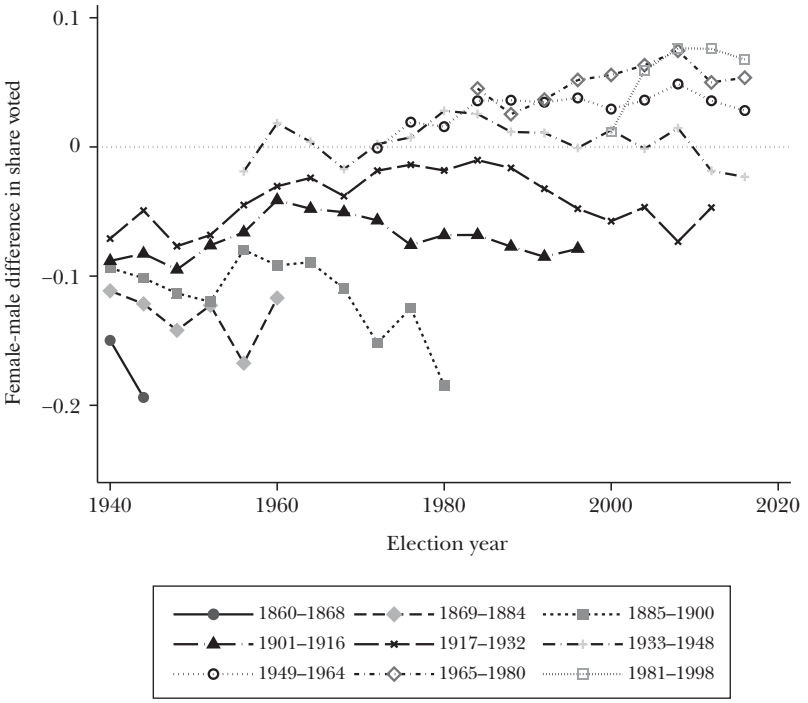
The findings thus far suggest that women are a much stronger political force today than they were immediately after adoption of the Nineteenth Amendment. Relative to men, women are now more likely to vote and more likely to identify as Democrats. What forces have generated the large observed changes in relative female mobilization and partisanship? Stronger partisans show up more reliably at the polls (Gerber, Huber, and Washington 2010). But this need not mean that the trends in the sex gaps in voter turnout and party identification shown in Figures 2 and 3 have the same root causes.

Cohort and Time Effects

For an exploratory analysis, we categorize potential forces changing the sex gap into two mutually exclusive groups: *cohort effects* that are constant across the life span of a given cohort, defined as a group of individuals born at roughly the same time, and *time effects* that affect individuals of all ages observed at the same time in the same way. With regard to cohort effects, experiences in early life may socialize women and men differently into (or away from) voting, and perhaps a later-life experience at the polls (or elsewhere) reinforces this early-life socialization (Gerber, Green, and Shachar 2003; Coppock and Green 2016; Fujiwara, Meng, and Vogl 2016). With regard to time effects, changes in society or in the policy stances that define parties may attract women of all ages.

Figures 5 and 6 show time trends in the sex gap in voter turnout and Democratic Party identification, respectively, separately by cohort. We group birth years into nine roughly 16-year cohorts that have a large degree of overlap with generations studied by demographers. These include individuals who would have been children when the Nineteenth Amendment was ratified, born between 1901 and 1916 (roughly the first half of the "Greatest Generation"), and individuals who would have been the youngest eligible voters in 1920, born between 1885 and 1900 (the "Lost Generation"). We also include two earlier cohorts comprised of individuals who would have been exposed to the Nineteenth Amendment at midlife (born between 1869 and 1884) or older (born between 1860 and 1868). Generations since the Nineteenth Amendment include individuals born between 1917 and 1933 (the second half of the Greatest Generation), 1933 and 1948 (the Silent Generation), 1949 and 1964 (Baby Boomers), 1965 and 1980 (Generation X), and 1981 and 1998 (Millennials).

