

The Political Geography of the Gender Gap

Dawn Langan Teele[‡]

Abstract

This paper leverages fine grained municipal level data from Sweden, including turnout figures separated by sex, to examine the political geography of the gender gap. Prominent arguments about the “traditional” gender gap claim that early on, women turned out at low rates and voted for conservative parties. Instead, I argue that when parties have clear geographic strongholds, gender gaps depend on population demographics and the mobilization of men and women in a given election. Using the computational method of bounds to estimate women’s vote choice, I find that women in cities and large municipalities were much more supportive of the left than women in the countryside after suffrage. At the national level, high turnout among women in more populous municipalities drove the majority of women to support the left. These findings demonstrate that the partisan gender gap is not only a feature of gender, but also produced by electoral geography.

Keywords: gender gap, turnout, electoral geography, suffrage, historical political economy, Sweden

*SNF Agora Institute Associate Professor, Johns Hopkins University, ORCID:0000-0003-3079-3083

[‡]Author contact: teele.academic@gmail.com. I gratefully acknowledge the support of the Norwegian Research Council grants 316340 and 314079. Replication files are available in the JOP Data Archive on Dataverse (doi.org/10.7910/DVN/VZURJ6). The empirical analysis has been successfully replicated by the JOP replication analyst.

Gendered differences in political behavior are an intriguing and widely studied aspect of public life. A now massive body of research in both comparative and American politics has asked whether, when, and why differences exist between women and men in mass political participation; partisan identification; public policy preferences; political attitudes; electoral engagement; political ambition; and descriptive representation.¹ In the realm of political behavior, one of the most prominent ideas holds that until the 1980s, politics was characterized by a “traditional” gender gap in which women turned out at low rates and voted for conservative parties.² Instead, I argue that partisan gender gaps are distinctive products of electoral geography and the demographics of turnout: when parties have clear geographic strongholds, gender gaps can wax or wane depending on the distribution of populations across those spaces and the mobilization of men and women during a given electoral cycle. Using fine-grained historical electoral data from Sweden, I show that the geography of competition, wherein left parties had strong support in larger municipalities and in cities, combined with high numbers of women and higher relative turnout in cities, drove a majority of women to support the left.

Public speculation and social scientific research about gender gaps emerged as soon as women entered the voting public, but the difficulty of making inferences about groups’ political loyalty from aggregate electoral outcomes bedeviled even sophisticated analysts for generations.³ New methodological tools and the turn toward historical political economy

¹*Participation*: Burns Schlozman and Verba 1995, Desposato and Norrander 2009, Prillaman 2017; *Partisanship*: Barnes and Cassese 2016, Edlund and Pande 2002, Junn and Masuoka 2020, Norris 1998; *Attitudes*: Bush and Clayton 2022, Emmenegger and Mannow 2014, Shorrocks 2018; *Ambition*: Bernhard, Shames and Teele 2021, Thomsen and King 2019; *Representation*: Brulé and Gaikwad 2021, Dassonneville and McAllister 2018, Iversen and Rosenbluth 2006, Teele, Kalla and Rosenbluth 2018.

²Duverger 1955, Inglehart and Norris 2001, Tingsten 1937. Today, in most context women turn out at higher rates than men and vote more frequently for the left (Shorrocks 2018, Stauffer and Fraga 2022, Edlund and Pande 2002).

³Mueller (1988: 17) argues that the “gender gap” did not emerge as a concept until the 1970s, when polling first made it possible to differentiate between men’s and women’s preferences. It should be noted,

have brought renewed attention to the crucial question of how women voted in the past, with scholars arguing that women’s turnout varied with the institutional context (Kim 2019, Skorge 2021) and the landscape of political competition (Teele 2022), and that women’s votes often fell with the locally dominant political party (Corder and Wolbrecht 2016). Here, I build on these insights, and research on political geography (Jusko 2017, Johnston and Pattie 2006, Rickard 2020, Rodden 2019, Xu 2023), to argue that variation in women’s political participation and vote choice, and the gaps between men and women, is driven by political geography even more than gender.

Many countries in Europe tallied turnout separately for men and women, so examining the link between geography and participation is straightforward. Deciphering the preferences of the first women voters, on the other hand, is tricky. In the absence of exit polls, public opinion surveys, or gender segregated voting procedures, we have little idea about whether, where, and how, women’s choices differed within countries. For this reason, most of our knowledge about women’s political behavior outside of the United States begins in 1960 and aims at understanding trends in women’s preferences at the national level (e.g. Inglehart and Norris 2000, Shorrocks 2018). But even if polls and surveys existed for the early twentieth century, the necessarily small sample sizes mean that without making unrealistic assumptions about sampling processes (Enos 2016, Lewin et al. 1972: 21, Johnston and Pattie 2006), we often struggle to identify differences in women’s voting patterns across contexts *within* countries.⁴ When it comes to studying historical political behavior, surveys are better poised

though, that the concept of the gender “cleavage” motivated some of the very first papers on women’s political behavior: in the US (Rice and Willey 1924, Ogburn and Goltra 1919), Germany (Bremme 1956), Italy (Dogan 1959) and comparatively (Duverger 1955, and Tingsten 1937), scholars used election returns to try to understand men’s and women’s turnout and vote choice just after suffrage.

⁴To be sure, the use of hierarchical modeling techniques with survey data has allowed scholars to examine the circumstantial correlates of women’s political choices (Desposato and Norrander 2009, Emmenegger and Manow 2014, Iversen and Rosenbluth 2006), and research on developing countries is producing new insights into the structural factors that influence women’s political behavior using household surveys (Brulé and

to establish intergenerational differences in political preferences across birth cohorts than to disentangle differences between women within countries (Carpenter et al. 2018; Shorrocks 2018).

This article circumvents the limitations of national aggregate data and survey research by leveraging fine-grained municipal level electoral data on gender and participation from Sweden in the early twentieth century. Sweden, a PR country that enfranchised women in 1921, just one year after the United States passed the Nineteenth amendment, has long been of interest to gender scholars because of its high performance on many contemporary indicators of gender equality (e.g. Dahlerup 1988, Iversen and Rosenbluth 2006: 11, O’Brien and Rickne 2016, Sainsbury 2001). Empirically, Sweden is a compelling study site because the rise of Social Democracy just after suffrage make it the most likely place to challenge the traditional gender gap hypothesis.⁵ It is also one of the few countries in the world that tallied turnout separately by sex for all of its more than 2500 municipalities.⁶ Gender separated turnout data allows us to understand the true participatory behavior of men and women across the country from 1921 onward. What is more, since most ecological inference techniques that predict partisan vote choice also require an estimation of turnout, the existence of gender separated turnout data allows us to sidestep one set of estimates.⁷ Armed with Sweden’s fine-grained information about gendered turnout, I make use of the simple and transparent “method of bounds” to estimate gendered patterns of voting across geographic space in order to examine the likely vote choices of the first women to cast ballots.

Gaikwad 2021; Prillaman 2020), but sampling methods were very crude until after WWII (Igo 2007).

⁵On the rise of Social Democracy see Berman 1998, Jusko 2017, Sejersted 2011.

⁶For national elections, other countries include Finland, Norway, Chile, Argentina, Denmark (1918 election only), Japan, Australia, New Zealand, Austria and parts of Germany. See Teele 2022.

⁷By way of comparison, in their careful 10-state study of US women’s voting patterns, Corder and Wolbrecht (2016: 93) have to estimate gendered turnout and gendered vote choices. Their largest number of observations comes from Massachusetts, which has 346 minor civil divisions, with average district size of 6,482 voters.

Several striking findings emerge. First, my data show heightened mobilization of women in the cities vis-à-vis women in the countryside. Second, although men participated at higher rates than women in most municipalities, the data reveal that women's rates of participation surpassed men's in a number of locales. Third, even with lower average rates of participation, I find that women cast the majority of ballots from the very first election in which they voted in cities. Finally, in terms of vote choice, my most conservative estimates suggest that urban women were between 13 and 17 points more supportive of the left than rural women. At the national level, I estimate a lower bound of leftist support among rural women to lie between 39 and 45 percent, while in urban areas I estimate that between 52 and 62 percent women cast ballots for the left parties.

