Green Party Vote Shares and Public Support for Climate Policy*

Justin Melnick†

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Abstract

Scholars and policymakers often infer public support for climate reforms from Green party vote shares. This paper shows that this inference is systematically biased. In multiparty democracies, climate-minded voters face incentives to vote strategically, weakening the link between climate preferences and Green party support. I develop a theory in which voters who favor climate action choose between Green and social democratic parties based on both policy proximity and the probability of defeating an anti-climate right. The model predicts that as mainstream parties adopt stronger climate platforms, pro-climate voters can rationally shift away from Green parties without becoming less supportive of climate policy. I test these predictions using individual-level panel data from the Netherlands. Former Green voters overwhelmingly move to the center-left rather than the far right, and platform convergence induces substitution away from the Greens. Green party vote share may understate public support for climate action.

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†Ph.D. Candidate, Department of Politics, New York University. Contact: melnickj@nyu.edu and justinmelnick.github.io.

How much public support exists for ambitious climate policy? Scholars and practitioners frequently treat the electoral performance of Green parties as a barometer of societal demand for climate action. When Green parties gain votes, the public is interpreted as endorsing environmental reform; when they lose, or when far-right parties on anti-climate platforms win (Heddesheimer, Hilbig and Voeten 2025; Voeten 2025), observers infer backlash against the costs of decarbonization. This logic underlies a growing body of work that links Green party vote share to climate attitudes, policy ambition, and political feasibility (e.g., Schumacher 2014; Grant and Tilley 2019; Hoffmann et al. 2022; Clegg and Galindo-Gutierrez 2025). It also shapes contemporary narratives about the "green backlash" following recent electoral setbacks for Green parties across Europe (Bosetti et al. 2025).

This paper argues that this inference is systematically flawed. In multiparty democracies, electoral competition can sever the link between climate preferences and Green party vote shares, even when voters' underlying support for climate policy remains unchanged. The reason is strategic voting (Myatt 2007; Fisher and Myatt 2017). When climate-minded voters face a strong anti-environmental right and a viable center-left alternative, they may rationally vote for parties other than the Greens in order to prevent the right from winning election, thereby maximizing the probability of a pro-climate government. Under these conditions, declining Green party support need not signal weakening public commitment to climate policy; instead, it may reflect voters' attempts to prevent electoral outcomes that would undermine it. Green party vote shares thus become a biased and potentially misleading proxy for the public's demand for climate action.

Over the past two decades, mainstream social democratic and liberal parties across Europe have increasingly incorporated ambitious climate agendas into their platforms (Fagerholm 2016; Schulze 2021). At the same time, far right parties have politicized opposition to climate policy, framing decarbonization as an elite imposition on households and workers (Huber et al. 2021; Dickson and Hobolt 2024; Voeten 2025). These developments have cre-

ated electoral environments in which pro-climate voters face a strategic dilemma in which they might vote sincerely for the party most closely aligned with their environmental ideals, or they might vote tactically for a larger party with a greater chance of defeating anti-climate challengers. As a result, the mapping from climate preferences to Green party votes is mediated by expectations about electoral competitiveness, coalition formation, and the distribution of power across parties.

This paper formalizes and empirically demonstrates this distortion. I develop a simple decision-theoretic model in which voters who strongly favor climate action nevertheless choose between a Green party and a center-left party based on their beliefs about which is more likely to defeat an anti-environmental right. The model shows that convergence between Green and social democratic center-left climate platforms paradoxically weakens the mapping from Green party vote shares to public demand for environmental policy, a common practice undertaken by researchers. When climate platforms converge, voters become more willing to substitute away from the Greens and toward the center-left without sacrificing much in terms of policy, making Green party support particularly sensitive to strategic considerations rather than sincere climate demand. In this sense, Green party vote shares may systematically understate public support for climate policy precisely when environmentalism becomes politically successful.

I test these implications using individual-level panel data from the Netherlands. Exploiting within-person variation across elections from 2008 to 2024, I show three patterns that together illustrate the measurement problem. 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). Third, 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. These patterns are precisely those predicted by a theory in which voters treat Green party support as a strategically adjustable vehicle for expressing fixed climate preferences.