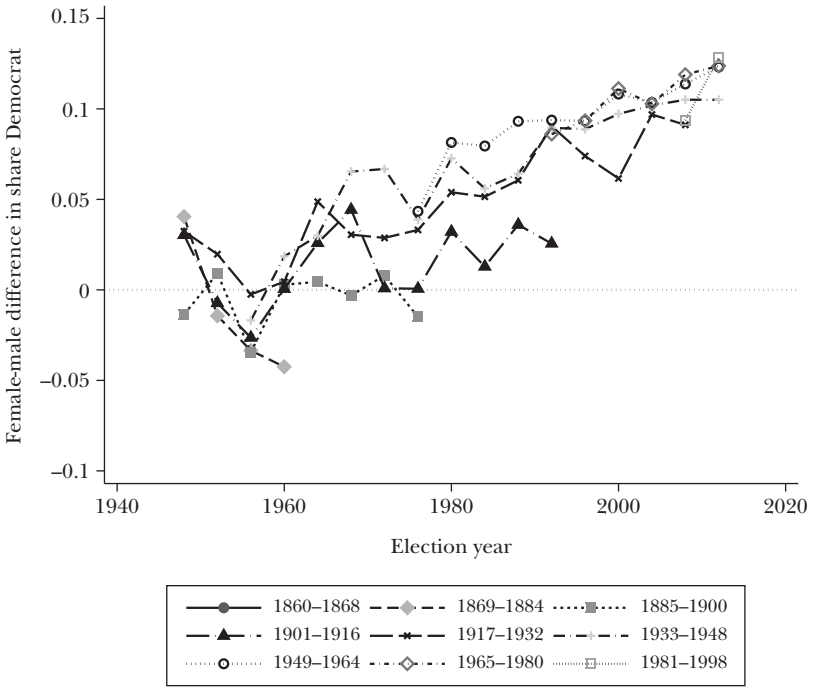
Figure 5
The Sex Gap in Voter Turnout by Cohort: Pooled Survey Data, 1940–2016



Source: Survey data pool the Gallup, November CPS, General Social Survey, and American National Election Studies series described in the notes to Figure 1.
Note: Statistics are weighted by survey-provided weights (for the CPS, General Social Survey, and American National Election Studies) or author-constructed weights (for Gallup), with all weights renormed to average to one within each survey-year. The figure plots the difference in estimated voter turnout rates between women and men by year and cohort. We omit cells based on small sample sizes (<150 observations per sex) to reduce noise.

The patterns of Figures 5 and 6 suggest, consistent with our earlier discussion, that cohort effects have been more important for the evolution of the sex gap in voter turnout and time effects more important for the evolution of the sex gap in party identification. While the cohort-specific time trends shown in Figure 5 are not literally flat (which is what a completely pure cohort effect would look like), younger generations typically show more positive sex gaps in turnout in every year. In addition, differences in the sex gap are on average greater across earlier cohorts than later ones, which corresponds with how the sex gap in turnout shrinks at a faster pace over earlier years of our sample period. In earlier research, Prior (2010) also shows that political mobilization is remarkably stable over the life cycle, using individual panel data. Also consistent with these findings, Firebaugh and Chen (1995) show that there is an especially large sex gap in voter turnout for the earliest cohort observable in data from the American National Election Studies.

Figure 6
Sex Gap in Democratic Party Identification by Cohort: Pooled Survey Data, 1948–2016



Source: Survey data pool the Gallup, General Social Survey, and American National Election Studies series described in the notes to Figure 3.
Note: Statistics are weighted by survey-provided weights (for the General Social Survey and American National Election Studies) or author-constructed weights (for Gallup), with all weights re-normed to average to one within each survey-year. The figure plots the difference in estimated rates of identification with the Democratic Party between women and men by year and cohort. We omit cells based on small sample sizes (<150 observations per sex) to reduce noise; for this reason, no observations from the earliest cohort are shown.

In contrast, the pattern in Figure 6 is better interpreted as a time-effect pattern, in which the sex gap in Democratic Party identification rises over time within each cohort. The result is smaller cross-cohort differences in the sex gap at a given point in time and a strong common upward trajectory. A regression analysis of data collapsed to the cohort-by-election year-by-state level confirms that cohort effects essentially completely explain the time trend in the sex gap in voter turnout but explain little of the time trend in the sex gap in Democratic Party identification.[11]

[11] The geographic unit to which we collapse is actually the single states and groups of states (27 total) identified in the 1976 November CPS. We omit the General Social Survey from this portion of the analysis, due to lack of information on state of residence in the public-use data. We regressed sex-by-cohort-by-state

Can the Cohort Effects Be Explained?

The relative contributions of cohort and time effects for these outcomes map to different sets of potential causal mechanisms for the evolution of sex gaps in voting behavior. Above, we presented evidence consistent with the inter-decadal growth in relative Democratic Party identification among women that cannot be explained by generational replacement: women of all ages have moved toward the Democrats as the two major parties have become increasingly divided on issues that women tend to care about. On the other hand, the growth in women's relative turnout appears to be largely explained by generational replacement. In this section, we consider the relevance of several cohort-varying factors for these findings.