The finding that most urban women voted for the left contrasts decades of received wisdom about early women voters. How does knowing that not all women were conservative and that women were the majority of voters from the first election after suffrage change our view of political development? The paper's conclusion raises several arenas in which future scholars might pursue an answer.

Geography, Gender, and Political Behavior

Most analyses of women's early political behavior have focused on differences in women's and men's rates of political participation, and whether women's partisan loyalties were distinctive. All scholarship finds that in the aggregate, women participated at lower rates than men (Boix, Magyar and Munoz 2022, Duverger 1955, Rokkan 1970, Skorge 2021, Tingsten 1937). But when it comes to preferences there are arguments to support all possible outcomes: some research suggests that women, who come from all classes, races, and ethnic groups, likely voted exactly like the men in their households, producing no difference in partisan outcomes (Acemoglu and Robinson 2000: 1186, Tingsten 1937, Norris 1988); other scholarship suggests that women voted more conservatively than men because they were more dependent on the traditional family arrangements, and more pious and connected

to the church (Inglehart and Norris 2000, Duverger 1955, Randall 1987); and still other research argues that women’s marginal status within the home and the economy should have prompted even the first women voters to support progressive causes (Morgan Collins 2021). In spite of these different predictions, over the past century the dominant narrative about women’s early political behavior argues for the “traditional” gender gap – that because women were less likely to work outside the home, and they were more religious, they tended to be more conservative than men (Desposato and Norrander 2009, Emmenegger and Manow 2014, Inglehart and Norris 2000, Lipset and Rokkan 1967, Morgan 2013).⁸

The tendency to conceive of the first women voters as a homogenous group, or subject to a single logic of vote choice, has been called into question by a major book on gender and political behavior in the early twentieth century United States (Corder and Wolbrecht 2016). In prodigious empirical analyses of both turnout and vote choice, Corder and Wolbrecht (2016) argue that the gender gap *per se* may not be the most important feature of the first women voters’ political behavior; instead, electoral context, and the salience of particular elections, is more important than gender in determining political participation. I build on Corder and Wolbrecht’s contextual insight by theorizing how geography – and specifically the differences between cities and rural areas – impacts gendered patterns of participation and vote choice. Finally, I examine how these two features together impact the political salience of women’s votes.

Geography and Participation

Geography is related to voter participation for a variety of reasons. To the degree that electoral districts are linked to physical space, political mobilization within districts is tied to location-specific political factors. These include the mundane – such as how far voters have

⁸Scholarship on the “modern” left gender gap in today’s advanced industrial economies claims that it emerged along with second wave feminist movements, when women entered the workforce in large numbers and when the possibility (and risk) of divorce emerged. Edlund and Pande 2002, Iversen and Rosenbluth 2006, Box-Steffensmeier et al. 2004.

to travel to the nearest polling station – to the germane – such as how local economic shocks impact voters’ determination to have a say in electoral outcomes.⁹ A major geographic distinction highlighted by scholars of political behavior relates to whether people reside in urban or rural locales. Cities are places where people live in densely populated neighborhoods, may have greater access to information and more exposure to political discourse, and many have an easier time traveling to local polling stations. This might increase mobilization of all groups, including women. Although the United States has generally not seen higher participation in urban areas than in rural locales, classic accounts of political behavior suggest that a central feature of early electoral politics in Europe was higher participation in the cities than in the countryside (Tingsten 1937, Lipset 1960).¹⁰ As Rokkan (1970: 183) writes, it was easier to mobilize voters in “densely populated, economically segregated areas of cities” than to turn votes out in villages and farm communities.

For women, aggregate data has shown that rural participation lagged behind that of urban women in most of Scandinavia and other parts of Europe (Tingsten 1937, Rokkan 1970, but c.f. fn 129). One reason European patterns of participation may be so different from the US, in spite of how overwhelmingly rural and spread out many of the northern countries remained in the early 1900s, has to do with proportional representation. In PR countries, competition is more evenly distributed across districts (Cox, Fiva, and Smith 2016, Blais and Carty 1990), and overall turnout is typically higher, than in majoritarian electoral systems (Eggers 2015). Recent scholarship has shown that in the aggregate, PR also produces higher turnout among women than majoritarian systems (Skorge 2021, Teele 2022). Within PR systems, we might still expect that women would be more likely to turn

⁹Electoral systems that use single member districts and plurality rules tend to have more geographically concentrated electoral groups, while electoral systems that use PR tend to create more geographically diffuse groups (Rickard 2020). In addition, majoritarian systems tend to generate more “safe” seats – places where competition and turnout is low.

¹⁰On low urban turnout in the US see Monroe (1977) and, for women, Andersen (1994).

out to vote in cities than in the country. In much of Europe in the early 20th century, cities were home to large numbers of young, single women that worked outside the home (Tilly and Scott 1987). The same processes that may have mobilized men's votes – information rich environments, public stumping, efforts at unionization, and social movement organization – should have also functioned to mobilize women's participation in cities. With less distance to travel, and potentially fewer familial responsibilities, urban women may have found voting less cumbersome.

The Swedish Farmer's Union (*Bondeförbundet*) voiced concerns about enfranchising women precisely because they expected that their party would be disadvantaged vis-à-vis urban parties after suffrage. In their 1917 official party platform, the Farmer's Union laments “In the cities, both men and women can vote very well, because the polling station is often located across the street. But in the countryside you often have miles of road, and you and your wife often can't get out at the same time for the supervision of children and animals. The result would be that cities and more densely populated communities would have their voting rights doubled, while the rural areas would have their voting rights virtually unchanged because of these conditions.”¹¹

Newly digitized data allow us to examine Corder and Wolbrecht's hypothesis that there was more variation in women's participation across districts than between men and women within them in the urban-rural context. I further theorize that since women in cities were more likely to participate in elections, and the demographics of cities skewed towards women, women's share of the votes cast should be larger in urban than in rural areas. Since national averages depend on constituency size, women's share of the votes cast is substantively important to women's political power after suffrage.

Geography and Vote Choice

Sociological theories of vote choice suggest that political preferences are generated by social cleavages and positions in larger economic structures (Lipset and Rokkan 1967), while

¹¹Translated by Jesper Lindquist.

psychological theories focus more on group identification and inter-generational socialization (Campbell et al. 1960). A growing literature argues, instead, that place matters for how people vote. This literature contends that what it means to be a member of a particular group is often defined locally rather than nationally. Political geographers have shown that the same type of voter will cast ballots for different parties depending on where that voter is located – for example, a working class voter in a working class neighborhood is much likelier to vote for the left than a working class voter in a middle class suburb (Johnston and Pattie 2006). Place matters because economic incentives might be local (Rickard 2020), and because the political affiliations formed in particular areas are tied to longstanding patterns of industrialization and political competition (Rodden 2019). In the early twentieth century, many cities experienced dramatic population growth, new forms of industrial production, and the emergence of union campaigns and labor parties. Whether related to shortening working hours, improving conditions in factories, or providing pensions for workers, people who lived and worked under these dynamic conditions might have been persuaded by similar political messages.

Since the needs of people in cities are often distinctive from the needs of people in rural areas, the nature of densely populated areas may generate common voting tendencies (Xu 2023). As Jusko (2017) argues, economic and demographic changes related to industrialization often spurred the formation of new political parties, that pursued new policy agendas, in an effort to court the changing electorate. To the degree that voters in a particular location become more identified with particular party leanings, others in their neighborhoods are likely to change their preferences in a similar way. An emergent political identity among some people can spill over to neighbors (Johnston and Pattie 2004). I build on this idea of geographic preferences by suggesting that men and women, though not necessarily identical in their political needs and desires, will tend to respond to similar impulses when they reside in the same location (Corder and Wolbrecht 2016).