The central contribution of this paper is thus not to explain the electoral fortunes of Green parties per se, but to identify a systematic source of bias in how scholars and policymakers infer public support for climate policy from election results. That is, 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 provide 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. When climate politics is embedded in multiparty competition, as is often the case when Green parties emerge as distinct electoral entities, Green party vote share is not a sufficient statistic for climate demand. This has far-reaching implications for how we interpret apparent "green

backlashes," how we evaluate the political feasibility of climate reforms, and how we design institutions to translate climate preferences into policy outcomes.

Moreover, 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 paper contributes to a growing literature that seeks to understand the political foundations of climate policy. A central empirical strategy in this literature is to use election results, especially the vote share of Green parties, as a proxy for societal support for environmental protection and climate mitigation. While this approach is intuitive, it implicitly assumes a close mapping between climate preferences and party choice.

A large body of scholarship treats Green party vote share as an indicator of public demand for environmental and climate policy. Early work conceptualized Green parties as niche or issue-owning actors whose electoral success reflects voters' environmental concern (Schumacher 2014; Spoon, Hobolt and De Vries 2014) This logic has thus given rise to a trend in which studies increasingly use Green electoral performance to draw inferences about how climate experiences, economic shocks, and policy costs shape environmental attitudes and political feasibility (e.g., Grant and Tilley 2019; Baccini and Leemann 2021; McAllister and bin Oslan 2021; Garside and Zhai 2022; Hoffmann et al. 2022; Papp 2022; Damsbo-Svendsen

2024; Hilbig and Riaz 2024; Kronborg et al. 2024). Similarly, cross-national research links Green party success to the ambition of national climate commitments and increased climate spending (Clegg and Galindo-Gutierrez 2025). In all cases, elections are a key mechanism through which micro-level preferences for green policy are purportedly conveyed.

This literature relies on a strong and underexplored assumption: that Green party vote shares reliably capture the distribution of climate preferences in the electorate. Yet Green parties are embedded in multiparty systems in which voters choose among bundled platforms that include economic, cultural, and governance dimensions alongside environmental policy. As Green parties have increasingly become part of the broader "New Left," their electoral support reflects not only environmental concern but also progressive positions on redistribution, immigration, and social values (Fagerholm 2016; Röth, and Schwander 2020). At the same time, mainstream center-left and social democratic parties have incorporated ambitious climate agendas into their programs (Schulze 2021), weakening the exclusivity of Green parties as vehicles for environmental representation. These developments complicate the interpretation of Green vote shares as a direct measure of climate demand.

Recent concerns about a "green backlash" have intensified these measurement challenges. A growing literature documents the politicization of climate policy by far right parties and argues that decarbonization can generate electoral opposition by imposing visible costs on households and workers (Huber et al. 2021; Colantone et al. 2024; Dickson and Hobolt 2024; Schwörer and Fernández-García 2024). Recent work links exposure to climate policies or green industrial transitions to increased support for right-wing or populist parties (Otteni and Weisskircher 2022; Bosetti et al. 2025; Voeten 2025), especially in carbon-intensive regions and occupations (Heddesheimer, Hilbig and Voeten 2025). These findings have been interpreted as evidence that climate ambition faces electoral constraints that threaten its sustainability. However, this scholarship often infers backlash from aggregate electoral shifts, like declining Green party support or rising far right vote shares, without directly observing

whether climate-minded voters themselves are turning against environmental policy. Indeed, as is corroborated here, individual-level panel studies increasingly show that direct vote switching from pro-environmental parties to the radical right is rare (Abou-Chadi and Wagner 2024; Bischof and Kurer 2024; Abou-Chadi et al. 2024). As a result, aggregate Green party losses may conflate multiple processes and provide a noisy or biased signal of underlying climate attitudes.[1]

