## Letter

# Gender and the Influence of Proportional Representation: A Comment on the Peripheral Voting Thesis 

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#### Abstract

$T$The right to vote is a keystone of democracy, but many groups, including those that were long excluded from the ballot, fail to exercise their rights in large numbers. In the United States, cutting edge research has argued that the first women to cast ballots were "peripheral" voters: their decisions to participate were even more sensitive to electoral competition than were men's, producing larger gender gaps in turnout in less competitive districts. This paper argues that the portability of the peripheral voting thesis depends on the electoral institutions when suffrage was granted. Using the example of Norway, which transitioned from majoritarian rules to proportional representation just a few years after women won the vote, I show that proportional representation, which increases competition on average, produces a dramatic fall in the gender turnout gap, particularly in previously uncompetitive districts. These findings suggest that electoral systems, more than gender, made women peripheral voters


## INTRODUCTION

Political science has a long tradition of studying the causes and the consequences of electoral reforms. The transformation of electoral rules, whether the extension of the franchise to previously excluded groups (Barnes 2020; Bateman 2018; Teele 2018a), the protection of ballot secrecy (Mares 2015), the move to compulsory voting (Fowler 2013), automatic registration (Barnes and Rangel 2014), or the adoption of proportional representation (Ahmed 2013; Boix 2010; Kreuzer 2010; Roberts, Seawright, and Cyr 2013), has long been important to scholars because of the substantive effects of electoral rules on the political fortunes of ruling groups (Morgan-Collins 2021), and the influence that rules have on citizens' participation (Skorge 2021). Reforms that influence the incentives to vote, such as compulsory voting, automatic registration, and even PR, can change not only the number of people who cast ballots but also the relative power of different social groups in the electorate (Beauregard 2014; Córdova and Rangel 2017; Kittilson and Schwindt-Bayer 2012).

Pioneering behavioral scholarship noted that in Europe and the Americas, aggregate turnout declined just after women won voting rights, which is usually explained by women's lower rates of participation than men's (Rokkan 1970, 245; Tingsten [1937] 1975, 10). Recently, Corder and Wolbrecht's (2016) comprehensive study of the gender gap after the Nineteenth Amendment (1920) in the United States shows that focusing only on the aggregate decline in turnout

[^0]postsuffrage masks considerable variation in the gender gap across districts. Analyzing gendered patterns of participation in presidential elections in 10 U.S. states after 1920, Corder and Wolbrecht (2016) find a large gender turnout gap in uncompetitive districts and a small gap in highly competitive districts. The differential mobilization of women in high-salience elections is interpreted as evidence that unlike "core" voters, who cast ballots on election day regardless of circumstances, early women voters evinced "peripheral" voting tendencies, only participating in exceptional political circumstances, such as when an election is salient, a candidate particularly compelling, or when a district is highly competitive.
Corder and Wolbrecht's findings for the U.S. raise the question of whether women were peripheral voters in other electoral contexts. Table 1 shows that in one-third of the countries in Europe and other selected countries, national parliaments used proportional electoral rules, or adopted them in a similar time frame as they did women's suffrage. Comparative scholarship shows that electoral rules tend to produce different geographies of competition (Rodden 2019). If PR has more evenly distributed competition (Cox, Fiva, and Smith 2020), then the peripheral voting tendencies of early women voters may be less pronounced in countries with PR.

Cutting-edge research on historical political economy provides some evidence that nonmajoritarian institutions can moderate the gender voting gap, at least at the municipal level. Kim (2019) shows that in postsuffrage Sweden, women were more active in local politics in towns that used direct democratic procedures; whereas, in Norwegian local elections, Skorge (2021) shows that municipalities that had PR foisted on them in 1919 saw a 10-point jump in women's share of turnout relative to municipalities that voluntarily adopted PR prior to 1919. Each of

