Where Did the Green Voters Go?
Commensurability Between Green Party Vote Shares and Public Support for Climate Policy*

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Abstract

This article challenges the prevailing interpretation that declining Green party support signifies waning public backing for climate policy. In response to narratives about a "green backlash" following recent electoral gains by the far right, the paper develops a theoretical framework to explain why pro-environmental voters may strategically support center-left social democratic parties instead of the Greens as a means of preventing the right from winning election. Descriptive analysis of panel data from the Netherlands confirms that switchers away from the Greens predominantly vote for social democrats rather than far right parties, and as Green and social democratic parties converge in environmental policy proposals, voters are less likely to back Green parties in a strategic vote. These findings suggest that we may draw erroneous inferences about public preferences by interpreting Green vote shares as an indicator of climate policy demand and counterintuitively imply that dissolving Green parties could promote green objectives.

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The results of the 2024 European Parliament elections demonstrated that the continent had undergone a rightward shift, with far right parties enjoying particular electoral success. In a dominant narrative, popular observers commented that the far right's gains came at the expense of the Greens,[1] arguing that the election results signified a rebuke to green policies[2] and that the green transition's burden on households proved to be too costly to support mainstream parties.[3] This phenomenon was especially notable in Germany and France, but is part of a larger trend in which Green parties have suffered in recent national elections in Germany, Austria, and Belgium, where far right parties are now the largest or second-largest bloc in national legislatures. More broadly, scholars have also discussed a brewing "green backlash" in which there is growing support from voters and parties alike to resist, repeal, and rollback climate policies (Bosetti et al. 2025). If such a backlash is occurring, where did voters casting their ballots for pro-environmental parties go? And to what extent can social scientists use Green party electoral returns to infer the public's appetite for climate policies, as is common practice (e.g., Hoffmann et al. 2022)?

This paper argues that by solely considering electoral returns of Green parties, especially in a concomitant bundled comparison with far right surges, we may draw erroneous inferences about public demand for climate policy. I develop a simple decision-theoretic framework that explains two essential components of the supposed green backlash—the rise of the far right and the decreased electoral support for the Greens—in which individuals with pro-environmental policy preferences that align with a Green party may nevertheless vote for a different party, namely a center-left social democratic party. This works through a

[1]Raf Casert, Lorne Cook, and Samuel Petrequin, "The far right's election gains rattle EU's traditional powers, leading Macron to call snap polls." *AP News*, June 10 2024, https://apnews.com/article/eu-election-results-european-parliament-acd0ceef91d198cf5e9ee695f394b28c.

[2]Darel E. Paul, "Europe Turns Against the Greens." *Compact Magazine*, June 11 2024, https://www.compactmag.com/article/europe-turns-against-the-greens/?ref=compact-newsletter.

[3]Lara Williams, "Le Pen, Meloni and the Populist Climate Pushback." *Bloomberg*, June 12 2024, https://www.bloomberg.com/opinion/articles/2024-06-13/europe-s-ascendant-right-is-a-new-hurdle-to-climate-action.

temptation to vote strategically by coordinating on the political force most likely to defeat anti-environmental parties, here modeled as a rightist or far right party (cf. Myatt 2007; Fisher and Myatt 2017), *holding fixed a voter's preferences for climate policy.* That is, since voters may vote sincerely on the basis of policy as well as tactically on the basis of affecting the electoral outcome, observing diminished support for the Greens need not mean that voters have soured on pro-environmental policies. Put differently, a decrease in Green party vote share from election to election need not be informative about individuals' underlying preferences for climate policy. Moreover, the theoretical argument demonstrates the difficulty with which pro-environmental voters are likely to switch their electoral allegiances to the far right, which pushes back on the idea that far right parties have benefited from voters who are disaffected by exposure to the green transition across the ideological spectrum (e.g., Heddesheimer, Hilbig and Voeten 2024; Voeten 2025).

The theory produces several empirical implications, which are examined descriptively within the context of the Netherlands using panel data from 2008-2024. First, topline results indicate that voters who previously supported the Greens overwhelmingly either remained loyal or switched their votes to the center-left Labor Party (PvdA), rather than defecting to the far right. Vote switching from the Greens to the far right Freedom Party (PVV) was exceedingly rare, suggesting that declining Green party vote shares are not necessarily indicative of a broader backlash against climate policy as the far right has co-opted stances of anti-environmentalism (Gemenis, Katsanidou and Vasilopoulou 2012; Huber et al. 2021; Dickson and Hobolt 2024). Second, to probe the strategic voting incentive, I show that voters were more likely to abandon the Greens and favor the PvdA as their environmental policy proposals converge. This result emerges theoretically because when parties' policy proposals are similar, voters realize that they should coordinate around a single party in order to prevent the right from winning the election, which counterintuitively might mean that pro-environmental voters forsake a vote for the Greens (cf. Abou-Chadi 2016; Abou-

Chadi and Kayser 2017). Finally, shifts toward more conservative environmental stances by the Greens and the PvdA had asymmetric effects. The Greens suffered electorally when they moderated their positions, which benefited the PvdA—similar to the result above about platform convergence—while the Greens enjoyed more electoral support when the PvdA became more environmentally conservative, likely due to green voters sincerely expressing their preferences at the ballot box.

This article has important takeaways for climate politics as scholars seek to understand how voters react to environmental reforms, or the emergence of "green voting" (e.g., Stokes 2016; Bolet, Green and González-Eguino 2024; Colantone et al. 2024). A common proxy for the public's preferences or demand for climate policy is the share of voters supporting Green parties; scholars posit that understanding support for these parties helps in unlocking political barriers to addressing the threats of climate change (Grant and Tilley 2019; Papp 2022; Clegg and Galindo-Gutierrez 2025). Conventional wisdom holds that Green electoral successes are indicative of increased support for the green transition, while their failures represent backlash to climate policies (Schumacher 2014; Hoffmann et al. 2022). However, I argue generally that electoral institutions can moderate this interpretation, as voters may have incentives to vote strategically to defeat anti-environmental or right-wing parties. In such a scenario, Green party vote share might *under*estimate public support for climate policy, even holding fixed demands for environmental remediation.

To be clear, the theoretical framework and subsequent empirical design do not seek to provide a general equilibrium explanation for the phenomenon of voting for Green parties. For example, I do not consider how parties select their climate policy proposals given the proposals of other parties and the downstream possibilities of tactical voting. Rather, I put forth a mechanism to explain why extant studies that focus on Green party vote shares might have weak commensurability with public sentiment for green policy—because voters may instead favor other center-left parties with greater odds of electoral victory—and pro-

vide descriptive evidence consistent with this mechanism—that voters are highly unlikely to switch votes across elections from the Greens to the far right, and that the Greens are a less attractive electoral choice when center-left parties offer similar environmental agendas.

The evidence of tactical voting documented in this article has important implications for the strategic future of Green parties and national pro-environmental blocs. As Green and social democratic parties increasingly converge in their climate policy positions, maintaining separate electoral identities may inadvertently fragment the pro-climate vote and enable far right victories. To counter this dynamic, Green parties may find it advantageous to pursue electoral alliances with mainstream center-left parties. This consolidation reduces voters' incentives to vote strategically against the Greens in favor of larger parties, ensuring that pro-environmental preferences are more effectively translated into national policies.