Finally, this paper draws on arguments from the literature on tactical or strategic voting. Voters may cast their ballot for a party other than the one with which they are most closely ideologically aligned (Duverger 1954; Downs 1957), particularly if they believe their most preferred party is unlikely to win an election (Cain 1978; Myatt 2007). This insight is especially relevant for climate politics. As center-left parties have adopted increasingly ambitious climate platforms, Green parties no longer uniquely represent environmental policy. At the same time, the rise of far right parties hostile to climate regulation raises the stakes of electoral competition for climate-minded voters. Under these conditions, voters who strongly favor climate action may rationally support a large center-left party rather than a Green party if they believe this increases the probability of blocking anti-environmental forces. The consequence is a systematic distortion: stable pro-climate preferences may translate into declining Green party support, not because voters have turned against climate policy, but because electoral dynamics have altered how to achieve such ends.

A Theory of Electoral Distortion in Climate Politics

I develop a simple decision-theoretic model of voting in a multiparty system to explain how a large pro-climate electorate can exist even when Green parties perform poorly at the ballot

[1]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.

box. The key idea is that votes are not direct expressions of climate preferences: they are strategic choices made in an electoral environment where voters must trade off policy proximity against the likelihood that their preferred policies will actually be implemented. As a result, public demand for climate action can be systematically underrepresented in Green party vote shares.

The model shows how climate-minded voters may rationally support a social democratic party rather than a Green party when doing so increases the probability of defeating an anti-climate right. It also clarifies why, when pro-environmental voters do support far right parties, this behavior should be driven by other salient political dimensions—such as immigration, globalization, or cultural conflict—rather than by opposition to climate policy itself. The formal structure of the model follows Fisher and Myatt (2017). Full derivations, assumptions, and proofs are provided in Appendix B and Appendix C.

There are $n + 1$ voters. I focus on the decision of a single voter, indexed by 0, whose behavior we will use to study how climate preferences are translated into votes. Voters choose between three parties: a Green party G, a Left or Social Democratic party L, and a (far) Right party R, indexed by $j \in \{G, L, R\}$. Each party advances a platform on climate change policy $x_j \in \mathbb{R}$ and suppose that $x_G < x_L < x_R$. This encodes the idea that the Greens, furthest to the left, are the most pro-climate, followed by the Social Democrats and the far right. 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 $v(x_G, x_0) > v(x_L, x_0) > v(x_R, x_0)$, meaning she would vote for the Greens if she voted sincerely on climate policy alone. These are precisely the voters whose behavior matters for measuring public demand for climate action: they are predisposed to support ambitious climate policy, but their votes may nevertheless go elsewhere.

Voter 0 is instrumentally rational. She cares not only about which party she prefers but also about which party is likely to win. If party j wins the election, she receives the

policy payoff $v(x_j, x_0)$. Thus, she prefers her vote to help elect a party that will implement climate policy close to her ideal point. To capture the fact that climate is rarely the only salient issue in elections, I also assume that voter 0 receives an expressive or valence payoff ε_j from voting for party j, reflecting her views on other dimensions such as redistribution, immigration, or social policy.[2] Her total utility from voting for party j is therefore $u_0(\text{vote } j) = \mathbf{1}_{\text{j wins}} v(x_j, x_0) + \varepsilon_j$. This formulation highlights the measurement problem at the heart of the paper. Even though voter 0 has preferences that are pro-climate and ideologically aligned with the Greens—her ideal point x_0 is closest to x_G of the three parties' proposals—her observed vote reflects not only her climate policy preferences, but also her beliefs about which parties are electorally viable and her valuations of non-climate issues.

Note that the model does not assert that strategic voting is the only force shaping Green party support. Nor does it deny the importance of ideology, identity, or economic cleavages. Instead, it isolates a specific and theoretically grounded mechanism through which electoral competition can cause climate preferences to be imperfectly revealed at the ballot box. In this sense, the model is best understood not as a theory of Green party success, but as a theory of how electoral institutions and party competition shape the informational content of election outcomes in climate politics.