Because our data are stratified by state, we can assess the explanatory power of both observed and unobserved factors that vary across cohorts. This is important, because some factors potentially contributing to cohort effects, like the "norms against [women's] political engagement" (Corder and Wolbrecht 2016, 14), will be difficult to quantify. On the other hand, other potentially important cohort-specific factors can be measured. We initially focused on educational attainment, employment rates, and divorce because they have been identified as important determinants of political behavior in prior research.[12] But because our central finding was that changes in the sex gap in turnout across cohorts tracked gains in education, we focus on the attainment results here. Even so, our findings should not be interpreted causally. We have used the extant variation, not exogenous variation, in educational attainment across cohorts and states, which may be correlated with other, unobserved state-by-cohort factors.

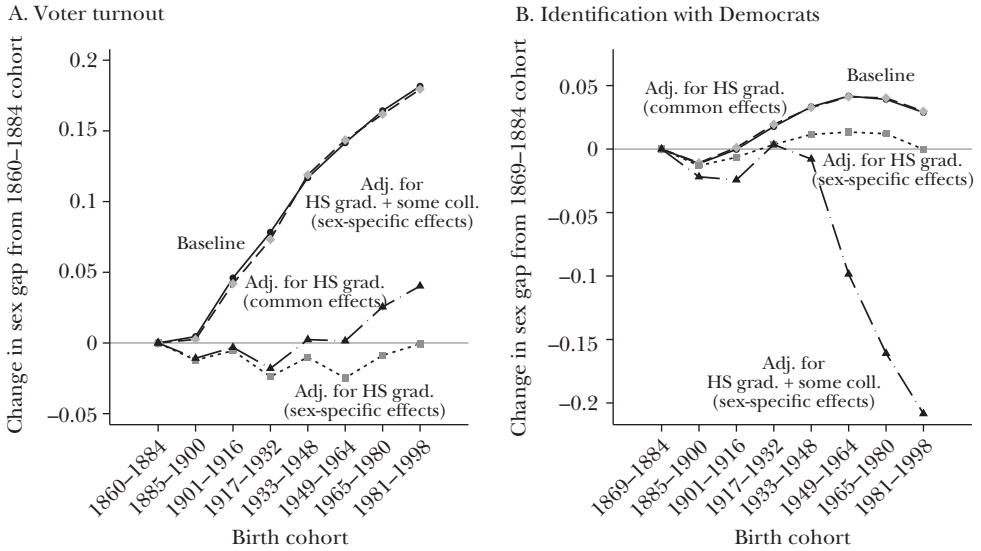
Baseline cohort effects in the sex gap in voter turnout, represented as an across-cohort change relative to the earliest two cohorts combined, are shown with the solid line in the first panel of Figure 7. For all cohorts beyond the first, these changes are significant both statistically and in magnitude. For example, the sex gap in turnout has been about 14 percentage points more favorable to Baby Boomer women than it was to women born roughly a century before.

To examine the role of rising levels of education in these patterns, we begin by introducing state-by-cohort-by-sex controls for high school completion as of age 25, estimated from the census and American Community Survey. Because cross-cohort gains in high school were similar by sex, we do not expect this to have much explanatory power, and in fact, we see little impact on our estimated cohort effects in panel A of Figure 7. Next, we allow for changes in high school completion to have different effects by sex, thus allowing for the realistic possibility that education

group-by-year outcomes on decade indicators interacted with a female indicator in a model including fixed effects for sex, decade, state group, and sex-by-state group. Online Appendix Figure 7 shows what happens to the coefficients on the decade-by-female interaction terms with the addition of cohort and cohort-by-sex fixed effects to this model. For details and further explication of the regression, see the online Appendix available with this paper at the *JEP* website.

[12] For example, divorce and economic vulnerability have been linked to the rising sex gap in Democratic Party identification in the United States (Edlund and Pande 2002; Box-Steffensmeier, De Boef, and Lin 2004).