In the time period surrounding the first wave of women’s suffrage, the demographics of

many industrializing European societies, which often left the countryside with more men and the cities with many more, younger, women (Thomas 1941), likely impacted not only turnout, and women's share of votes cast, as described above, but also preferences. In the post-suffrage period, contemporary Swedish commentators overwhelmingly thought women would be conservative voters.¹² An opinion editorial from 1921 quoted a Swedish liberal parliamentarian who stated that "The right wing should be the first to work for [women's] vote, since the right is likely to gain a lot of votes. They are on average more conservative than men." The conservatism of women was reinforced by some of the first research on gender and political behavior. Herbert Tingsten, a professor of political science who later became editor of the Swedish daily newspaper *Dagens Nyheter*, argued in his groundbreaking 1937 book on political behavior that there was a "strong correlation [...] between social position and conservatism, it follows as a matter of course that woman suffrage becomes an asset to the parties on the conservative wing" (36). Finally, working with an early survey, Ingulfson and Hagman (1950: 146-7) concluded that "Historically it may have been true that Swedish women tended to prefer right-wing parties. In 1946 and 1948, public opinion polls showed that women tended to prefer the Conservative party. The same polls showed that the non-socialist parties had a larger proportion of female supporters than did the socialist parties."¹³

Yet the conclusion that women were more conservative, drawn by both Ingulfson and Hagman (1950), and Tingsten (1937), failed to account for the distribution of women across Sweden. In urban areas in the early twentieth century, women were more likely to participate in the formal labor market, had lower levels of fertility, married at later ages, and were younger overall than women in rural areas (Thomas 1941: chart 9, chart 12, table 13). Women in the cities thus lived very different lives than women in the countryside. These geographic particularities might have contributed to distinctive preferences among women in the cities. A conservative opinion writer articulated the idea succinctly in 1921; he voiced

¹²This was not the case in every country, see Teele (2018, ch 2).

¹³Translated by Jesper Lindquist

concern that data from Scania, the southernmost province, showed that women working in industry tended to vote more frequently than women who were farmers and home-makers. The author feared this was helping the Social Democrats.¹⁴ Fundamentally, because industrial women cast different ballots than women in the countryside, the op-ed writer perceived that a conservative impulse among the average woman in some areas may not have translated into a conservative tendency among women in the country as a whole.

My expectations for women's preferences in the case of Sweden are mixed. Given decades of research on political preferences in the past, I expect that there may be a gender preference gap – with women being more conservative than men on average. Yet there is also good reason to believe that the average impulse among women may not have been conservative in the cities. In this case, we should see less variation in vote choice, and more left-leaning voting by women, in Sweden's cities.

Empirical Case: Sweden 1914-1924

Sweden was among the earliest of Europe's contemporary nations to consolidate. After the abolition of the Estates system in 1866, national elections became competitive around 1887. Yet the franchise was limited to less than 20 percent of adult males, and participation was very low, until a wider franchise was extended for the lower house elections in 1909 (Lewin et al. 1972: 29, 45). Scholars have called the 1909 reform "universal" suffrage because for lower-chamber elections, property requirements were abolished, yet no women were included and a very large share of men who were not current on taxes, or had not completed military service, remained ineligible to vote.¹⁵ Under the 1909 reforms, the country went from using single member districts in national elections to proportional representation, where seats were allocated from open lists based on the d'Hondt rule.

¹⁴*Trelleborgs-Tidningen* (newspaper), 8/26/21; 7/11/25.

¹⁵Men's voting age was also raised from 21 to 24 (Verney 1957: 248). In the 1909 reform, the upper chamber maintained property requirements, current tax payments, and reduced, but did not abolish, plural voting.

Under these electoral rules, Sweden's lower house, the "Second Chamber" of the Rikstag, returned 230 deputies from 56 constituencies.¹⁶ Somewhere between 3 and 8 deputies were elected from each constituency. The (high) threshold for representation was receipt of 8.5 percent of the vote. Importantly, in this period Sweden's rules allowed for parties to run as alliances, called "cartels," on the same lists in specific districts, even if they were separate entities in other districts.¹⁷ Voters could cast a ballot for an alliance, as well as for candidates on specific party lists within the alliance, so that seats were allocated first to the alliance and then to parties within the alliance (Särilvik 2002: 238). For example in the 1917 general election, Conservatives (*Moderata* and *Högern*) and Agrarians (*Bondeförbundet*) formed alliances in 29 constituencies (52%) while the Left Socialist and Social Democrats had a common label in 44 constituencies (78.5%). The Liberals, the party in the center which held the government in the prior year, formed alliances with the Social Democrats in five constituencies (Särilvik 2002: 240). Because the d'Hondt rules favor larger parties, there were incentives for parties closer on the ideological spectrum to form cartels within districts.

Partisan Landscape

The early 1900s were a dynamic time politically and economically for Sweden. Although the small country was a strong military and an economy in the seventeenth and eighteenth centuries, it was a relatively late industrializer, only really beginning to shift toward modern production techniques in the 1890s (Sejersted 2011: 40). At the dawn of the new century, the Liberal party pushed for manhood franchise reform and a free trade policy while the conservatives tended to be protectionist and against an expanded electorate. The 1909 reform, which granted a wide male franchise in the second (lower) chamber, and proportional representation, has been understood as providing concessions to both the Liberals and the

¹⁶The number of districts was further reduced to 28 in 1921, although administrative boundaries, and the vast majority of municipal boundaries, remained unchanged.

¹⁷The practice, known as *apparentement*, allowed more seats to be gained by parties that were ideologically related to one another (Cox 1997: 61).

Conservatives groups (*Moderata* and *Högern*) (Sejersted 2011: 67). In 1911, around the time of the first election with widened franchise and proportional rules, there was considerable labor unrest (for example, the great strike of 1909), and tensions were rising between the rural and the urban economies.

Whereas the conservative parties had tended to represent landed agrarian interests around the turn of the century, by the time of the First World War the conservative party was increasingly run by economic liberals, it focused on industrial concerns, and it courted the urban votes of employers and white-collar workers in the towns and cities (Lewin et al. 1972: 279). With the Conservative party tacking to the center, space was made for an agrarian party on the far right. The Social Democrats, led by economically forward-thinking socialists, were more progressive reformist than communist, allowing the more moderate among them to integrate with the Swedish Liberals (Berman 2006: 154ff, Sejersted 2011: 68). The Social Democrats (SAP) polled strongest in the industrial center-south (e.g. Stockholm) and in the central mining and ironworks districts, Västerbergslag and Grythytte and Hällsefors, and Jukkasjärvi Lappmarks in the very north. The SAP under-performed on west side of country and in the northern county of Västerbotten, and textile region around Borås. They polled weakest in the agricultural areas of south and north.

Women's Suffrage Reform

Taxpaying widows and spinsters were given local voting rights in 1862, making Swedish women among the first in Europe to have the municipal franchise (Karlsson Sjögren 2013). Yet they were with the pack in the extension of parliamentary voting rights. The first women's suffrage organization was formed in Stockholm in 1902, and thereafter mobilization proceeded rapidly, particularly among the middle classes (Blom 2012). By 1904, one national organization boasted 240 branches and more than 15,000 members, and by 1905 there were 63 separate suffrage societies. Women's suffrage bills presented to the parliament in 1902, 1904 and 1905 failed. But, after women procured 142,128 signatures on a suffrage petition in 1907, the fledgling Social Democratic party took women's suffrage on its platform. The

following year, in the wake hundreds of large public meetings, the Liberals also took suffrage on their platform (Eduards 2018: 208).