Because voter 0's ideal point is closest to x_G, a vote for the Right is always dominated on policy grounds by a vote for the Greens. Unless the valence term ε_R is very large, meaning the Right is attractive to her for reasons unrelated to climate, voting for the Right is not optimal. The model therefore predicts that, among voters with pro-environmental preferences, support for far right parties should be rare and driven by non-climate issues rather than by a "green backlash." This implication is important for interpreting electoral trends: declining Green party support does not imply that pro-climate voters are becoming

[2]This term is not necessary, but captures the substantive fact that voters may select parties based on other issues besides climate policy.

anti-climate.

The central decision voter 0 faces is whether to vote for her most preferred party, the Greens, or for the Social Democrats, who are less aligned with her on climate but may have a greater chance of defeating the Right. To choose optimally, voter 0 weighs the policy and valence benefits of each party against the probability that her vote will influence the outcome.[3] If she believes the Greens are competitive, she votes sincerely. But if she believes that only the Social Democrats have a realistic chance of preventing a victory by the Right, she may rationally vote for them because doing so increases the probability that some pro-climate government takes office, even though their climate platform is weaker. Crucially, this does not require any change in her climate preferences. Her ideal point x_0 remains fixed; what changes is how those preferences are expressed in a strategic electoral environment.

The incentive to vote strategically depends on how different the Greens and Social Democrats are on climate policy. Counterintuitively, when their platforms are similar, when the policy utility difference $v(x_G, x_0) - v(x_L, x_0)$ is small, strategic voting becomes more attractive. In that case, the main consideration is which party is more likely to be in the lead to defeat the Right. By contrast, when the Social Democrats are much less ambitious on climate, sincere voting for the Greens is more likely, because the policy cost of supporting the Social Democrats is high. This implies a central result of the model: as Green and Social Democratic climate platforms converge, Green party vote shares become a weaker signal of climate demand. Pro-climate voters can shift away from the Greens without abandoning their support for climate action. This is precisely because the Social Democrats have proposed a climate policy that is similar enough to the Greens, and are perceived as the party likely to win the election.

The model also predicts asymmetries when parties change their climate platforms. When

[3]Formally, voter 0 does not observe the electoral intentions of the other n voters; vote shares are random variables from her perspective. Her decision depends on the probability that her vote is pivotal in determining which party wins.

the Greens become more moderate—that is, when x_G moves rightward toward x_L—they become less distinct from the Social Democrats. This increases the scope for strategic voting, making it easier for even strongly pro-climate voters to justify voting for the Social Democrats. Green moderation therefore reduces Green vote share. By contrast, when the Social Democrats become more conservative on climate—moving x_L further right toward x_R—the policy gap between them and the Greens widens. This strengthens the incentive for sincere voting and makes the Greens more attractive to climate-minded voters.

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. As Green and social democratic environmental platforms become more similar, voting for the Greens should fall and voting for the social democrats should rise.

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.

These implications describe how electoral competition filters and distorts the expression of climate preferences at the ballot box. The empirical analysis tests these predictions using individual-level panel data from the Netherlands.

Voting in the Netherlands

To examine the model's implications, I study voting in the Netherlands, which provides a useful setting for studying how electoral competition shapes the relationship between climate preferences and party support. It combines three features that, according to the theory, generate strong incentives for strategic voting among climate-minded voters. First, the Green party (GroenLinks) in the Netherlands has long been an electoral fixture, making it possible to observe voters who sincerely favor ambitious climate policy. Second, a large and electorally competitive social democratic party, the Labor Party (PvdA), has increasingly adopted strong environmental commitments, creating an ideologically adjacent alternative for climate-aligned voters. Third, a powerful far right, the Freedom Party (PVV), has mobilized explicit opposition to climate policy, raising the stakes of electoral coordination for voters who wish to prevent climate retrenchment.[4] These conditions mirror the structure of the model: two pro-climate parties that differ in electoral viability face a common anti-climate challenger. In such an environment, Green party vote shares should be sensitive to strategic incentives, making the Netherlands an ideal case for studying when and how climate demand becomes decoupled from Green electoral performance.