Related Literature

This research note engages directly with studies that examine "green voting" by employing Green party vote share as a proxy for the public's climate policy support, as well as the literature on the rise of the far right due to a potential "green backlash." Scholars increasingly interrogate public willingness to support environmental reforms by examining the electoral support for Green parties (e.g., Baccini and Leemann 2021; McAllister and bin Oslan 2021; Garside and Zhai 2022; Hoffmann et al. 2022; Damsbo-Svendsen 2024; Hilbig and Riaz 2024; Kronborg et al. 2024), which is *prima facie* sensible given these parties' historical roots as single-issue, outsider parties (Spoon, Hobolt and De Vries 2014). Contrasted with accounts that stress individual characteristics and personal experiences (see Drews and van den Bergh 2016, for a review), or macro-level determinants of green voting like economic change (Kahn and Kotchen 2011; Bez et al. 2023; Cavallotti et al. 2025), this paper highlights how electoral pressures affect green voting. However, contrary to extant accounts, I contend that multiparty competition can obfuscate the link between Green party vote share and the con-

ceptualization of the public's support for climate policy because voters may cast their ballot strategically.

Recent studies have argued that far right parties are gaining electoral ground based on their opposition to the green transition (Huber et al. 2021; Bosetti et al. 2025). There is some aggregate evidence for this assertion (e.g., Otteni and Weisskircher 2022; De Groote, Gautier and Verboven 2024; Heddesheimer, Hilbig and Voeten 2024; Voeten 2025), and far right parties increasingly incorporate anti-climate positions into their platforms in an effort to paint the green transition as an imposition of costs by technocrats onto the working class (Bonikowski and Gidron 2016; Dickson and Hobolt 2024; Schwörer and Fernández-García 2024). While these distributional consequences of climate policies could hurt mainstream left parties (Kono 2020; Bolet, Green and González-Eguino 2024), I contribute to a nascent literature finding that vote *switching* from pro-environmental or center-left parties toward the far right is exceedingly unlikely (Abou-Chadi and Wagner 2024; Bischof and Kurer 2024), which qualifies the extent of the backlash (Abou-Chadi et al. 2024).

It should be noted that there are methodological challenges with studying such a backlash, as it is often difficult to disentangle turnout effects from vote switching, a persistent ecological fallacy (Cohen, Krause and Abou-Chadi 2024). This study focuses on the latter channel, which, by employing panel data, overcomes these concerns by examining within-individual behavior. While other work employing individual-level data confirms some subsets of the electorate are switching toward far right parties—like renters who may bear the brunt of higher energy bills (Voeten 2025) or those exposed to "brown" sectors (Heddesheimer, Hilbig and Voeten 2024)—the existing literature generally fails to find that this is at the expense of support for greener alternatives.

Finally, this paper draws on arguments from the literature on tactical or strategic voting, a phenomenon documenting that voters may cast their ballot for a party other than the one with which they are most closely ideologically aligned (Duverger 1954; Downs 1957). Often-

times individuals cast strategic votes if they believe their most preferred party is unlikely to win an election (Cain 1978); from the perspective of climate-motivated voters, this may entail voting for a party with a greater chance of winning, like a center-left party, if the Greens are expected to have a poor electoral showing. Myatt (2007) demonstrates theoretically how strategic voting arises in equilibrium when voters need to coordinate around a single candidate to overcome a mutually disliked status quo. Most extant empirical scholarship investigates strategic voting in majoritarian systems (e.g., Cain 1978; Alvarez and Nagler 2000; Blais et al. 2001; Kawai and Watanabe 2013; Fisher and Myatt 2017), as the canonical work of Duverger (1954) emphasizes strategic voting as an explanation for the dominance of two-party systems in these contexts. Theories of strategic voting have also been advanced for proportional representation systems (Cox and Shugart 1996; Slinko and White 2010); this paper builds on these studies by providing evidence consistent with tactical within a proportional representation system, the Netherlands. By integrating these ideas into discussions of climate politics, this paper demonstrates how the vote share of Green parties becomes a muddled empirical representation of the public's willingness to support environmental policies.

The rest of this paper proceeds as follows. I first present some recent voting trends from Green parties in select European countries to document significant variation in the trajectory of Green successes in the face of a surging far right. These trends also show suggest how vote splintering across Green and social democratic parties might enable far right victories. Next I describe a decision-theoretic framework to show how pro-environmental voters can vote strategically for social democrats even if they are most ideologically aligned with the Greens, thereby weakening the commensurability of Green party vote share as an indicator of public support for climate policies. Finally, I examine the empirical implications of the theory and discuss the consequences of multiparty competition for green voting.

Recent Trends in Green Voting

This section establishes patterns in voting behavior across several countries in Western Europe. I interrogate the vote shares of Green parties and far right parties. Additionally, as will be made clear in the theoretical framework below, I also examine the trends of voting for center-left, social democratic parties—a plausible electoral alternative for voters with pro-environmental preferences.

Figure 1 depicts the vote share for Green, social democratic, and far right parties in six European countries (Austria, Belgium, France, Germany, Netherlands, and Sweden) between 1990 and 2025 in both national parliamentary and European Parliament elections. I selected these countries to illustrate the trends because they cover a large geographical portion of the continent and they are places where Green parties have been in government or have garnered substantial shares of the vote, thereby making a Green presence a nontrivial portion of the electorate. See Table A.1 for the list of parties used to construct the figure.

Several key trends emerge. First, it is evident that in all countries, far right parties have increased their vote shares sizably over time, and the social democrats have been losing ground. This trend is well-documented as mainstream parties have struggled in the face of anti-establishment parties across Europe (Colantone and Stanig 2019; De Vries and Hobolt 2020). There is clear variation in the magnitude of these shifts, as social democratic parties continue to be the dominant force in countries like Sweden, while far right parties have become the largest party in countries like Austria, Belgium, and the Netherlands. In five of six countries analyzed in the figure, the far right party has surpassed the vote share of the social democrats in the most recent national legislative elections. Additionally, in almost all elections, the far right has earned a larger vote share than the Greens.