In 1912, the Liberal Karl Staff presented the parliament with the first women's suffrage bill to gain clearance. This was passed 140 to 66 in the lower house (the Second Chamber), but was defeated in the conservative-dominated upper house 86-58 (the First Chamber). The split matched the partisan split in the first chamber, with 86 Conservatives against and 64 Liberals and Social Democrats for suffrage. Another massive petition, this time with 350,000 signatures (12 percent of the total female population), was delivered to the parliament in 1914. A suffrage measure with government backing passed the lower chamber before WWI, but it was put aside during the war. In the election of 1917, the Liberals and Social Democrats formed a coalition in the lower chamber. The suffrage bill that would become law contained several improvements over the 1909 law; the voting age was lowered one year to 23, and conditions of tax payment and completion of military service were abolished (Caramani 2000: 863). Notably, some poverty and bankruptcy conditions existed until 1944, when the voting age was also reduced to 21. Though the women's suffrage bill initially passed in May 1919, a requirement that two consecutive legislatures must approve electoral reform mandated passage by passed by the parliament elected in 1920. Hence women's suffrage in Sweden only became a reality in 1921.

Empirical Approach

To understand the nature of women's participation and partisanship after suffrage in Sweden, the analysis hereafter utilizes a dataset of national electoral returns at the level of the Swedish municipality from all parliamentary elections to the Swedish lower house during the period 1911-1944. The data, which is augmented from Berglund (1988), contain electoral returns for 2576 municipalities across the country (*kommun*) and 49 wards in Stockholm, embedded in 409 districts (*härad*) and 25 counties (*län*). The data contain information on the total size of the eligible electorate, the size of the male electorate, and the female

electorate, as well as the number of valid votes cast by men and women. In addition, the data contain information about changes to municipal boundaries, and whether the municipality was located in a rural area, a town, or a city.¹⁸ (Online appendix A contains detailed coding information.) Some of the aggregate figures display information for all of the elections from 1911-1944, but the primary analyses will use municipal panel data surrounding four consecutive general elections, two before women's suffrage (1917 and 1920) and one after the adoption of women's suffrage (1921). In 1921, the first year women voted, the average municipality contained 1,276 eligible voters (min=53, max=116,078).¹⁹

National Level Trends

The early twentieth century brought considerable change in party fortunes in Sweden. Figure 1 reveals several important aspects of the geography of preferences, and figure 2 shows the evolution of the electorate from 1911-1944. These figures rely on three measurement choices. First, the description of party support based on average vote share (rather than seat share) at the national level or the municipal level. Second, the classification of parties as representing the left or the right (see Appendix A).²⁰ Third, a classification of parishes as

¹⁸In less than 3 percent of municipalities the original data contained inconsistent information on the size of electorate (N=59) or on party votes (N=27). I was able to reconcile all but three of these discrepancies. In addition, small changes in district boundaries took place in 0.7 percent of observations. I treat these observations as missing.

¹⁹Excluding Stockholm, Gothenberg and Malmoë, the average number of electors per parish is 1103 in 1921. Stockholm's wards have on average 7,526 electors (min 4,730). There are 37 rural designated observations that have more than 4730 electors (1.55 percent of all rural observations).

²⁰Aggregation has its limits, but since the Social Democrats often ran in cartels with the Liberals (Lewin et al. 1972: 20, 34, 277), and since the agrarians split off from the Conservatives, the simplification we make in this paper mirrors the actual groupings among parties. Aggregation also circumvents problems that might arise if voters switch between similar parties across elections. At least in the 1920s, we believe we are measuring distinct preference orderings by aggregating parties into left and right. In the 1930s this simplification would be more tenuous as the Social Democrats formed a government with the agrarians in 1932.

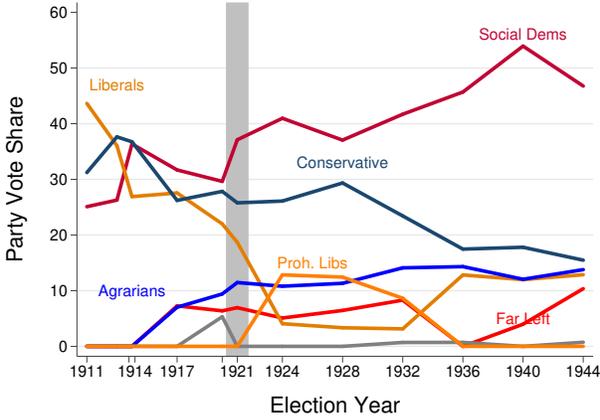
urban or rural.²¹ And finally, a decision that is crucial to the rest of the paper, the use of the log of the electorate size as continuous proxy for the level of urbanization (see Appendix B).

The top left panel (a) of Figure 1 shows average party support from 1911-1944. As can be seen, there were big changes in party fortunes across this period – the Liberal party dominated until PR was adopted in 1910, and the Social Democrats, who barely existed in 1911, emerged victorious just ten years later. In the elections surrounding the extension of the franchise to women (the first election in which women voted is marked by a grey bar), the average vote share of the Social Democratic party rose by 8 percentage points, while the Liberal vote share plummeted.²² Panel (b) collapses party categories into right and left. It shows that that before and after suffrage, although the left had considerable support across the country, the average urban parish was more supportive of the left than the average rural parish. The bottom left panel (c) reveals considerable stability of preferences across elections in both urban (diamond) and rural (dot) parishes. For the elections spanning 1914 to 1917, $\rho=0.91$; For those from 1917 to 1920 $\rho=0.90$. Lastly, the bottom right panel (d) reveals how the size of the electorate (logged, shown in levels) is correlated with the support for the left. The 1921 electorate size is used to make the graphs visually comparable. There is more variation in vote choice in the more numerous rural parishes. Both before and after suffrage, whether classified as urban or rural, there is a positive correlation between electorate size and leftism. This latter figure suggests that using electorate size as a proxy for urban voting tendencies is capturing a substantively important political process.

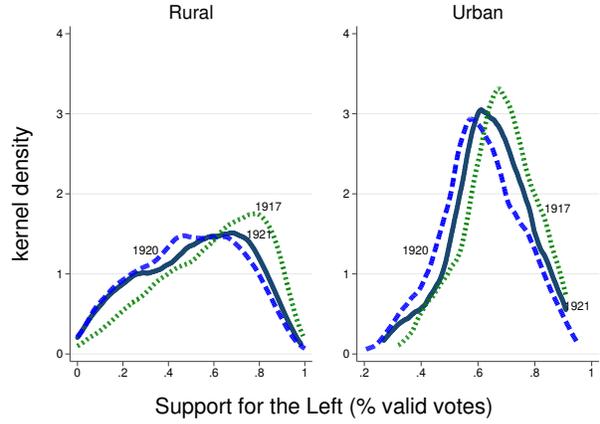
Moving to the evolution of the electorate, the panels in figure 2 reveal four gendered

²¹The official registry of Sweden’s parishes in the early twentieth century designated parishes as rural, towns, or cities. In 1921, 194 parishes (7.5 percent) were designated as cities or towns while 2,377 parishes (92 percent) are rural. Cities could be as small as 186 or as large as 116,078 electors.

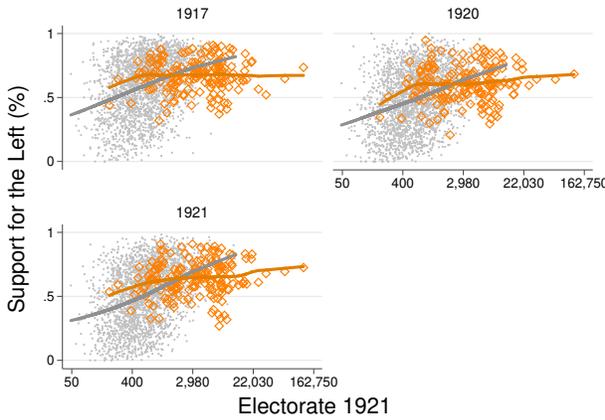
²²This is in part due to a split between the prohibitionist liberals “Frisinnade” and the anti-prohibition Liberals. See Caramani 2000: 865-866.



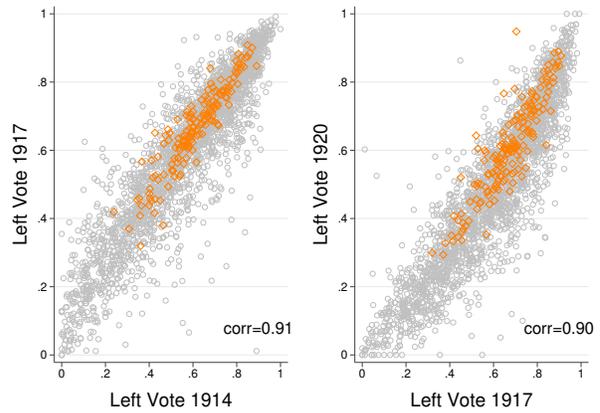
(a) General Election Results



(b) Left support in rural and urban areas.