Crucially, the analysis exploits individual-level panel data that follow the same voters across multiple elections. This allows direct observation of how voters with stable pro-environmental orientations translate their preferences into votes as party platforms and electoral conditions change. Unlike aggregate election returns, panel data make it possible to distinguish between ideological change and potential strategic reallocation of support.

As an overview, Figures 1 and 2 show that support for the PVV is on the rise in the Netherlands since its inception in 2006. The simplex plots shown in Figure 1 demonstrate

[4]In the 2023 election, the PvdA and GL parties recognized the need for strategic coordination against the 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.

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.[5] Figure 2 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.

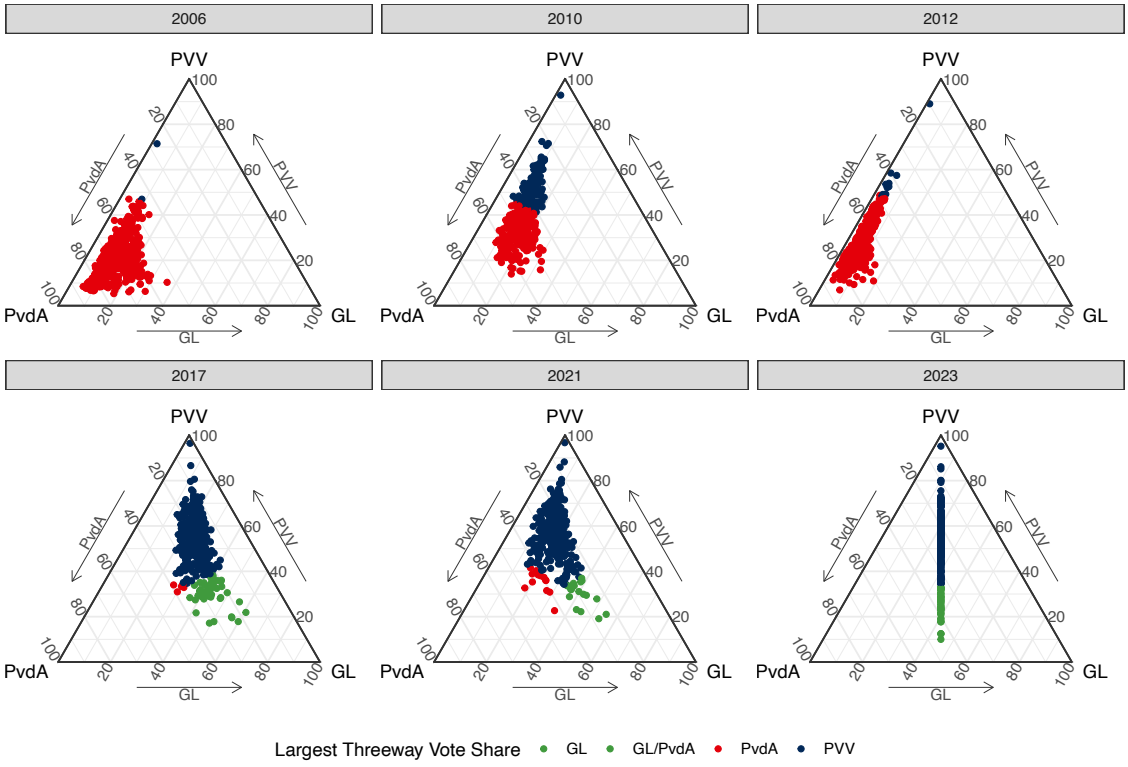

Figure 1: Simplex Plots for Dutch Elections by Municipality, 2006-2023

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.[6] The LISS panel asks respondents about

[5]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.

[6]Due to data privacy concerns, I cannot geo-locate voters, which means it is not possible to assess

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). This allows direct observation of how voters who previously supported the Greens reallocate their votes over time. Unlike aggregate election results, which confound changes in voter composition with changes in voter behavior, panel data make it possible to identify whether pro-environmental voters are abandoning climate politics or simply changing the party through which they pursue it.