The electoral success of Green parties is more nuanced, winning 9.3% of the vote on average between 1990 and 2025. Interestingly, Green parties appear to fare better in European

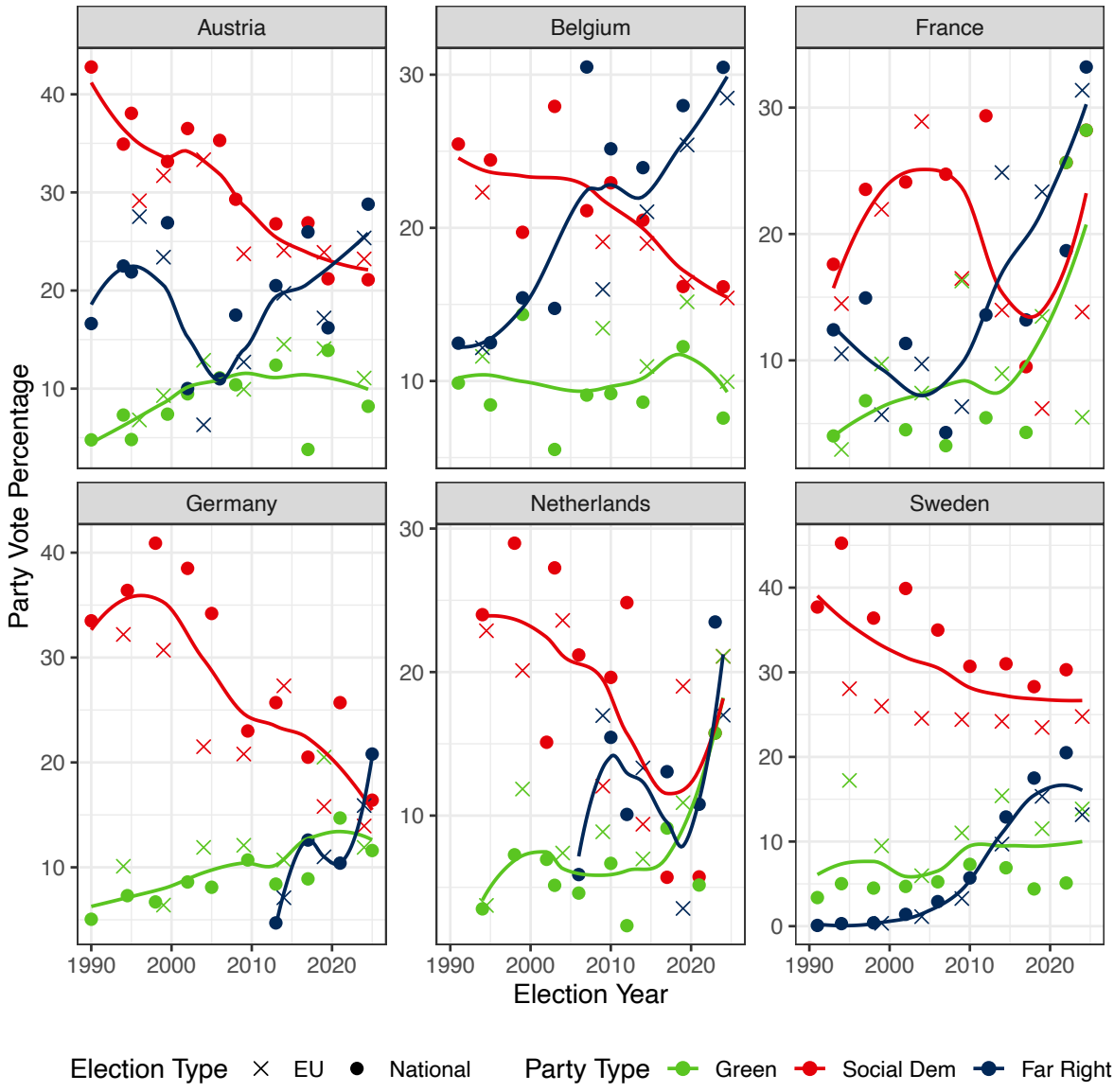

Figure 1: Voting Trends for Green, Social Democratic, and Right Parties

Parliament elections compared to national elections (see Table A.3) despite losses in the 2024 European Parliament elections. Those losses appear to be driven by results in Germany and France, although the Dutch Greens won a plurality of the Netherlands' seats. This is perhaps because the European Commission and European Parliament have significant leeway in shaping continent-wide climate policies. This dynamic is contrary to the notion that EU

elections are "second order" (Reif, Schmitt and Norris 1997), as Brussels has consolidated its environmental policy authority over time.

Recently, Green parties and social democratic parties have proposed electoral fusion tickets or alliances in an attempt to consolidate pro-environmental electoral support and prevent the far right from forming a government. This endeavor, observed in national elections in France in 2022 and 2024 and in the Netherlands in 2023, has increased the share of the electorate that functionally supports green objectives. On the figure, this is shown by the convergence of the green and red lines in these countries. Ultimately, this bid was successful in France, where the New Popular Front became the largest bloc in the National Assembly and prevented the far right National Rally from forming a government in 2024, but not in the Netherlands, where the far right Freedom Party now leads a right-wing coalition after the 2023 election. Upon the creation of the Dutch joint Green-Labor list, leader Frans Timmermans stated "the climate crisis, growing inequality, a failing government, international security: they require a decisive approach that can count on broad support among the population,"[4] as a rationalization of the two parties' consolidation. Moreover, Timmermans has recently argued for the formal merger between the GreenLeft and the Labor parties, claiming that "the fragmentation works to our disadvantage. If you really want to make a fist against the right, the left must unite as much as possible."[5] As we shall see, this type of electoral fusion may be beneficial from the standpoint of preventing strategic voting and further fracturing the support of pro-environmental voters across Green and social democratic parties, the threat identified in the theory.

More systematically, Figure 2 investigates the relationship between Green-social democratic alliances and far right voting at the subnational level. I use national parliamentary

[4]Eddy Wax, "EU climate chief Timmermans set to lead left-wing alliance into Dutch elections." *POLITICO*, August 11 2023. https://www.politico.eu/article/eu-climate-chief-frans-timmermans-all-but-set-to-lead-socialist-green-alliance-into-dutch-elections/

[5]Nynke de Zoeten, "Frans Timmermans: new party as soon as possible." *NOS*, February 4 2025. https://nos.nl/nieuwsuur/artikel/2554499-frans-timmermans-zo-snel-mogelijk-nieuwe-partij