| Country | Wide male suffrage | Wide women's suffrage | PR reform | Sequencing |
| :---: | :---: | :---: | :---: | :---: |
| Netherlands | 1918 | 1919 | 1918, 1937 | PR right before |
| Germany | 1871 | 1918 | 1919, 1920 | Same |
| Luxembourg | 1902 | 1919 | 1919 | Same |
| Austria | 1907 | 1918 | 1919, 1920, 1923 | Same |
| Finland | 1906 | 1906 | 1907 | $\sim$ Same, univ |
| Ireland | 1918 | 1922 (a)/1928 | 1922 | ~Same/before |
| Denmark | 1848/1901 | 1915 | 1918, 1920 | PR right after |
| Norway | 1900 | 1907 (p), 1913 | 1919 | PR right after |
| Iceland | 1908 | 1915 | 1934 | PR much later |
| Sweden | 1911/1921 | 1921 | 1911, 1921 | WS later |
| Greece | 1844 | 1952 | 1926, 1932, 1936 | WS much later |
| Switzerland | 1848 | 1971 | 1919 | WS much later |
| Italy | 1913 | 1945 | 1919, 1921 | WS much later |
| Belgium | 1894/1919 | 1948 | 1900, 1919 | WS much later |
| United States | 1860/1964 | 1920* |  | no PR |
| France | 1871 | 1945 |  | no PR |
| New Zealand | 1879 | 1893 |  | no PR |
| United Kingdom | 1885 | 1918 (a,p), 1928 |  | no PR |
| Spain | 1888 | 1931-1939/1978 |  | no PR |
| Canada | 1900/1960s | 1921* |  | no PR |
| Australia | 1901 | 1902 (r) |  | no PR |
| Japan | 1920/1928 | 1945 |  | no PR |
| Note: Table ordere consider the most $m$ USA, and Canada property restrictions Penadés 2008. Wid | uencing in last co pansion at the nati lier national suffr women of color or suffrage: when two | ost of the OECD cou <br> l, derived from Teele in certain federal u ous women prevented exist the second is the | re in the first wave of w . Women in some fede different age floor tha oting until 1960 (Canada) od reform. Greece alte | suffrage. Suffrage tries like Switzerland (r) racial restriction 65 (USA); PR date PR and majority sys |

these works indicates that institutions can mitigate the large gender vote gaps seen in the U.S. But because the local elections studied by Skorge (2021) and Kim (2019) were nonpartisan, neither work directly tests the link between electoral system, competition, and women's peripheral voting tendencies. ${ }^{1}$

This paper provides such a test by analyzing the gender gap before and after PR was adopted for parliamentary elections in Norway in 1919. Norway is an ideal case to study: women voted in several elections prior to the adoption of PR, and it is one of the few countries where voter eligibility and turnout were recorded separately for men and women. Armed with gender-specific data, I extend Cox, Fiva, and Smith's (2016) study of turnout before and after the Norwegian PR reform in order to precisely estimate how much the change in competition induced by PR affected the gender voting gap. ${ }^{2}$

Consistent with Corder and Wolbrecht's (2016) peripheral voting thesis, I find that majoritarian rules produce a large gender participation gap in

[^1]uncompetitive districts and a smaller turnout gap in competitive districts. In Norway, PR increased competition in nearly every district. ${ }^{3}$ Although women continued to participate at lower rates than did men, their relative turnout rose by more in districts that were previously less competitive. These findings suggest that women's vote supply was more elastic with respect to competition than was men's in both electoral systems, but that PR dramatically reduced the turnout gap.

Reflecting on these findings, the conclusion circles back to the larger comparative patterns on display in Table 1 and lays out several comparative questions to guide new research on women's electoral power in the early twentieth century.

## PROPORTIONAL REPRESENTATION AND PERIPHERAL VOTING

Unlike "core" voters, who are interested in public affairs and are regular political participants, "peripheral" voters have marginal interest in politics, which depresses their participation (Kaufmann, Petrocik, and Shaw 2008, 151). Only in exceptional political circumstances, such as high-salience races or when a charismatic candidate captures people's

[^2]imaginations, will peripheral voters be moved to vote. Therefore, a core voter's participation is relatively inelastic with respect to political context, whereas a peripheral voter has a greater elasticity of their vote supply.