(c) Size and leftism in rural (dots) and urban (diamonds) areas.



(d) Within-municipality correlation across pre-suffrage elections.

Figure 1: Election outcomes and the Geography of Left Support. (a) Swedish Election Results 1911-1944, percent of total national vote. The vertical grey bar is women’s first election. Each tick mark on the x-axis represents an election. The bottom line represents “other” parties: from 1921-1932 this includes Federation of Farmers (1920) and Freedom Party (1921). (b) Before and after suffrage, the average support for the Left was stronger in urban areas; rural areas had higher variance. (c) Before and after suffrage there is a positive correlation between the electorate size (logged, shown in levels) and support for the left in urban areas (diamonds) and rural areas (dots); x-axis shown in levels. (d) Prior to women’s suffrage, support for the left within municipalities was highly correlated across elections in both rural and urban areas.

patterns of turnout. The top left panel (a) shows the total size of the eligible electorate for men and women across rural and urban locales. As can be seen, the majority of voters are classified as living in rural areas (top two lines of panel a), and there were more eligible women than men in both the countryside and the city. Due to the clustering of younger women in cities (Thomas 1954), in 1921 women were 55.7 percent of the eligible electorate in urban areas compared with 50.8 percent of eligible voters in rural areas.

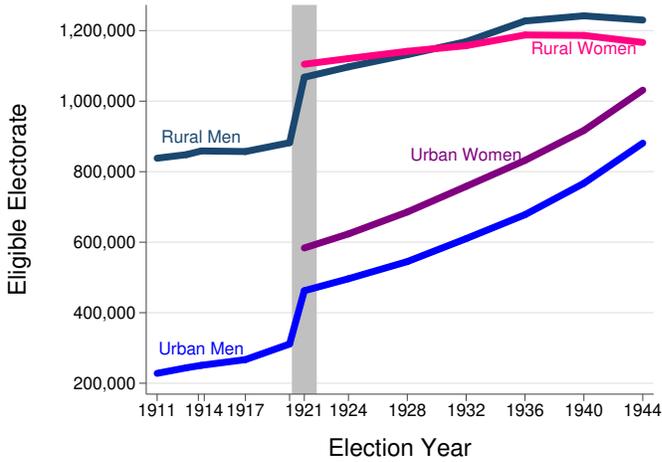
The top right panel (b) uses the raw numbers of eligibility from (a) as the denominator to calculate the turnout among eligible men and women in rural and urban areas. The figures show that men turned out at higher rates than women in both urban and rural areas, and that urban men turn out at the highest rates and rural women turn out at the lowest rates for the period in question. Panel (b) also shows that although women's rates of participation were rather low in the first election in which women voted – in 1921, 43 percent of eligible women cast ballots in rural areas and 53 percent in urban areas – women's rates of participation rose steadily, reaching between 65 and 75 percent by 1936. (These figures are stunning in comparison to women's participation rate of 54 percent in the 1936 US presidential election.)

The bottom left panel (c) divides the raw total of women's votes by the total of all votes cast, in urban and rural areas, to calculate women's share of turnout across elections. Since women in rural areas were the least likely to turn out, they ended up casting between 42 and 46 percent of all votes in rural areas. Remarkably, although the rate of turnout among eligible women was lower than men's rate of turnout, because women made up a larger portion of eligible voters, in urban municipalities women cast more than 50 percent of all ballots. Finally, the bottom right panel (d) presents the raw distributions of the gender turnout gap based on electorate size across elections. The y-axis measures the gender turnout gap as the proportion of eligible men that turn out minus the proportion of eligible women that turn out. The x-axis arranges municipalities in terms of the total size of the eligible electorate (logged for clearer presentation). In most municipalities in most elections, the raw gender turnout gap is positive, meaning that eligible men were more likely to turn out than

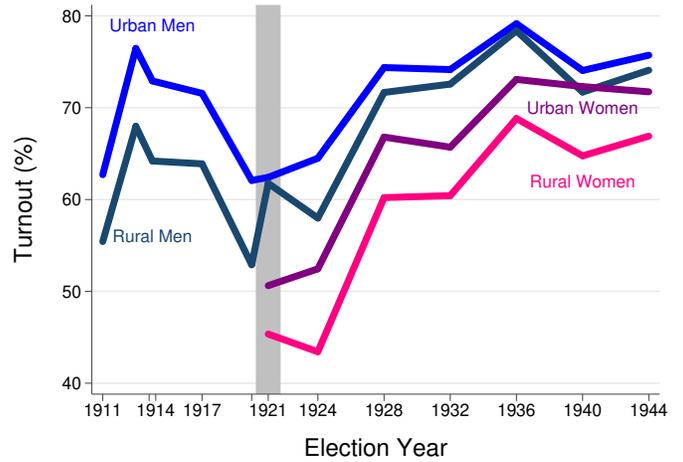
women. Surprisingly, though, there are a number of municipalities in each election where the women turned out at higher rates than men.

Together these figures show the importance of geography for understanding preferences and the multi-faceted concept of turnout. Before suffrage, leftism was more pronounced in larger municipalities whether they were classified as urban or rural. Although in the aggregate women's rates of turnout were lower than men's, the turnout gap tended to be smaller in municipalities that had more voters overall. Most strikingly, there were several municipalities where women turned out at higher rates than men, even in the first election in which women voted.²³ Both of these findings are striking in comparison with the United States, where rural women turned out at higher rates than urban women in the early twentieth century, and where women's rate of turnout is believed not to have surpassed men's until the 1980s (Wolbrecht and Corder 2020). In addition, while women may not have participated at rates as high as men, that did not mean they were not a hugely important part of the electorate. Indeed, the demography of Sweden, where cities were home to a larger share of women, and of women among eligible voters, than rural areas, meant that even with lower rates of participation, women were responsible for casting the largest number of votes from the very first post-suffrage election in urban areas.

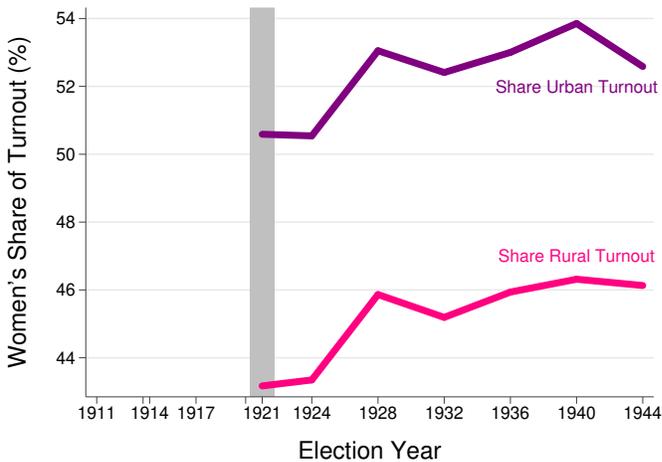
²³In 1921 only 13 municipalities recorded higher rates of turnout among women. In 1928 there were 47. The average municipality had 1,249 eligible electors in 1921, and 1,360 in 1928. Where women turned out at higher rates, the average size was 407 in 1921 and 493 in 1928.