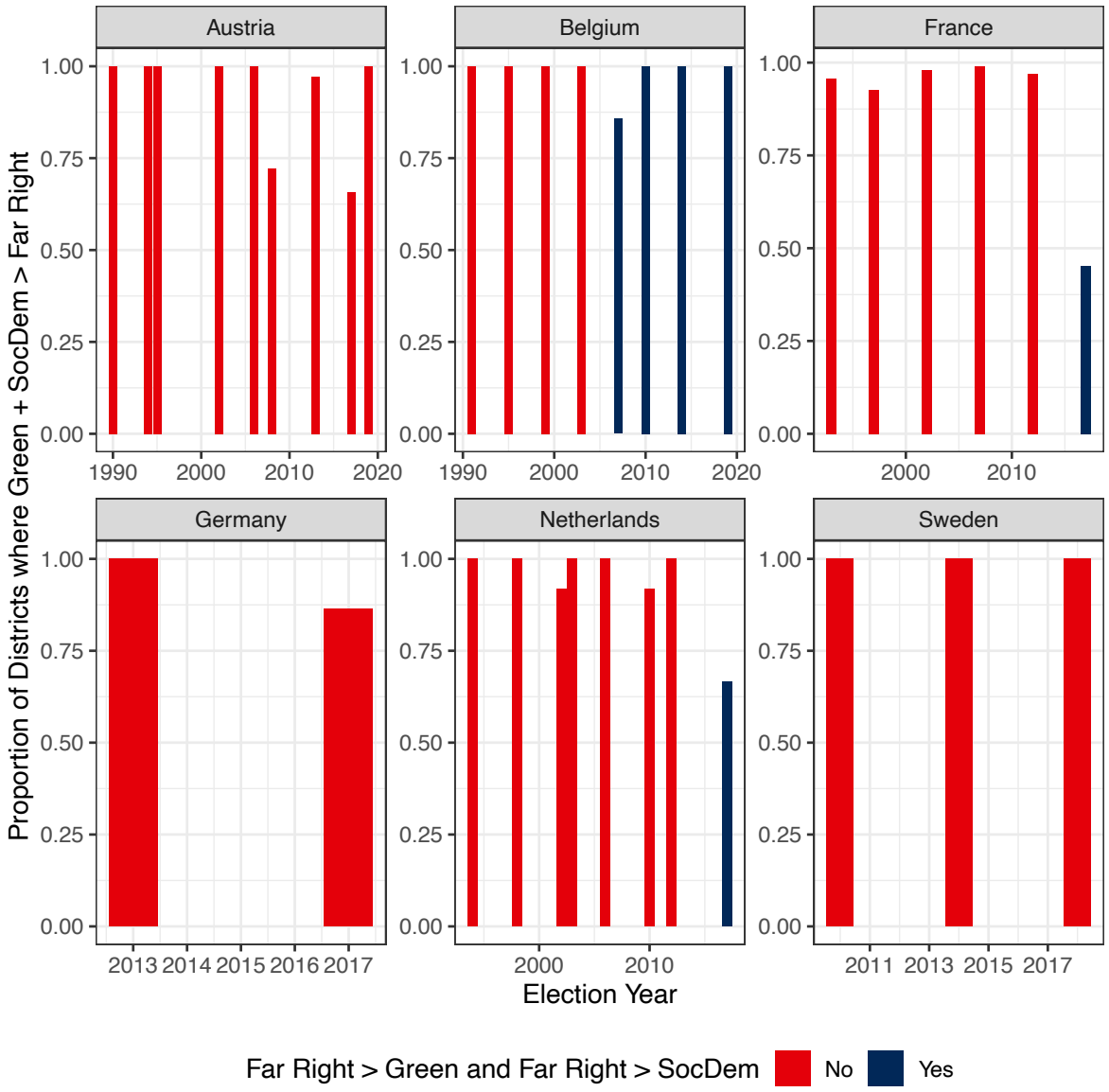

Figure 2: NUTS Units where Green + Social Democrat Votes Beat Far Right

election data from Schraff, Vergioglou and Demirci (2023), who collect party vote shares at the NUTS-3 (NUTS-2 for Netherlands) level. For each national election, the figure depicts the proportion of NUTS units for which the combined vote share of Green and social democratic parties exceeded the far right vote share in that NUTS unit. Dark blue columns represent elections in which the far right won a larger vote share than both the Green party

and the social democratic party individually. As the figure shows, a combination of Green and social democratic votes defeats the far right in nearly all NUTS units through the 1990s and 2000s. In fact, in all but one election—the 2017 legislative elections in France—these two electoral forces beat the far right in a majority of units. This is true even as the far right begins to gain ground and wins a greater share of votes than the two constitutive parties in countries like Belgium, France, and the Netherlands. Although weakening, the share of the vote across social democratic and Green parties is enough to overcome the far right's electoral ascendance, but ultimately one party becomes the largest with privileges like government formation. Such an effect motivates the possibility of strategic voting as there exists pro-environmental electoral will to defeat the far right.

A Theory of Tactical Voting

I develop a simple decision-theoretic framework of tactical voting to explain the emergence of a pro-climate policy electorate without explicit votes for a Green party. Voters demanding green policies may support a social democratic party instead of the Greens if the former has a better chance of winning the election. Additionally, I also contend that any vote switching that we observe from pro-environmental parties to far right parties should occur on the basis of other electorally salient dimensions, like anti-immigration policy or anti-globalization policy, rather than a "green backlash." This section describes the intuitions of the model, with a fuller elaboration–along with all formal results, proofs, and comments on the model's assumptions—provided in the appendix.

This structure draws on Fisher and Myatt (2017). There are $n + 1$ voters, where I focus on the decision of a single voter 0. Voters choose to vote for one of three parties: a Green party G, a Left/Social Democratic party L, and a (far) Right party R indexed as $j \in \{G, L, R\}$. Each party advances a platform on climate change policy $x_j \in \mathbb{R}$ and

suppose that $x_G < x_L < x_R$. Voters have ideal points x_i and a quadratic utility function over policy, $v(x_j, x_i) = -(x_j - x_i)^2$. I focus on the substantively interesting case where voter 0 has an ideal point x_0 satisfying $v(x_G, x_0) > v(x_L, x_0) > v(x_R, x_0)$. This means that voter 0 would vote for the Green party if she voted sincerely. To economize notation, let $u_j = v(x_j, x_0)$. The voter is both instrumental and expressive: her payoff for voting for party j is $\mathbb{1}_{j \text{ wins}} u_j + \varepsilon_j$. Think of ε_j as additional party-specific payoff that represents the value of party j on all electorally salient dimensions besides climate policies.

The key driver of the optimal decision is that voter 0 does not know the electoral intentions of the other n voters—the probabilities that other voters choose each party are random variables, and so the vote shares for each party from voter 0's standpoint are stochastic—and thus must form expectations about when her vote will affect the electoral outcome. This subsequently affects her interest to vote strategically. Indeed, given voter 0's preferences, the primary tension she faces is whether to support her ideologically preferred party, the Greens, or a party with which she is less ideologically aligned but believes has a greater chance of winning the election, the Social Democrats. Unless valence shocks ε_j are sufficiently large, voter 0 will never support the Right as that vote is always dominated on policy grounds by a vote for the Greens. Hence, we should observe very little electoral support for far right parties from voters with pro-environmental preferences.

To form her optimal voting decision, voter 0 weighs the policy (and valence) payoffs associated with each party against her beliefs that her vote will sway the electoral outcome. This latter factor depends on her expectations about the behavior of other voters, and critically boils down to the probability that her vote could break a tie between parties. As shown in Proposition A.1, voter 0 will vote sincerely for the Greens whenever, given her ideal point, her relative preferences for the Greens over the Social Democrats—the tradeoff between the willingness to sacrifice some policy gains by switching her vote from the Greens to the Social Democrats in order to prevent the Right from winning—dominate her beliefs in

the value of a strategic vote. Otherwise, if she believes that a vote for the Social Democrats could prevent the Right from winning the election—a diminished confidence in the likelihood that the Greens could take the electoral lead—then voter 0 casts her vote for the Social Democrats over the Greens, supporting the party that has the greatest chance of winning the election. Note that switching her vote from the Greens to the Social Democrats does not require voter 0 to become "less green" in her preferences for climate policy, as her own ideal point x_0 is factored into the optimal vote decision. Rather, she finds that any policy utility loss between the Greens and Social Democrats Democrats is acceptable enough to block the Right from winning.