The first generation of potential women voters was subject to many cultural, political, and economic forces that may have depressed women's political interest and increased the elasticity of their vote supply. In most of Europe and North America, women were enfranchised in the early twentieth century. ${ }^{4}$ Although the fight for the vote was a battle in which many women participated, women were also some of the staunchest antisuffragists, and many more were were not mobilized at all (Teele 2018a). In addition to having faced formal exclusion from politics, women had lower levels of education than later in the century, were less likely to participate in the labor force, and were less likely to be involved in party (and union) organizations than were men. Each of these factors can depress individual women's turnout and produce a gender gap in participation (Burns, Schlozman, and Verba 2001; Skorge 2021).

Yet women's structural position may not be the only, or even the most important, driver of the gender vote gap. Comparative scholarship argues that electoral institutions play an important role in catalyzing, or depressing, turnout (Barnes and Rangel 2014; Fowler 2013; Skorge 2021). Although majoritarian systems, like the United States, have many districts and lots of uncompetitive races, proportional systems have fewer districts and more evenly distributed levels of competition (Rodden 2019). Because turnout is sensitive to the level of competition, the differing competitive landscapes induced by PR or majoritarian rules will produce distinctive patterns of participation (Cox, Fiva, and Smith 2016; 2020).

Moreover, contemporary research shows that the gender turnout gap is lower in PR systems today (Beauregard 2014; Kittilson and Schwindt-Bayer 2012). Thus, although the US's majoritarian system produced substantial variation in the gender gap (Corder and Wolbrecht 2016), PR, which alters the dynamics of competition and turnout, might close the gap between men's and women's participation for early women voters (Skorge 2021). Theoretically, I expect a larger gender gap in less competitive districts under majoritarian rules but that the adoption of PR will increase women's turnout and attenuate the gender gap in districts that were previously less competitive. Additionally, I expect that the gender gap will fall by more in districts that were previously less competitive.

[^3]
## SUFFRAGE AND PROPORTIONAL REPRESENTATION IN NORWAY

Following the Napoleonic Wars, Norway was ceded by Denmark to Sweden. Although officially ruled by its easterly neighbor, Norway retained independent governing capacity through the parliament established in 1814. As in most of Europe, Norway's nineteenthcentury parliament provided limited franchise for some wealthy men, with a wide male suffrage law established only in 1898. A tide of nationalist sentiment erupted through the Norwegian countryside in the early twentieth century, leading to a permanent dissolution with Sweden in 1905. Thanks to the efforts of women suffragists aligned with center (the Liberals) and left (Social Democrats), many with connections to the nationalist movement, women demanded suffrage as a reward for their efforts to liberate their country. ${ }^{5}$ Women's enfranchisement followed a two-step process. Women who paid taxes were admitted to the parliamentary franchise in 1906 and voted for the first time in 1909 election. Then, on June 11, 1913, a paragraph added to constitution gave universal suffrage to all citizens over 25 years of age who had resided in country for five years. The 1915 election was the first with universal suffrage. ${ }^{6}$

During the early independence period (1906-1919), parliamentary seats were allocated to the Storting through single-member districts under plurality electoral rules, with a second-round runoff in the event that no candidate won in the first round (Cox, Fiva, Smith 2016). The Liberal and Conservative parties had benefited from disproportionality and second-round coordination in the majoritarian period, but they feared the radicalization and growth of the Labor Party, leading to a compromise in 1919 to move toward proportional representation under closed-list d'Hondt rules (which reward larger parties).

Together, women's suffrage and PR produced major changes. The left panel of Figure 1 shows Norway's electorate during this period, revealing that women became the largest group of eligible voters in the 1915 election. The right panel shows the evolution of turnout at the national level. As women's eligibility increased from 1912 to 1915, the average level of women's turnout, measured by the share of eligible women that cast ballots, fell. Thereafter, women's rates of participation grew faster than men's. Comparing the last election before PR (1918) with the first election after (1921), men's turnout increased by 6 points after the reform (from $70 \%$ to $76 \%$ ), whereas women's turnout

[^4]FIGURE 1. Women's Eligibility and Rates of Turnout

(a) Eligibility

(b) Average Turnout

Note: Eligibility (left) and rates of turnout (right) increased dramatically with PR in 1919 (gray line). Taxpaying women were eligible to vote in 1909. The first election with universal suffrage was in 1915. National turnout data come from Tingsten ([1937] 1975, 14) and Nohlen and Stöver (2010, 1448-50).
increased almost 10 points (from $50 \%$ to $60 \%$ ). ${ }^{7}$ Although a national gender turnout gap of 16 points remained after PR, the slightly higher growth rate in turnout among women, and women's numerical strength, translated into a big change in women's share among voters. Even amidst women's lower rates of participation, in 1921 women cast $47 \%$ of all ballots.