Figure 7
Educational Attainment and the Cohort Effects in Voting Sex Gaps



Note: The figures plot coefficients from regressions where the dependent variable is voter turnout (panel A) or the rate of Democratic Party identification (panel B) at the election year × cohort × sex × state group level. All regressions are weighted by the number of observations used to construct the dependent variable. The solid line ("baseline") plots the change in the sex gap in the outcome from the initial birth cohort (1860–1884 in panel A and 1869-1884 in panel B), or coefficients on the interaction between a female dummy and cohort indicators from a version of the regression described in the online data Appendix that also includes cohort fixed effects. Other lines show what would have happened to the sex gap in voter turnout across cohorts holding constant high school graduation and some college completion. Throughout, the sex gap is the female-male difference in the outcome.

could have a different impact on women's political participation. Because the positive association between high school completion and lifetime political mobilization is significantly stronger for women than for men, much of the unobserved cohort effects in the sex gap in turnout fades away.[13] Although women born in the mid-1950s and later have been more likely to attend and complete college than their male counterparts (Goldin, Katz, and Kuziemko 2006), adjusting for college attendance by age 25 offers little additional explanatory power, given the comparatively weak association between college attendance and turnout in our data.[14]

Thus, the rise in educational attainment—or, perhaps, other correlated outcomes—appears to explain the changes in the sex gap in voter turnout across

[13]The association in our data for women is similar to that found by Milligan, Moretti, and Oreopoulos (2004) for the population overall exploiting variation in completion from compulsory schooling and child labor laws early in the twentieth century.
[14]We added each variable directly and interacted with a female indicator to the model outlined in footnote 11. For detailed regression findings, see online Appendix Table 3.

cohorts; adding sex-specific effects of high school completion in particular to the model lowers and renders statistically insignificant the contribution of unobserved cohort-specific factors. The change is especially noticeable for cohorts born in the first half of the twentieth century, for whom changes in high school completion were particularly dramatic even if similar across sex. The sizable sex difference in the association between high school completion and turnout in our data could be explained by the particular role that education plays in women's lives, such as through reductions in fertility, or through other factors coinciding with the high school movement—such as advancement of social norms—that could have pushed women's voter participation up more than men's.

The solid line in the other panel of Figure 7 shows the baseline, essentially negligible cohort effects in the sex gap in Democratic Party identification, consistent with Figure 6. Though not associated with turnout in our data, college attendance is positively associated with increases in Democratic partisanship and more so for women. Because of the divergence of women's college attendance rates from men's across recent cohorts, holding constant college attendance thus *generates* some unexplained cohort effects. As shown in the figure, in the absence of rising college attendance, Baby Boomer, Gen-X, and Millennial women would have actually been *less* likely to identify with the Democratic Party.

Taken as a whole, these descriptive findings suggest that each successive generation of women has been more politically mobilized than her predecessors, with educational attainment playing an important role. However, this is only a descriptive exercise that would be useful to revisit.

Conclusion

The female voter has come a long way since the passage of the first suffrage laws at the turn of the century and since the passage of the Nineteenth Amendment in 1920 extended the franchise (at least in principle) to women nationwide. We trace the evolution of the sex gap in voter turnout and partisanship over the last 80 years using a novel dataset of voter surveys. We find that women closed a 10 percentage point gap in voter turnout over the 40 years from 1940 to 1980 and over the next 40 years from 1980 to present gained more than a 4 percentage point advantage in turnout over men. Additionally, while women and men had similar patterns of party support in 1940, over the last half-century, a 12 percentage point sex gap has emerged in the probability of women and men identifying with the Democratic Party.

What accounts for these changes? We argue that the relative rise in women's turnout is largely explained by the replacement of older, low-participation cohorts with younger, high-participation cohorts. Descriptively, we find that these cohort effects are associated with women's differential response to increasing rates of high school graduation, with less explanatory power for rising rates of college attendance. In contrast, the rise in women's support for Democrats appears to have been

common to all cohorts. At least since the 1970s, this seems to be best explained by the trend towards greater polarization of political parties, as we find little evidence of any change in the gap in policy preferences across men and women.

Many gaps remain in analyzing the causes and consequences of this century of political progress for women. First, what are the causal factors behind the large rise in women's voter turnout across cohorts? To the best of our knowledge, there is no research providing a credible analysis of the link between the increase in voter participation that we have documented and the significant advances made by women across cohorts—in educational attainment, economic opportunities, and access to contraceptive technology, to name a few—despite the fact that these changes appear to have occurred simultaneously. Our descriptive analyses suggest that rising education may have the most explanatory power, but a more rigorous design may yield different results. Second, in what ways have the rise in women's voter participation and greater identification with the Democratic Party affected modern policy outcomes? In addition to clarifying the process of political change for women, providing answers to these questions may also provide broader insights into the process of acquiring political capital for newly enfranchised groups.

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