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 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.[7] Recall that in the model, voter 0's preferences were such that she would sincerely prefer the Greens, followed by the Social Democrats,

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).

[7]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.

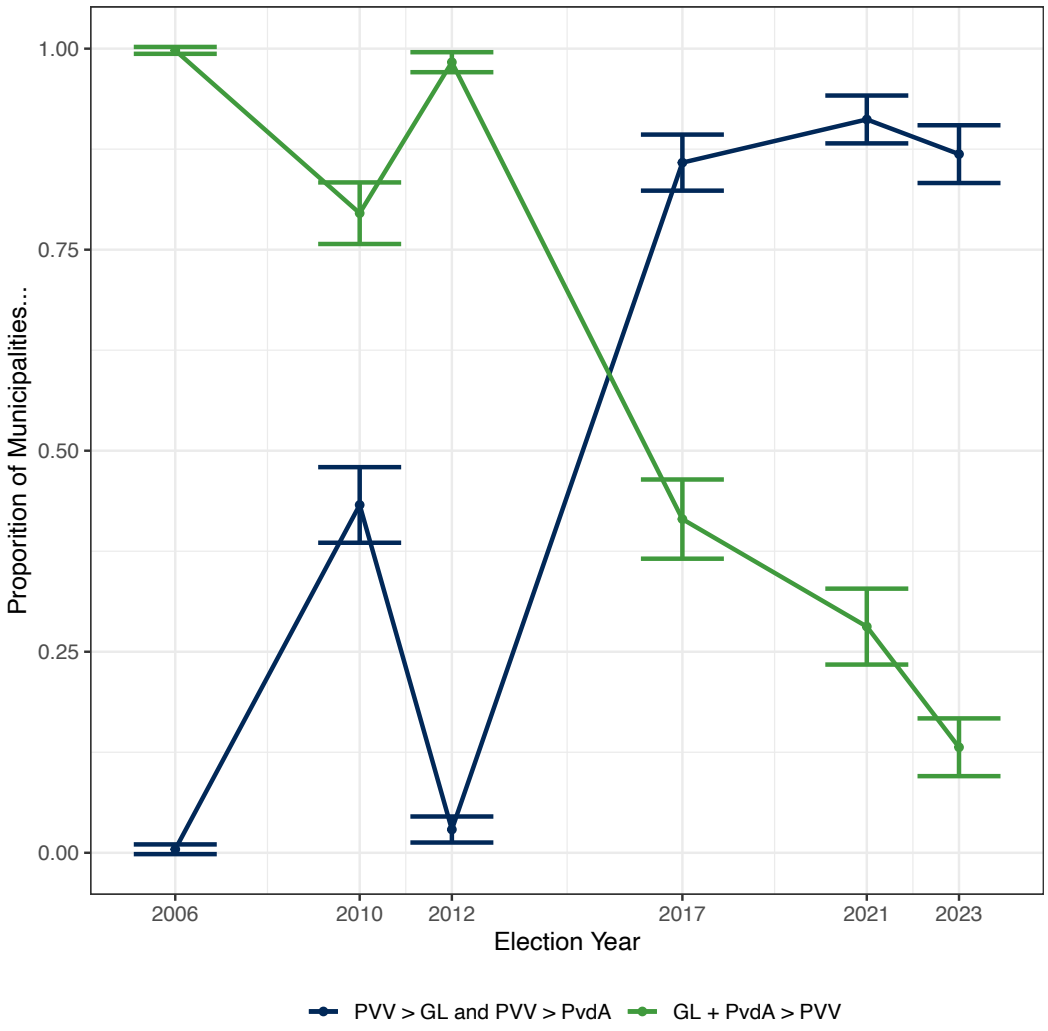

Figure 2: Far Right on the Rise in the Netherlands

followed by the Right. The left panel of Figure 3 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[8] rather than the PVV, which conforms with the expectations of the model. Moreover, Green voters were not likely to shift toward the far right PVV; less than 1% did so. Figure A.4 also

[8]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.

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.