## EMPIRICAL APPROACH

To test the hypothesis that adoption of proportional rules can attenuate the gender participation gap, I replicate and extend Cox, Fiva, and Smith's (2016) analysis of Norway's national adoption of PR in 1919. I use the prereform district structure to compare outcomes before and after PR was adopted.

Data Structure: Before PR, most of Norway's 700 municipalities aggregated into 126 single-member districts. ${ }^{8}$ After PR, the number of districts fell to 31. Cox, Fiva, and Smith (2016) linked most municipalities to the prereform district structure, leaving a balanced panel of 92 units that can be tracked before and after PR was adopted nationally in 1919. Excluded from this panel is Oslo (formerly Kristiania) and several other large cities, which were structured as single municipalities that housed several SMDs in the pre-PR-period districts. See appendix D for a discussion of why these exclusions should not change my results.

Competition: Competition in both periods is measured using something akin to the margin of victory between the winner and the runner-up. In the majoritarian

[^5]period, Norway used a runoff system, so competition is measured as the final-round average margin of victory between the winner and the closest runner-up. In the PR period, the margin is the minimal number of additional votes one party would have had to win to gain another seat, scaled by the number of votes cast. A higher margin indicates a less competitive district.

Turnout: Following Cox, Fiva, and Smith (2016), I use turnout in whatever marked the final round of voting as the main measure of participation. However, for each election and municipality, I add the Norwegian Electoral Service's gender-specific turnout records, which include eligibility and the number of votes cast, by men and women separately. ${ }^{9}$ My turnout measure calculates, separately for men and women, the total number of votes cast in the final round, divided by the eligible electorate in each group. ${ }^{10}$

## Aggregate Turnout and Competition before and after PR

In Norway, competition and turnout were much more variable across districts prior to the adoption of PR (1909-1918) than after (1921-1927). Using the 92 comparable districts, I found that 84 became more competitive, and eight less competitive, with the adoption of PR (Appendix B). Figure 2, which replicates Cox, Fiva, and Smith's (2016) Figure 4, uses kernel density plots to show this dramatic change in competition: the average

[^6]
## FIGURE 2. Norwegian Districts Became More Competitive after PR



Note: Kernel density plots of district-level competition before (1909-1918) and after (1921-1927) PR; Cox, Fiva, and Smith (2016).

## FIGURE 3. Distribution of Turnout



Note: Women's turnout was more variable than men's both before and after PR. Some women voted in 1909, but universal suffrage began with the 1915 election.
margin of victory was much larger and the variance across districts more substantial before PR. The districts that became less competitive were among the most competitive districts in 1918 (see Appendix B).

A similar story emerges for the distribution of turnout. Figure 3 replicates and extends Cox, Fiva, and Smith's (2016) Figure 2. In panel (a), prereform turnout varies considerably across districts, with a higher median than mean. The more peaked shape of the distribution postreform, with a mass point to the right of the prereform curve, shows that turnout variability fell while turnout rose after reform. The center and right panels of Figure 3 show turnout by gender. Women's turnout was more variable before (s.d. 19.3) and after reform (s.d. 11.5) than men's (s.d. 12.2 before, 6.7 after). After the reform, the variance in women's turnout fell by more than men's, yet women's participation remained more heterogeneous.