The strength of the incentive to vote strategically depends on several factors. Counterintuitively, if the Greens and the Social Democrats are relatively aligned in their stance on climate policy—the difference in policy utility $u_G - u_L$ is small—then voter 0 becomes more likely to cast a tactical vote. In this case, the main consideration is simply which of the two parties, the Greens or the Social Democrats, is likely to be in the lead to defeat the Right. Conversely, sincere voting is optimal when the Greens and the Social Democrats are distinct in their climate platforms, because the policy value of an unambitious Social Democratic party is low. This suggests that strategic voting by Green voters should be more likely, all else equal, in electoral environments where the Greens and the Social Democrats have relatively little difference in their climate policy proposals.

There are asymmetric effects on voting decisions when parties become more conservative in their environmental policy proposals. For the Greens, becoming more conservative (i.e., shifting x_G rightward) moves their policy platform closer to the Social Democrats, which opens the Greens up to losing more supporters from tactical voting for the Social Democrats. Counterintuitively, extreme pro-climate voters may cast their vote for a more mainstream party as the Greens moderate. By contrast, if the Social Democrats become more conservative, moving closer to the Right in their environmental policy proposals, then

the voter's preferences for the Greens on policy become more accentuated and therefore makes the Greens more attractive. This weakens both the strategic and policy value of selecting the Social Democrats over the Greens and reflects sincere voting for voter 0.

The model provides one explanation to the question of where Green voters may have gone: in an attempt to defeat right-wing parties, pro-environmentalist voters may instead back the Social Democrats. This theoretical framework provides the following observable empirical implications:

1. Pro-environmental voters, if not voting for Green parties, should be more likely to vote for social democratic parties over far right parties.

2. Increasing the congruence between Green and social democratic environmental policy proposals should decrease the chances of voting for the Greens and increase the chances of voting for the Social Democrats.

3. Making the Greens more conservative decreases the chances of voting for the Greens while making social democratic parties more attractive; making social democratic parties more conservative decreases the chances of voting for the Social Democrats while making Green parties more attractive.

Vote Switching in the Netherlands

To examine the model's implications, I study voting in the Netherlands. The Netherlands presents as a pragmatic case because it is one of the only countries in Western Europe with readily available individual-level panel data so that we can analyze voting patterns over time. Additionally, in the 2023 election, the center-left Labor (PvdA) and Green GroenLinks (GL) parties recognized the need for strategic coordination against the far right Freedom Party (PVV) and ran together as a joint list, suggesting that concerns over strategic voting might

be at play. See De Vries (2018), Harteveld et al. (2022), and Voeten (2025) for further context about the rise of the PVV and the far right in the Netherlands.

As an overview, Figures 3 and 4 show that support for the PVV is on the rise in the Netherlands since its inception in 2006. The simplex plots shown in Figure 3 demonstrate that, at the municipality level, the PVV has enjoyed electoral dominance over both the PvdA and the Greens, as the number of dark blue points has overtaken both the red and green points.[6] Figure 4 further shows that the share of municipalities in which the PVV is winning more electoral support than the PvdA and the Greens is increasing over time, and the share of municipalities where the combined vote shares of the Greens and the PvdA surpassing the PVV is decreasing over time—from 100% in 2012 down to just 13% in 2023 (similar to Figure 2).

To probe the model's implications, I employ the Longitudinal Internet studies for the Social Sciences (LISS) panel dataset, a true probability sample of households in the Netherlands (Scherpenzeel 2011) covering 2008-2024.[7] The LISS panel asks respondents about turnout, vote choice in the most recent election, as well as sympathies for various Dutch political parties and their leaders (it is always the same individual within the household who answers the survey). This dataset covers potential voting behavior in six different elections (2006, 2010, 2012, 2017, 2021, 2023).

Given responses in time t, the outcome I focus on is voting behavior in the next election $t+1$. Unfortunately, these surveys do not ask respondents about their preferences on environmental protection. To capture environmental preferences x_0 in reduced form, I leverage the panel structure of the data. In time t, I measure whether respondents have voted for the

[6]Each point on the plot represents an electoral outcome in a Dutch municipality. The coordinates of the point represent the weighted average of PVV, PvdA, and GL vote shares in that municipality. A dot closer to a party's vertex implies greater vote shares for that party, relative to the other two. In 2023 when GL and PvdA ran together, their vote shares are counted as the same.

[7]Due to data privacy concerns, I cannot geo-locate voters, which means it is not possible to assess hypotheses about voters' expectations of the intentions of others (which could be done by building measures of electoral closeness or competitiveness based on their residence, for example).

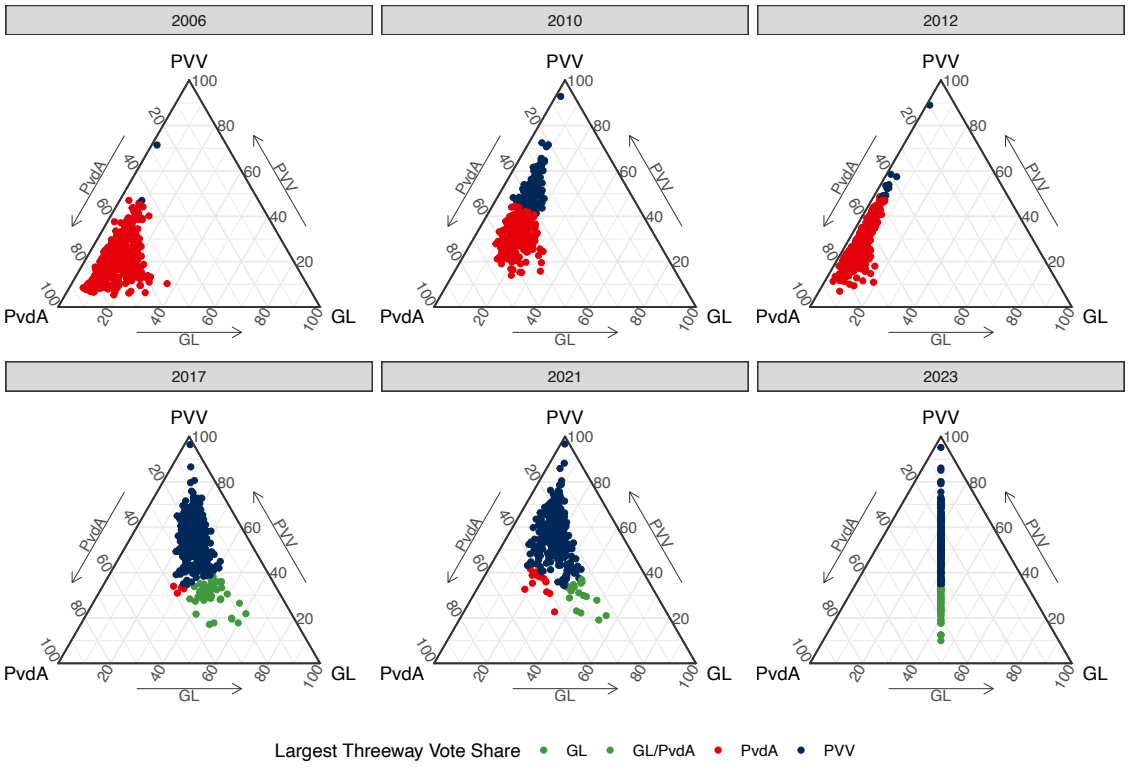

Figure 3: Simplex Plots for Dutch Elections by Municipality, 2006-2023

Greens and what their sympathies are for the Green party. The latter is asked to respondents as "What do you think of GroenLinks?" where a score of 0 is "very unsympathetic" and 10 is "very sympathetic." These independent variables are fairly positively correlated ($\rho = 0.36$), which reassures that even though voting is a strategic choice, it is correlated with measures more akin to primitives.