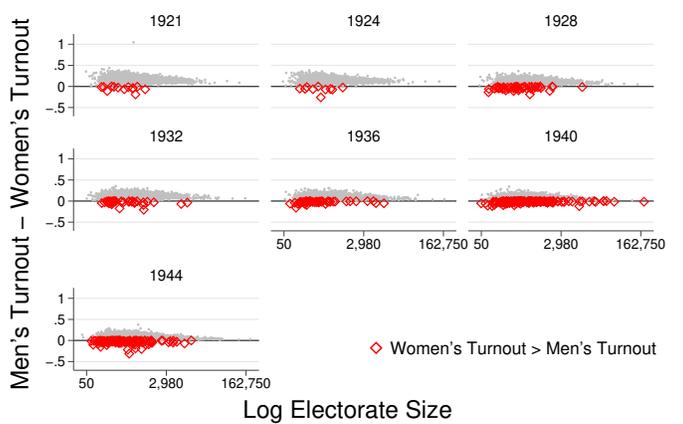
(a) Eligibility



(b) Turnout Among Eligibles



(c) Women's Share of Turnout



(d) Gender Turnout Gap by Size of Electorate

Figure 2: Gendered Turnout in Four Ways. (a) shows the raw number of eligible voters by gender and rurality; (b) shows the rate of turnout among eligibles by gender and rurality; given the total votes cast by group, (c) shows women's share of all votes cast; (d) shows the gap in rates of turnout across election and size of the electorate (logged, shown in levels) within municipalities (x-axis shown in levels).

Approach to Estimating Gendered Political Preferences

Understanding the relationship between electoral geography, gender, and preferences provides a formidable challenge because the ballot is secret and votes were not tallied separately for men and women. To gain traction on how women in Sweden voted after suffrage, I clas-

Gender of People Voting	Voting Decision for party		
	Vote	No Vote	
Women	β_j^w	$1-\beta_j^w$	$X_j =$ share of voters that are women
Men	β_j^m	$1-\beta_j^m$	$1 - X_j =$ share of voters that are men
	V_j	$1-V_j$	V_j is the fraction of people in constituency who voted for that party

Table 1: Notation for constituency j for a representative party.

sify parties as left and right (see Appendix A). I then use the “method of bounds” approach, pioneered by Duncan and Davies (1953) and interrogated by Goodman (1958) to estimate the share of women in each parish that that is predicted to vote for the left to glean the geographic basis of preferences. The bounds approach is very flexible. I begin where others have, first by calculating computational bounds – how women in each district must have voted if all men did, or did not, vote for the left. Then, using transparent assumptions about men’s behavior after suffrage, I refine the estimates of geography and preferences by thinking counterfactually about women’s vote choice under different configurations of men’s political preferences. I provide notation for understanding local and national vote choices below, and then describe the bounds approach and various inferential issues before presenting the estimates.

Notation: Following Grofman and Merrill (2004), and to simplify notation, consider a world in which there are two sexes, men and women, and only two parties. For any given municipality j , let

$X_j =$ proportion of voters who are women;

$V_j =$ proportion of votes that go to the party;

$\beta_j^f =$ proportion of female voters that vote for the party;

$\beta_j^m =$ proportion of male voters that vote for the party.

Table 1 fills out the matrix of known and unknown quantities using the notation above. According to an accounting identity, votes for a party in a given constituency j is clearly a weighted average of women’s share of the vote for that party, β_j^w , times the share of women

among voters X_j , plus men’s share of the vote for that party β_j^m times the share of men among voters $(1 - X_j)$:

$$V_j = \beta_j^w X_j + \beta_j^m (1 - X_j) \tag{1}$$

The basic ecological issue is that we know V , V_j , and X_j but don’t know the β_j values—the proportion of men and women that cast ballots for the party—and need to estimate those from aggregate data. There are many strategies for dealing with this problem such as Goodman’s “ecological regression,” and more sophisticated parametric estimators (see King 1997, and King, Tanner, and Rosen, 2010). Goodman’s approach requires that, at least in expectation, members of a given group vote in the same proportions for a specific party across the countryside (Goodman 1959: 612). The very idea that women vote in different proportions for the left in different types of constituencies, and the results presented herein, implies that the Goodman’s constancy assumption is surely false for the case of women. The challenge with the alternative framework provided by King (1997) is that unlike in other applications (e.g. estimating the black-white divide for particular parties), the distribution of men and women across geographic and electoral space is fairly homogenous: for example, when women first began to vote in Sweden in 1921 they were 51.3 percent of the eligible voting population ($sd=0.24$); at the 25th percentile they were 49.7 percent of the eligible population and at the 75th they were 52.6 percent of the eligible population. Because of the lack of variation, the estimates that emerge from King’s MLE approach are unlikely to be precise. For the application at hand, then, the best way to get at women’s preferences is to use the transparent method of bounds.

Method of Bounds: In the literature on ecological inference, the method of bounds makes use of the fact that because the proportions of women and men who voted for the right and the left must each lie between 0 and 1, there are linear constraints on the feasible values of β_j^f and β_j^m . We can refer to the identity in equation 1 to calculate bounds on women’s

support for right across geographic space. Using Duncan and Davis’s method (1953), we can calculate women’s vote share for the party if all men voted for the party, $\beta_j^m = 1$, or if no men voted for the party $\beta_j^m = 0$.

$$\begin{cases} \text{if } \beta_j^m = 1, & \beta_j^w = \frac{1}{X_j}(V_j - 1) + 1 \\ \text{if } \beta_j^m = 0, & \beta_j^w = \frac{V_j}{X_j} \end{cases}$$

I will present these computational bounds in the following section, but because they are very wide and produce many impossible values, I propose to estimate men’s vote share— $\hat{\beta}_j^m$ —under several different assumptions about how men would behave given past values of party support at the local level.

For example, take the simplest case where we assume that men in constituency j voted in the post-suffrage election the same way they did in the prior election (indexed by $t - 1$), we can re-arrange the equation to isolate women’s vote share $\hat{\beta}_j^w$:

$$\begin{aligned} \text{if } \hat{\beta}_j^m &= \beta_{j,t-1}^m : \\ \hat{\beta}_j^w &= \left[V_j - \hat{\beta}_{j,t-1}^m(1 - X_j) \right] \frac{1}{X_j} \\ \text{in this case, } \hat{\beta}_j^w &= [V_j - V_{j,t-1}(1 - X_j)] \frac{1}{X_j}. \end{aligned}$$

If $\hat{\beta}_j^m$ is assumed to be the same as how men voted previously, $\hat{\beta}_j^w$ can be calculated directly from the data. (Note that in the few parishes where using men’s past vote share produces impossible values of women’s leftism, I re-compute a realistic value for men’s leftism. See Appendix D.)

Empirical Intuition The key empirical intuition in this paper is that since I am interested in understanding women’s political behavior after a long period in which they were unable to vote, there is actually a lot of information on which to base a “prior” belief about men’s patterns of partisan voting before the vote was extended. As panels (b) and (d) in

figure 1 show, the distribution of support for the left was similar (even if not identical) across elections, and there was a very high within-parish correlation in support for the left across elections. There is also a strong relationship between urbanization and leftism. Thus, while reliance on men’s past behavior is imperfect, aggregating the parties into larger families, and separating parishes by urban and rural, and municipality size, is a way to impose homogeneity within parishes to simplify the ecological inference problem. After presenting results we delve more deeply into these and other inferential concerns.

Results

The theoretical argument claims that women in cities may have been less conservative than previous scholarship, or contemporary observers, believed. I try to make this case by making it difficult to attain this result. To do so, I assume left-leaning values for $\hat{\beta}_j^m$. The top panel of figure 3 shows the patterns of men’s leftism in pre-suffrage elections upon which I base the estimates of women’s leftism. I present locally smoothed estimates of women’s predicted left vote for urban and rural areas based on the electorate size under the following assumptions: 1.) that all men (old and new voters) cast ballots as they did in 1917, or 1920; 2.) That all men voted as in the most left-leaning year in the municipality (choosing from 1911, 1914, spring or fall, 1917, and 1920). 3.) Thinking about inferential threats I imagine that men that were added to the electoral registers may have voted differently from the formerly enfranchised men. I assume that the old male voters acted as in their most left-leaning year, while the new men voters were between 5 and 30 percentage points more left-leaning than the most left year in their municipality (see appendix D). 4.) I then further homogenize municipalities by breaking them into deciles of left support in 1921, presenting estimates for women’s leftism in the most conservative and most leftist deciles.