## Gender, Turnout, and Competition

To provide visual evidence of how turnout changes across reform, Cox, Fiva, and Smith (2016) categorize prereform districts by the level of competitiveness, measured by the average margin of victory in four elections prior to reform, and then divide districts into six groups from the most competitive (Q1) to the least (Q6). The dashed line in Figure 4 replicates their Figure 6 of average of district level turnout. In the top left panel, turnout in the most competitive prereform sextiles went from $69 \%$ to $67.7 \%$ after reform, but in all remaining sextiles, turnout increased "with successively larger increments observed in successively less competitive districts" (1257). Figure 4 shows that women's turnout tended to move in parallel to men's during both periods.

Figure 4 also provides the district-average gender gap in turnout before and after the reform. Under

FIGURE 4. Average Voter Turnout 1909-1927, by Gender and Pre-PR Average Competition


Note: The dashed line is average district turnout for all voters. The numbers represent the gender gap in turnout (women-men).
majoritarianism, the gender gap in turnout was 16 percentage points in the most competitive districts and 29 percentage points in the least competitive districts. After PR, the gender gap in turnout shrunk in most districts. The least competitive saw the gap shrink to 21 percentage points (an 8-point decrease), whereas the most competitive actually saw the gender turnout gap rise one point (to 17 percentage points). Thus, in the first election after PR, both men's and women's participation increased in previously uncompetitive districts, but the gender gap shrunk substantially.

How did the dramatic change in the competitive landscape after PR influence the dynamics of turnout? Competition is measured differently in majoritarian than in proportional elections, so I conceptualize the change by ranking the most competitive to least competitive before and after the reform. Figure 5 shows how the growth in women's turnout minus the growth in men's turnout changed with a district's rank in competition. In districts that became more competitive, women's rate of participation increased faster than men's. When competition increased by a standard deviation (a rank change of 39), average women's turnout rose 5 percentage points more than men's.

Appendix C presents three more tests. Figure A. 6 compares the rate of increase in women's participation in previously uncompetitive districts (Q6) with that in competitive districts (Q1), showing relatively faster
growth for women in Q6 ( $p=0.0067$ ). Figure A. 7 and Table A. 2 (column 5) show that party entry is not correlated the change in women's participation before and after the reform. And Table A. 2 presents linear regressions with heteroskedasticity robust standard errors that separately regress the change in women's and men's turnout using different measures of competition including change in a district's rank, the average margin pre-PR, the competition rank in 1921, and the margin of the last allocated seat averaged post-PR. The regressions show that women's turnout rose faster than men's did when competition grew by more. ${ }^{11}$

To summarize, after PR was adopted, the gender gap in turnout attenuated more in districts that were previously less competitive. This reveals both that women's participation was more elastic with respect to competition and that participation of the same voters can be dramatically different depending on electoral incentives.

## CONCLUSION

Gender has been at the periphery of research on political development for too long. Because electoral

[^7]
## FIGURE 5. Turnout Effects of Change in the Competitive Landscape



Note: Women's turnout grew more rapidly than men's in districts where competition increased after PR.
rules influence the behavior of old and new groups of voters in distinctive ways, scholars must pay closer attention to how historical electoral reforms shaped patterns of participation (Skorge 2021). In this paper, I showed that the national adoption of PR in Norway increased women's participation in parliamentary elections and attenuated the gender gap across districts, especially in districts that were less competitive under majoritarian rules. Because women were the largest group in the electorate, lower rates of participation did not vitiate their power: in 1921, they cast $47 \%$ of all votes, suggesting their centrality to electoral outcomes.

These findings raise broader questions about women's historical political behavior. First, if PR produced smaller gender turnout gaps, how did the sequencing of suffrage and PR affect aggregate turnout patterns after suffrage? Table 1 shows that for 21 OECD countries, seven never adopted proportional rules ( $33 \%$ ), five adopted PR and women's suffrage in the roughly same year ( $24 \%$ ), and the reforms were separated by many years in five countries ( $28 \%$ ). In three countries, PR was adopted either right before (the Netherlands) or right after (Iceland and Norway) women's suffrage. If, like in the U.S., early women voters displayed peripheral voting tendencies in other winner-takes-all settings, countries that had many uncompetitive districts and that never adopted PR, or did so much later, may have seen a substantial decline in aggregate turnout after women won the vote and much lower participation of women in other realms of political life. Alternatively, countries where PR was already in place or that adopted it shortly after suffrage may have seen less dramatic turnout gaps as those witnessed in the U.S. context.