Beginning with the model's first implication—that Green voters, if not supporting the Greens, should be more likely to support social democratic parties over the far right—I contrast the voting behavior of Green voters and non-Green voters across successive elections. To maintain commensurability with the model, I focus on vote choices for three possible parties: the Greens, the PvdA, and the PVV.[8] Recall that in the model, voter 0's preferences

[8]The Netherlands is characterized by an electoral environment with many parties, see Figure A.1 for a distribution including more parties. Green voters were not more likely to switch to other right-wing (i.e., Christian democratic or socially conservative) parties either.

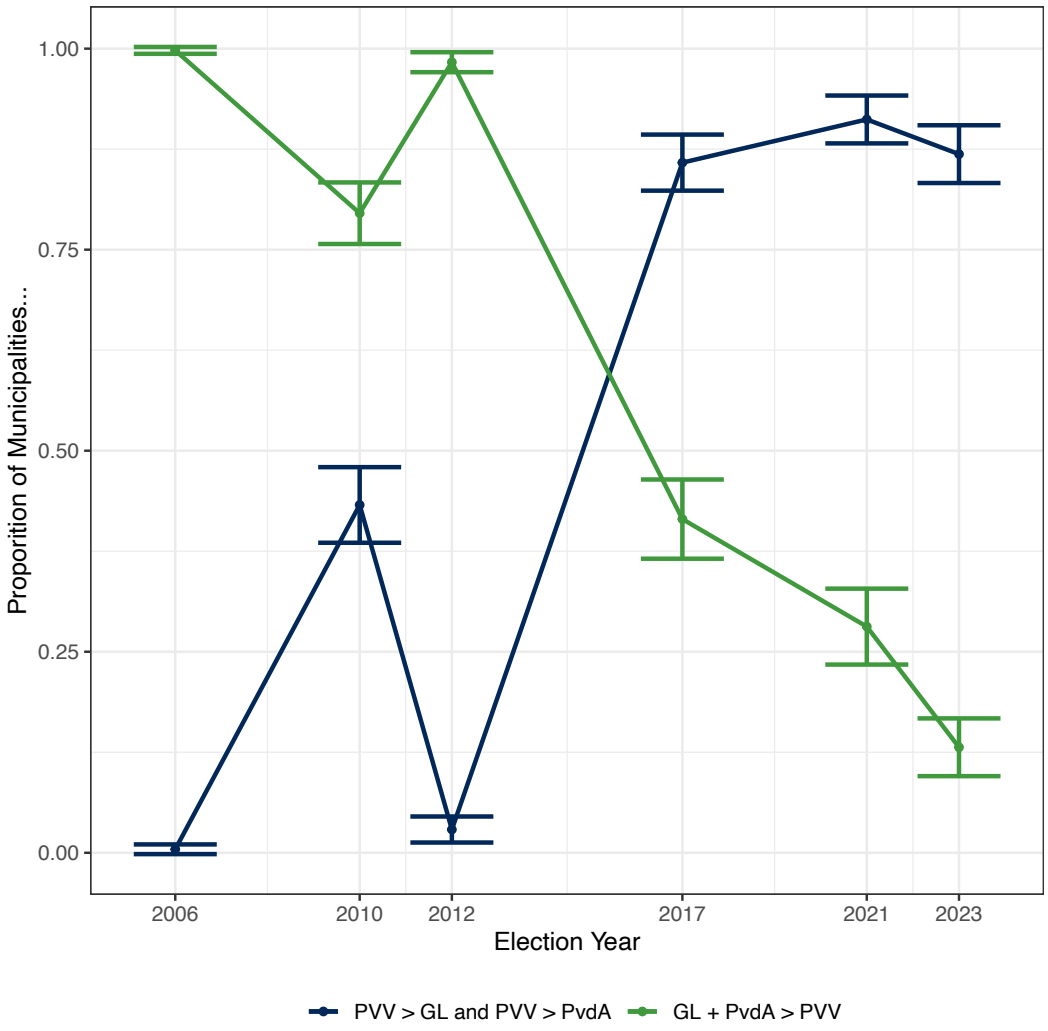

Figure 4: Far Right on the Rise in the Netherlands

were such that she would sincerely prefer the Greens, followed by the Social Democrats, followed by the Right. The left panel of Figure 5 demonstrates that, among voters who casted a ballot for the Greens in election t, they were overwhelmingly more likely to continue supporting the Greens in $t+1$, with about 40% doing so. Should such a voter switch her electoral loyalties, however, a greater share moved away from the Greens and to the PvdA[9] rather than the PVV, which conforms with the expectations of the model. Moreover, Green

[9]To guard against overinterpretation of the strategic voting mechanism, I code a vote cast for the joint GL-PvdA list in 2023 as a vote for the Greens rather than a vote for PvdA.

voters were not likely to shift toward the far right PVV; less than 1% did so. Figure A.4 also shows that Green voters, besides expressing greatest sympathies toward the Green party, are most likely to express the most sympathy toward the Labor Party as well as some liberal parties, and, among Green voters, the far right is the least likely to be seen as sympathetic.