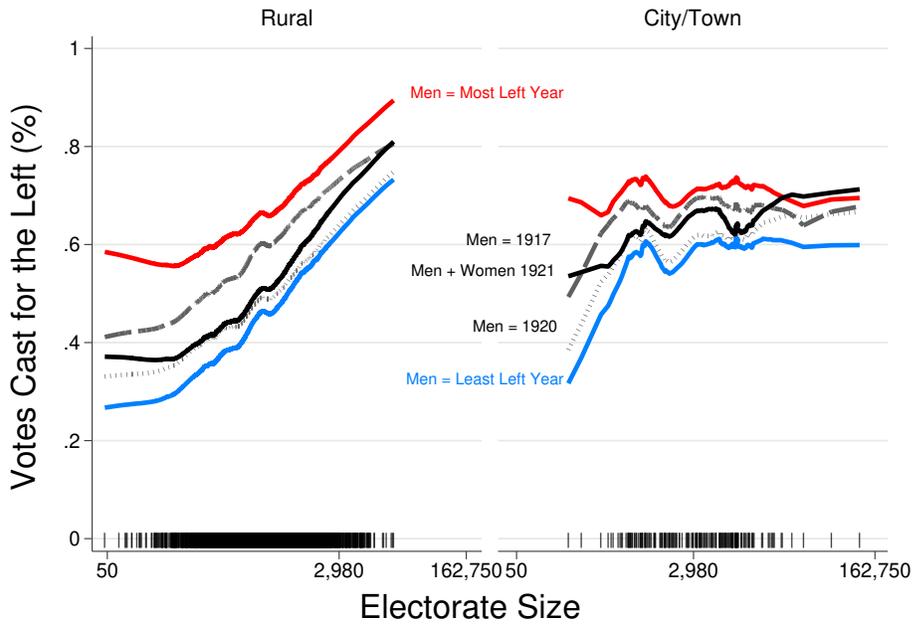
Duncan-Davis style bounds and counterfactual results: figure 3 presents the main results. The top panel shows the actual patterns of men’s leftism across the distribution of electorate size in rural (left) and urban (right) constituencies in the 1917 and 1920 elections,

as well as the counterfactual categories where parishes are assigned their most left, and their least left, value across the prior three elections. As can be seen, for men, rural areas have wider gaps in leftism (small rural parishes cast between 25 and 55 percent of votes for the left, large rural parishes from 67 to 90 percent), and urban parishes cast between 50 to 85 percent of their votes for left. The bottom of figure 3 presents a lowess fit on the computational bounds on women’s support for the left across the distribution of electorate size, assuming all or no men vote left. This figure also shows the actual vote share for the left in the 1921 election, as well as my estimates of women’s leftism given the predictions about men’s behavior laid out in the top panel. As can be seen, women in urban areas are predicted to be more homogenous in their leftism, and there is less variation across municipality size. Women in rural areas appear to have a steeper gradient of left preferences (for the distribution of municipal-level estimates, see appendix figure ??). As is the case for men, in the largest rural-designated parishes my predictions of women’s leftism exceeds that in some of the parishes designated cities.

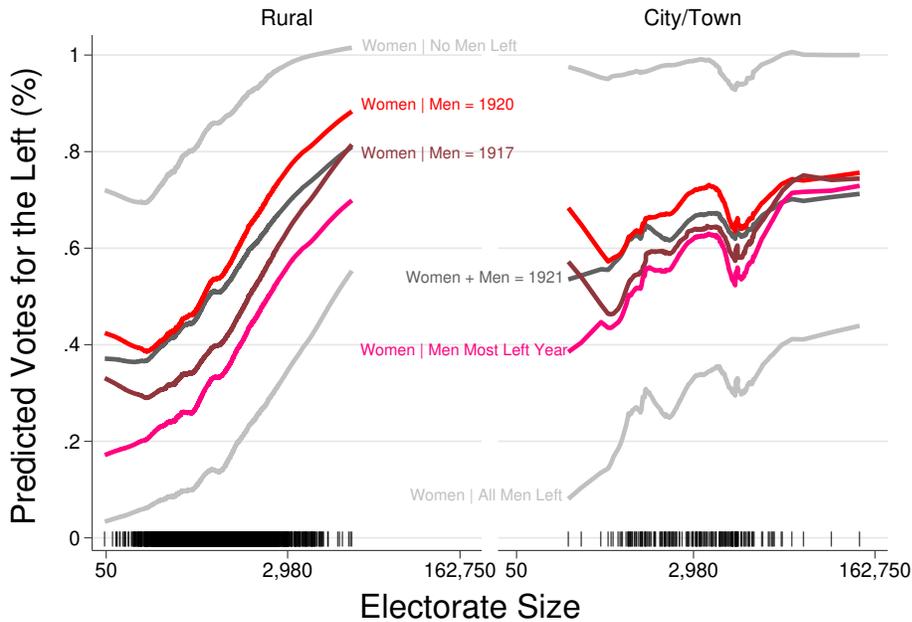
Inferential Concerns Using the past as a proxy for the present raises several inferential concerns, such as the possibility that the previous election represented an aberration, or kicked the district into a new trend that was unobservable in prior elections’ outcomes. In the case of Sweden, there is the further concern that the 1921 suffrage reform enfranchised a fair number of men as well as women.²⁴ If new groups of men introduced into the electorate had different (more leftist) tendencies than the old male voters, we might erroneously attribute local leftism to women when in fact it was new male voters.

Appendix C works to demonstrate that on many observable dimensions the extension of the male franchise was not affiliated with changes in other dimensions that might confound

²⁴The Swedish electoral registers provide province-level information on the reasons for male disenfranchisement. These include status as a foreign national, status as a new arrival, failure to complete military service, bankruptcy, poor relief, and debts to the crown and municipality. In the case of Stockholm in 1920, about 20 percent of men were deemed ineligible to vote, 60 percent of whom were not current on their taxes.



(a) Men's Left Voting before Women's Suffrage



(b) Women's Predicted Vote Share

Figure 3: Men in larger municipalities are more left-leaning in both rural and urban districts (top). Women's predicted left vote share is higher larger municipalities than and in urban municipalities (bottom). (a) The top figure shows the geography of men's support for the left in pre-suffrage elections based the size of the municipality (logged, shown in levels) and whether the municipalities are rural or urban. The lines show specific election years, as well as the lowest smooth for the most leftist year and the least leftist year across geographic area. (b) The bottom figure shows lowest smoothed estimates of women's predicted left vote share (logged, shown in levels) The grey lines represent the realistic Duncan-Davies bounds if no men vote left (top grey line) or all men vote left (bottom grey line).

our estimates. Figures A.3 and A.4 show the distribution of the male expansion, which was relatively larger in cities and towns with larger initial electorates. Figure A.5 shows that there was no noticeable turnout response, for either men or women, in places where the electorate grew by more.

Since most contemporary accounts suggested that women would be more conservative than men, and since tax-delinquency may have been more common among the lower classes, and that the lower classes may have been more supportive of the left, I will assume that the newly enfranchised men would have been more left-leaning than prior voters.²⁵ Thus, I also simulate the distribution of women’s preferences for the left if we assume that new men are even more leftist than old male voters. Then I calculate women’s support for the left if the new male voters are more left. (Note, though that appendix figure A.7 shows that there is no correlation between the change in the male electorate and the change in the leftist vote.) In the most extreme counterfactual, I assume that all new male voters support the left, and that the old male voters vote like their most left year. Appendix D presents graphical depiction of these scenarios, and table 2 presents the municipal-level point estimates. When old male voters are assumed to be at their most-left leaning value, and all new men cast ballots for the left, I find that 30 percent of rural women and 60 percent of urban women cast ballots for the left, another substantial geographic divide in women’s preferences.