Second, if early women voters were socialized in an electoral context with proportional rules, would a subsequent transition to less-inclusive majoritarian rules produce the peripheral voting tendencies seen in women socialized under majoritarian systems? A handful of countries in Europe volleyed between PR and winner-takes-all rules. ${ }^{12}$ A study that evaluates whether women maintained high levels of participation and the gender gap remained low, even after a transition to majoritarian rules, would provide insight into the roles of socialization and habituation versus electoral context in driving the elasticity of women's vote supply.

Finally, if proportional electoral systems reduce the large gender gaps in participation produced by uncompetitive races and the elasticity of vote supply is malleable, then the very idea of a "peripheral" voter bears reexamination. Perhaps a peripheral voting tendency is not as much a characteristic of individuals as a characteristic of institutional alienation from politics. The first generation of women voters may have behaved peripherally in majoritarian contexts because they were not considered central to the electoral project of parties and politicians. In this case, systems, and not proclivities, make voters peripheral.

## SUPPLEMENTARY MATERIALS

To view supplementary material for this article, please visit http://doi.org/10.1017/S0003055422000788.

[^8]
## DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study are openly available at the American Political Science Review Dataverse: https://doi. org/10.7910/DVN/QEUF67.

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## CONFLICT OF INTEREST

The author declare no ethical issues or conflicts of interest in this research.

## ETHICAL STANDARDS

The author affirms this research did not involve human subjects.

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[^1]:    ${ }^{1}$ By offering a direct test of the link between competition and the gender gap, this paper complements the work of Skorge (2021), who studies women's share of turnout rather than the gender gap and who proxies for competition by using turnout (because party labels were not yet common in municipal elections). See Skorge (2021, fn25 and appendix 15).
    ${ }^{2}$ See appendix A.

[^2]:    ${ }^{3}$ See appendix B.

[^3]:    ${ }^{4}$ Teele (2018a; 2018b) provides a strategic account of suffrage, arguing that political cleavages, electoral competition, and information provided by the suffrage movement explain variation in suffrage adoption across countries. Barnes (2020) shows that legislators in New Zealand used gendered ideas about women's disposition to inform their calculations, whereas Castillo (2022) studies Ecuador, Uruguay, and Peru, arguing that normative motivations must align with strategic motivations for franchise reform.

[^4]:    ${ }^{5}$ In anticipation of a plebiscite to dissolve the union with Sweden, the National Woman Suffrage Association had prepared a petition with 300,000 signatures in support of seceding, mobilizing nearly all adult women in the country. See Blom (1980) and Hagemann (2009).
    ${ }^{6}$ Citizens on poor relief were suspended from voting until 1919. In 1918, on average $1.6 \%$ of eligible women voters were suspended compared with $0.8 \%$ of men. The number of eligible voters is not dramatically changed if poor-relief suspensions are subtracted. In 1920, the voting age was lowered from 25 to 23 . As I use eligibility as the denominator, the age change is not a concern.

[^5]:    ${ }^{7}$ When only wealthy women voted in 1909 and 1912, turnout was $55 \%$ and $57.7 \%$, respectively.
    ${ }^{8}$ From 1909 to 1915, 123 districts elected a single member, growing to 126 in the 1918 election (Cox, Fiva, and Smith 2016, 1253).

[^6]:    ${ }^{9}$ Post-PR the government recorded mail-in ballots separately from in-person ballots. I sum these two as a measure of total votes cast.
    ${ }^{10}$ Unlike Cox, Fiva, and Smith (2016), the denominator is not valid votes because I cannot discern approvals or rejections by gender. Luckily, few ballots were rejected: $1.5 \%$ on average and $2.5 \%$ at the 90th percentile. Appendix A shows that CFS's results are indistinguishable using my measure of turnout.

[^7]:    ${ }^{11}$ Appendix E shows that women's turnout growth is uncorrelated with growth in leftist votes.

[^8]:    ${ }^{12}$ Roberts, Seawright, and Cyr 2013 outline a large set of countries in the 1990s that adopted less-inclusive rules.