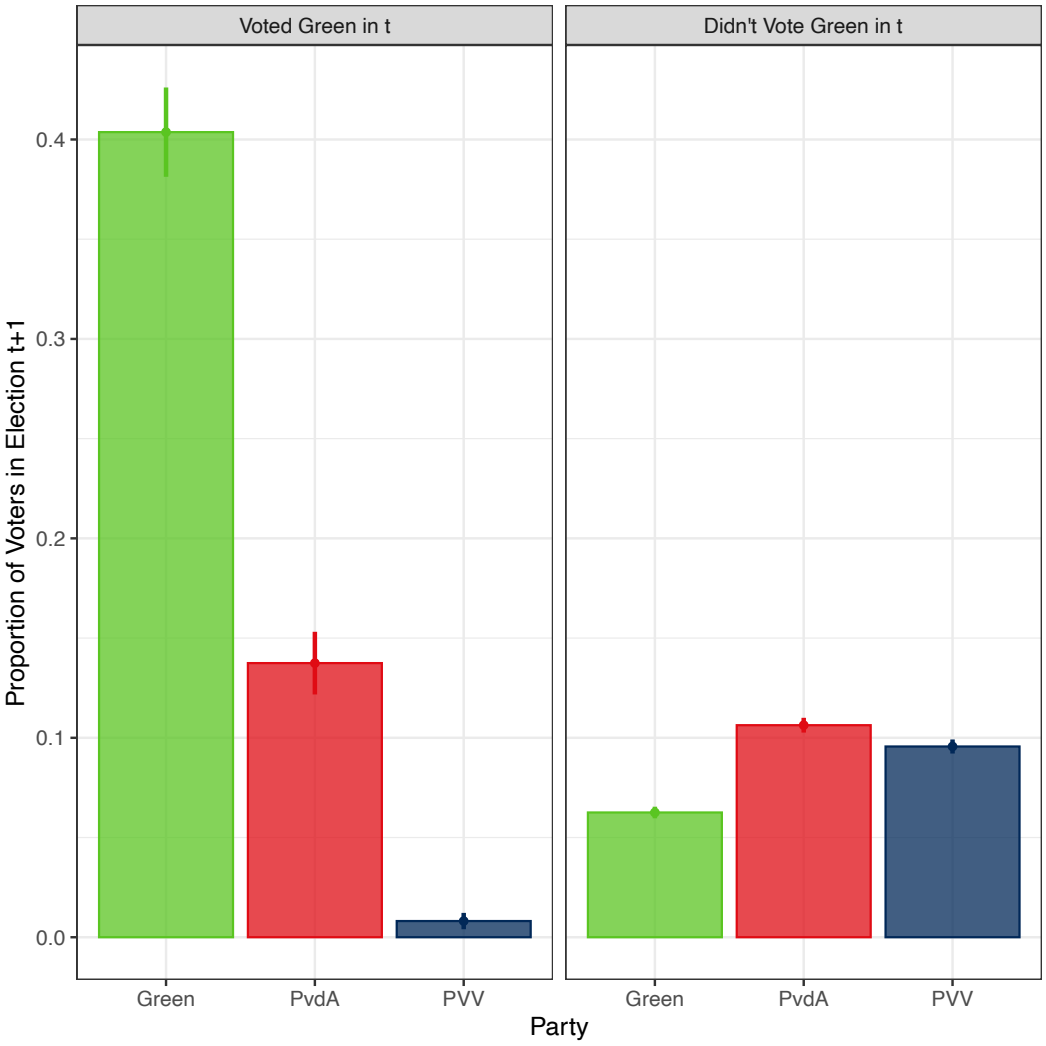

Figure 5: Votes for GL, PvdA, and PVV by Green and non-Green Voters

For non-Green voters, shown in the right panel of Figure 5, voting patterns are quite different. This group of individuals, who may have voted for any party other than the Greens in election t, is almost equally likely to have supported the PvdA and the PVV

in election $t+1$, with the PvdA and the PVV each winning approximately 10% of these voters. The Greens, however, only won about 6% of this group. Compared to Green voters in election t, non-Green voters were much more likely to support the far right and much less likely to support the Labor party in election $t+1$.

The results pooling across respondents that Figure 5 displays are reassuring, but given the panel structure of the data, we can exploit within-respondent variation over time. I therefore fit a series of fixed-effect regression models to estimate the effect of pro-environmental preferences on vote choice. Specifically, having observed respondent i's voting history for party $p \in \{\text{GL}, \text{PvdA}, \text{PVV}\}$ in elections t and $t+1$, I run

$$\text{Vote}_{ipt+1} = \text{Voted Green}_{it} + \alpha_i + \lambda_t + \varepsilon_{ipt}$$
$$\text{Vote}_{ipt+1} = \text{Green Sympathy}_{it} + \alpha_i + \lambda_t + \varepsilon_{ipt},$$

where Voted Green_{it} is an indicator that respondent i voted for the Greens in election t, $\text{Green Sympathy}_{it}$ is respondent i's sympathy toward the Greens, α_i are respondent fixed effects, λ_t are election year fixed effects, and ε_{ipt} is an error term. I cluster standard errors at the respondent level.

Table 1 displays the results. Models 1 and 2 look at the within-respondent effect of having voted for the Greens and sympathy toward the Green party on future Green voting behavior. The within-respondent nature of the research design should be emphasized in interpreting Model 1, as any respondent who has only voted for the Greens contributes no variation to the estimated effect. Thus, model 1 should be viewed as mechanical, while the result in model 2 is statistically and substantively sensible: voters who were more sympathetic toward the Greens are more likely to vote for them in future elections.

Models 3 indicates that previous Green voters are often likely to switch their votes toward the center-left PvdA, which is consistent with a strategic vote. There appears to be, however,

	Vote GL in $t+1$		Vote PvdA in $t+1$		Vote PVV in $t+1$	
	(1)	(2)	(3)	(4)	(5)	(6)
Voted Green in t	-0.221***		0.043***		0.0009	
	(0.014)		(0.011)		(0.004)	
GL Sympathy in t		0.005***		-0.0007		-0.006***
		(0.001)		(0.002)		(0.002)
Observations	28,532	27,071	28,532	27,071	28,532	27,071
R^2	0.561	0.539	0.562	0.551	0.582	0.594
Within R^2	0.037	0.0007	0.001	1.02×10^{-5}	6.88×10^{-7}	0.001
Number of Respondents	9,152	8,839	9,152	8,839	9,152	8,839
Respondent fixed effects	✓	✓	✓	✓	✓	✓
Election Year fixed effects	✓	✓	✓	✓	✓	✓

Table 1: Within-Respondent Analysis of Pro-Environmentalism and Party Voting
Standard errors clustered by respondent

no statistically distinguishable effect of Green sympathy on the tendency to vote for the PvdA. By contrast, voters who are more sympathetic toward the Greens are much less likely to vote for the PVV, as indicated by the negative and statistically significant coefficient in Model 6. In fact, this effect is stronger in magnitude than the effects of Green sympathies on Green voting. The analysis indicates that respondents who are ideologically aligned with the Greens are more likely to support them, may switch to Labor, but are not likely to vote for the far right.

The model produces additional implications, specifically about the relative attractiveness of Green and social democratic parties. In particular, the second implication of the model is that voters are less likely to support Green parties when they propose policies that are quite similar to those proposed by social democratic parties, *precisely because* voting for social democratic parties is more valuable strategically. To study this implication, I utilize data from the Chapel Hill Expert Survey (Jolly et al. 2022) which estimates party positioning on various ideological and policy issues, including the environment. In particular, the survey

includes an assessment of parties' stances on environmentalism, measured on a 0-10 scale. A score of 0 means a party "strongly supports environmental protection even at the cost of economic growth," while a 10 means a party "strongly supports economic growth even at the cost of environmental protection." It also includes a weight in which experts assess how salient environmental protection is to a particular party, where a score of 0 is "not important at all" and 10 is "extremely important."