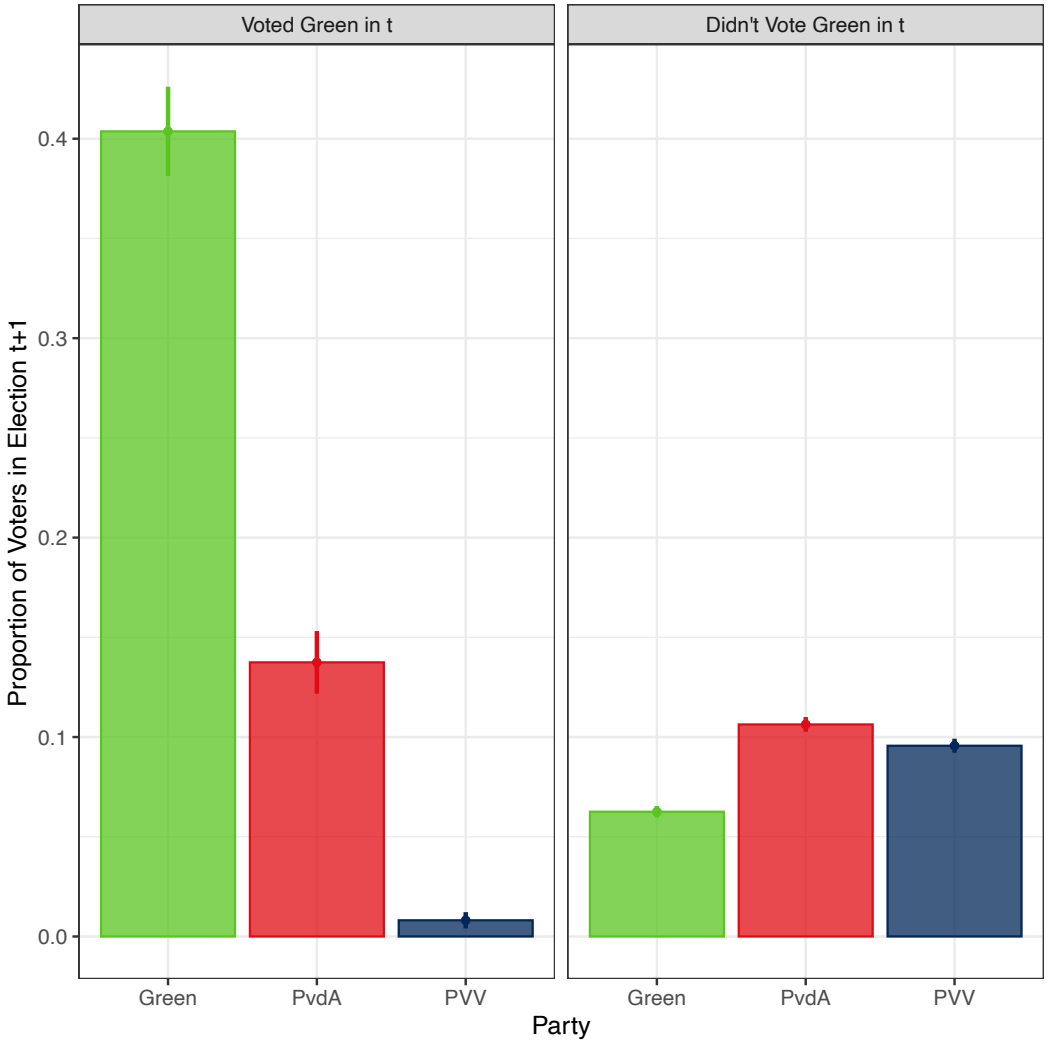

Figure 3: Votes for GL, PvdA, and PVV by Green and non-Green Voters

For non-Green voters, shown in the right panel of Figure 3, 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 3 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, no statistically distinguishable effect of Green sympathy on the tendency to vote for the

	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

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, even holding fixed one's preferences for climate reforms. 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 $v(x_G, x_0) - v(x_L, x_0)$ 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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