In a final exploration of inferential concerns, figure 4 presents the computational bounds, along with counterfactual estimates, based on different deciles of leftism in the 1921 election. One counterfactual estimate considers that all men vote as in the most left year in the municipality. The other estimate considers that all old male voters vote like the most left year, while all new male voters cast their ballots for the left. The idea here is we should be able to narrow our estimates of women’s leftism considerably by calculating the bounds in

²⁵Turnout is highly correlated across elections (see figure A.6), but 1920 was a low point in turnout. We take the average number of votes cast in the previous three elections, and set the number of new men voters as the difference between 1921’s total vote count for men minus the average, provided that it isn’t negative.

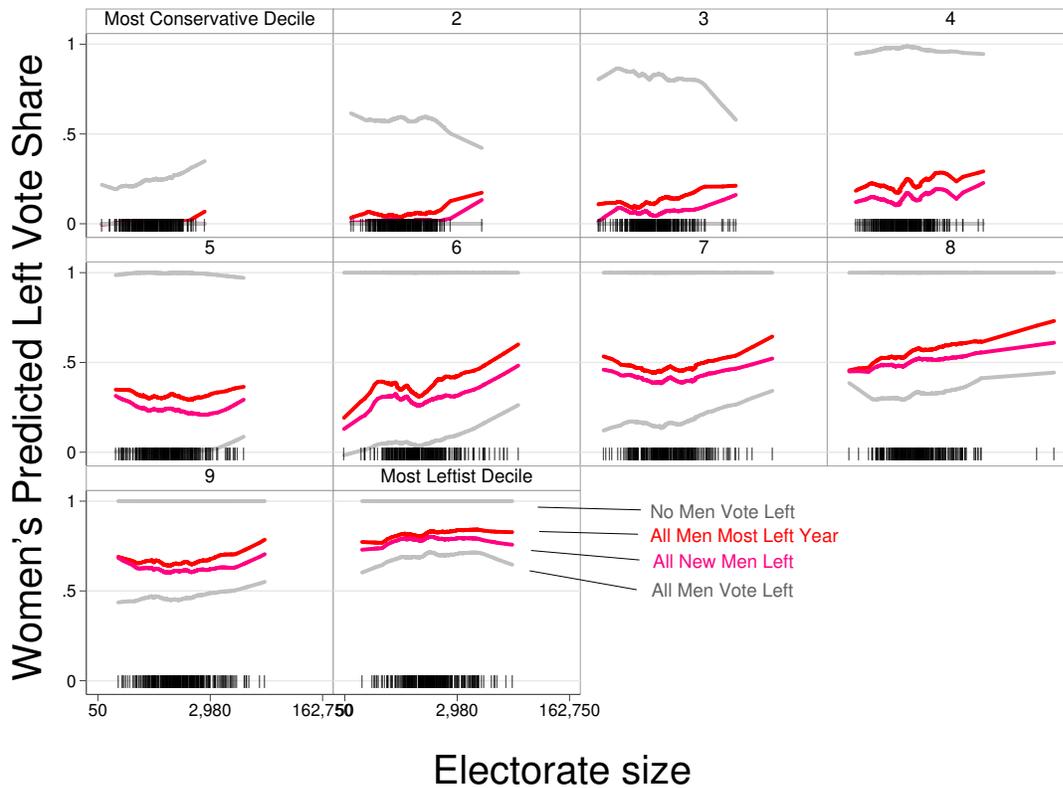


Figure 4: Women’s predicted left vote share is higher larger municipalities that are more left-leaning. The figure breaks municipalities into deciles based on leftist support in 1921 (about 265 municipalities per bin). It shows lowess-smoothed estimates of women’s predicted vote share for the left in 1921 (y-axis) against the size of the electorate (logged, shown in levels), using various assumptions about men’s votes. The red lines estimate women’s votes in 1921 if all men voted like the district’s most left year; the pink line estimates women’s left votes if old male voters acted like their most left-leaning year, and all new male voters voted for the left.

municipalities that are distinctly leftist or not. Each decile in figure 4 contains about 266 municipalities. In the most conservative decile, no more than 25-30 percent of women could have voted for the left. While in the most leftist municipalities their average had to be above 75 percent.

Summarizing Results Table 2 summarizes the findings from all of these counterfactual exercises. Women are predicted to be more leftist in urban areas – both in the average municipality, and when I weight the municipal outcomes by women’s turnout. In urban areas, the municipal average is between 56 percent (if all men behave like the most left year) and 67 percent (if all men behave like 1920). In rural areas, the municipal average is between 30 percent (if old men act like their most left year and all new men vote left), and 54 percent (if men behave like in 1920). The weighted average of women’s leftism in rural areas suggests that between 41 and 65 percent of all women voted for the left. In urban areas, the weighted average suggests that between 45 and 70 percent of women voted left.

Table 2: Predicted Leftism Among Women in Rural and Urban Areas

Assumptions	Municipal Average (sd)			Weighted Average			National weighted
	Rural	Urban	Gap	Rural	Urban	Gap	
Men behave like 1920	.54 (.27)	.67 (.16)	-.13*	.65	.70	-.05	.67
Men behave like 1917	.42 (.29)	.60 (.16)	-.18*	.54	.65	-.09	.58
All Men behave like most left year	.34 (.28)	.56 (.20)	-.22*	.47	.62	-.15	.53
Old Men Most Left, New Men All Left	.30 (.28)	.60 (.27)	-.30*	.41	.52	-.11	.45

*p-value for difference of means < 0.001

Finally I consider the impact of women’s votes on the gendered basis of party support. Using a back of the envelope calculation that takes women’s predictions from men’s most left year and weights it by the total number of women that vote in rural and urban areas, I find that 34 percent of the left’s votes in rural areas come from women, while in urban areas,

47 percent of the left's vote comes from women. The large share of women among voters made women nearly half of the left's constituency in urban areas from the very first election. Making the strongest assumption about men's leftism, these calculations show the importance of urban women for the left parties' constituencies. After women were enfranchised in Sweden the country went through a tumultuous decade, with 12 prime ministerial changes from 1920 to 1932, before proceeding on a path toward greater Social Democratic power (Berman 1998; Jusko 2017; Sejersted 2011: 73). Although there were stark differences in women's participation and vote choice depending on the locality in which women cast their ballots, the relative concentration of women in cities, combined with the leftist tendencies in cities, suggest that urban women's votes were important for this social democratic moment.

Conclusion

The idea that women were traditional voters in the past—that they turned out at low rates and voted for conservative parties—has become a textbook fact, reported and repeated in decades of research on the contemporary gender gap in participation and partisanship. The findings of this paper demand a reconsideration of both facets of the traditional gender gap thesis. First, lower turnout rates did not mean women lacked political influence; indeed, a demographic imbalance meant that women still cast the largest number of ballots from the very first election in which women voted. Scholarship which looks only at differential rates of turnout between men and women will miss this point and may fail to see how women's partisan choices have always been crucial determinants of party fortunes. Normatively, if Fraga (2022) is correct that perceptions of a group's political relevance drives both parties' attention to group needs and impacts group participation thereafter, then early behavioral studies and newer scholarship which focuses only on rates can reinforce women's marginalization in politics. Second, as I show, the partisan gender gap is a product of the electoral environment in which ballots are cast. In the case of Sweden, larger municipalities and the women within them were more left-leaning than smaller locales. This electoral geography,

in combination with women's numerical presence and heightened mobilization in cities, put downward pressure on the national level partisan gap. What was viewed as a traditional gender gap thus had more to do with which women were mobilized, and where, than with differences between men and women per se.

These arguments raise several new questions related to gender and political development. First, to what extent will the dynamics in Sweden, which has long been hailed as a bastion of gender equality and which was home to a paradigmatic example of Social Democracy, resonate elsewhere? Will other Nordic countries with similar urban-rural divides produce a similar pattern of women's partisanship? Second, in countries in which turnout was very high and rural women's participation rates matched those of women in urban areas after suffrage, like Italy, Spain and Chile, was the gender gap, or the intra-gender gap, more pronounced than those in Sweden? Finally, and most broadly, if women in cities were more liberal than women in the countryside, and they were the majority of voters, future scholars might consider whether European welfare states were built on urban women's political participation.

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