Given the timing of the survey, I observe party scores for GL, the PvdA, and the PVV for the 2010, 2012, and 2017 elections and examine their effects on downstream voting. The outcomes studied are thus voting behavior in 2012, 2017, and 2021, which guards against any simultaneity bias or *ex post* assessments in party ideology that confound with election results, and also keeps the design commensurate with the empirical results in Table 1. For GL and the PvdA, I define similarity in their ideologies at election t as $\text{Similarity}_t = -|\text{Environment}_{GL} - \text{Environment}_{PvdA}|$. I thus run the following model estimating the effect of the similarity between the Greens and the Labor party in election t on downstream voting in $t+1$ for parties $p \in \{\text{GL}, \text{PvdA}\}$ with respondent-clustered standard errors,

$$\text{Vote}_{ipt+1} = \text{GL/PvdA Similarity}_t + \alpha_i + \varepsilon_{ipt}.$$

The results in Table 2 confirm that when the Greens and the PvdA converge in their environmental policy proposals—when $u_G - u_L$ gets small in the theory—voters are less likely to prefer the Greens and more likely to prefer the social democratic PvdA. As the theory implies, voters are likely to abandon the Greens in a bid to support social democratic parties, *even if they are pro-environmental in their preferences.* Hence, holding fixed the electorate's preferences, we may nevertheless observe drops in Green electoral support because voters anticipate that social democratic parties might be more likely to win the election.

In the appendix, I also interrogate heterogeneous effects by pro-environmentalist prefer-

	Vote GL in $t+1$ (1)	Vote PvdA in $t+1$ (2)
GL/PvdA Similarity	-0.018***	0.056***
	(0.006)	(0.006)
Observations	18,128	18,128
R^2	0.572	0.596
Within R^2	0.001	0.006
Number of Respondents	7,395	7,395
Respondent fixed effects	✓	✓

Table 2: Effects of GL/PvdA Similarity on Voting Behavior
Standard errors clustered by respondent

ences and also use the weighted similarity measure. Results confirm that similarity has a negative and statistically significant effect on the propensity to vote for the Greens, and this effect is stronger for those who voted for the Greens in previous elections.

Finally, beyond relative similarities between the Greens and the PvdA, I consider the absolute effects of changing party ideology on downstream voting behavior. Recall that in the theory, increasing x_G and x_L implies more conservative climate policy proposals. For parties $p \in \{\text{GL}, \text{PvdA}\}$, I study the effects of p's anti-environmentalist ideology score in election year t on downstream voting in $t+1$ with respondent-clustered standard errors:

$$\text{Vote}_{ipt+1} = \text{Anti-Environmentalism}_{pt} + \alpha_i + \varepsilon_{ipt}.$$

From Table 3, we observe that a more environmentally conservative Green party diminishes its electoral support (Model 1) while simultaneously bolstering support for the PvdA (Model 3). Indeed, when the Greens become more conservative, it diminishes their value with pro-environmental voters and can heighten the temptation to vote strategically for social democratic parties. By contrast, a more conservative PvdA moves the Labor party closer to the right, and decreases its electoral support (Model 4). In this eventuality there is also

a positive relationship with support for the Greens downstream, but, while congruent with theoretical expectations, this effect is statistically indistinguishable from zero (Model 2).

	Vote GL in $t+1$		Vote PvdA in $t+1$	
	(1)	(2)	(3)	(4)
Anti-Environmentalism (GL)	-0.079***		0.265***	
	(0.013)		(0.017)	
Anti-Environmentalism (PvdA)		0.011		-0.026***
		(0.009)		(0.009)
Observations	18,128	18,128	18,128	18,128
R^2	0.573	0.572	0.604	0.594
Within R^2	0.004	0.0002	0.025	0.0006
Number of Respondents	7,395	7,395	7,395	7,395
Respondent fixed effects	✓	✓	✓	✓

Table 3: Effects of Shifting Green and PvdA Ideal Points on Voting Behavior
Standard errors clustered by respondent

Discussion and Conclusion

This paper has argued that Green party vote share, often used as a barometer of public support for environmental policy, may instead obscure deeper dynamics of strategic behavior, particularly in electoral systems where multiple parties compete for ideologically similar voters. The central insight is that pro-environmental voters may cast their ballots for social democratic parties when doing so maximizes the chances of defeating right-wing challengers, holding fixed their preferences for climate reforms. This behavior becomes particularly likely when Green and social democratic parties offer convergent climate platforms, which is counterintuitive to accounts of sincere voting based on an individual's ideological preferences. Thus, a decline in Green party support does not necessarily imply a weakening of climate concern. Rather, it may reflect tactical adaptation to institutional incentives and perceived

threats from the right.

Two simultaneous processes might shape this phenomenon. First, social democratic parties have increasingly embraced climate issues, integrating environmental remediation into their broader redistributive agendas (Fagerholm 2016; Schulze 2021). Second, Green parties themselves have moderated over time to gain broader appeal. Figure A.6 demonstrates that Green parties appear to have slightly tempered their environmental platforms since 2007, and extant scholarship has documented that these parties have also increased their discussion of more traditional economic issues (Dolezal 2010; Röth, and Schwander 2020). These developments have narrowed the ideological gap between the two party families. As this paper theoretically posits and empirically demonstrates, such convergence fosters conditions for strategic voting. In systems where Green and social democratic parties remain distinct electoral entities, this creates a risk of vote splitting and electoral underperformance, potentially paving the way for far right parties to form governments. Office-motivated, environmentally-oriented parties might therefore consider electoral fusions with social democratic parties—as in the Netherlands—in order to dispel concerns of tactical voting and to avoid cutting through an ideologically cohesive bloc of pro-climate voters.

These findings raise important questions for future research. For one, scholars should consider the institutional arrangements that are most likely to facilitate coordination between Green and social democratic forces. Some electoral systems facilitate joint lists or alliances more easily than others (see Cox 1999). France's two-round majoritarian system and the Netherlands' proportional representation have both enabled experiments in coalition-building, albeit with different outcomes. By contrast, in countries like Germany and Austria, which also have distinct electoral systems, the Greens have taken sizable losses in recent elections but remain separate electoral entities from social democratic parties. A systematic comparison across systems could reveal how institutional design mediates the strategic environment of pro-climate voters and parties.

Relatedly, the empirical analyses in this paper focus on a single country—primarily due to data availability. This limitation points to the need for broader comparative work and greater development of cross-national panel datasets. Scant political science work employs long-run panel data to study questions of vote switching that are at the center of questions about electoral viability of Green and left-leaning parties (exceptions are Abou-Chadi and Wagner 2024; Bischof and Kurer 2024). Information tracking vote switching, environmental attitudes, and party preferences over time could help test the generalizability of the theoretical claims. In particular, this could help discern whether similar vote switching patterns are observed in other European contexts where Green and social democratic parties have converged in their climate policy proposals.

Finally, future methodological research might develop a more enriched model to determine the theoretical conditions under which the use of Green party vote share successfully approximates the public's support of climate reforms. This paper has identified one theoretical mechanism, strategic voting, that skews the relationship between concept and measure, demonstrating how Green parties' vote shares are likely an underestimation of public appetite for environmental policies. Considering the sum of Green and center-left vote shares, however, might be an overestimation of this willingness, and so an expanded theoretical treatment of the problem facing pro-climate voters and parties within a multiparty electoral environment could help determine accurate empirical estimates of the size of pro-environmental voter coalitions.

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