Protest Voting in Recent United Kingdom Elections

`Preliminary Draft`

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Abstract

In this paper I study the extent of protest voting behavior in recent elections in the United Kingdom. Protest voting is narrowly defined here as sending a signal about an important issue by (1) casting a vote for a party that the voter identified as the best for that issue, (2) that is not the voter's most preferred party, nor (3) a tactical vote aimed at influencing who wins the seat. Using data from the British Election Study Online Panel, I show that approximately 8% of voters exhibit behavior consistent with protest voting. I also find that voters are more likely to cast a protest vote when neither their preferred party nor their best alternative have chances of carrying the seat. Additionally, voters with higher levels of political attention and political efficacy are more likely to cast protest votes, which his consistent with this protest voting behavior being a rationally-motivated choice. Finally, voters are more likely to cast protest voters when they have weaker attachments to their most preferred parties.

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1 Introduction

When voters are interested in influencing who wins an election, they usually face a simple choice: supporting their most preferred party. However, for some voters, electoral systems provide incentives to 'misrepresent' their sincere preferences and cast a vote for another, less preferred party with higher chances of winning. This type of Downsian logic (Downs, 1957) has received widespread attention in the empirical literature on tactical behavior (see Alvarez et al., 2018, for a review). This type of behavior is part of the logic behind Duverger's Law (Duverger, 1954)[1], and more generally influences the way in which electoral institutions shape electoral outcomes and representation (Cox, 1997)

But voters' motivations may extend beyond simply influencing who wins a seat and the government that is formed thereafter. Instead, voters may be interested in using their vote as an expression of their general political views and beliefs. Additionally, voters can also use their vote as a way to protest or to highlight issues of importance to them. There are a variety of actions voters can take in order to register a protest through their voting behavior. For example, Driscoll and Nelson (2014) argue that in a Bolivia Judicial Election in 2011, unusually high levels of abstentions and spoiled votes were used as a protest against what the opposition viewed as a flawed election. Elections for the European Parliament have long been seen as "second-order national contests" (Reif and Schmitt, 1980) sometimes used as a vessel to punish national governments (e.g., Hix and Marsh, 2007), which could be seen as a type of protest.[2] Other authors note that votes for insurgent parties and candidates can sometimes be viewed as a protest against the political mainstream and status quo (e.g., Brug et al., 2000).

But voters may also potentially cast a protest vote in a more instrumental manner, that does not involve a rejection of the mainstream nor the status quo. Instead, voters may realize (or believe) that their vote may not influence who ultimately wins an election in their district.

[1] Although this idea is significantly older. The creator of the Droop quota, Henry Droop, noted that in a majoritarian system "[...] an election is usually reduced to a contest between the two most popular candidates" (as quoted in Riker, 1982, p 756.)

[2] Interestingly, Hix and Marsh (2007) do not find that voting behavior in European Parliament elections is particularly designed to protest against European institutions themselves, at least not systematically.

Under these circumstances, voters may purposely choose another party simply to bolster their numbers and signal that they support specific policies. For example, a voter may cast a vote for a small environmental party not because they expect or even want that party to win, but to signal to the major parties that the environment is an important issue to them and should be addressed. Similarly, voters may cast a vote for an extreme anti-immigration party, not because they subscribe to its entire agenda, but only to signal that immigration is an important issue to them.

In this article, I provide a narrow working definition of rational protest voting within the context of plurality elections. In particular, I define a protest vote as a vote that is: (1) not sincere for the most preferred party, (2) not tactical in the traditional sense of attempting to influence the winner of the election, and (3) cast for a party that the voter identifies as the best party to deal with an issue that is important to them. It is important to highlight that, more often than not, the party voters identify as the best party to deal with an issue important to them is also their most preferred party overall; for these voters a vote for that party is considered a sincere vote, not a protest vote.

With this definition of a protest vote, I use data from the last three United Kingdom General Elections to study voters' decision to cast a protest vote. I find that when the chances of success of a voter's sincere and 'traditional' tactical choice are small, voters are more likely to cast a protest vote. I also find that voters with higher levels of political attention and political efficacy are also more likely to cast a protest vote, which is consistent with this behavior being the result of a rational decision-making process. Finally, I find that the weaker a voter's preferences for their most preferred party, the higher the likelihood of a protest vote. Thus, lower expressive benefits of casting a sincere vote make protest behavior more likely.

In the following section I present a brief summary of the protest voting literature. In Section 3, I describe my data, methods, and explain my definition of protest voting. In Section 4, I present the main results. Section 5 concludes.

2 Protest Votes and Incentives to Cast Them

Alvarez et al. (2018) identify different patterns of voting behavior that literature has characterized as protest voting. The most common pattern characterized as protest voting are votes for insurgent candidates or parties, understood as parties with anti-establishment, extreme, or unorthodox views and policy positions. But defining a protest vote as a vote for what looks like a 'protest party,' as Brug et al. (2000) note, is not particularly useful, especially since it depends heavily on the analyst views (and thus their own biases).

A more fruitful approach is to define protest voting as a vote "against" something (e.g., the mainstream parties) rather than as a vote in favor of some (arbitrarily defined) insurgent. Under this approach, a protest vote is understood as a vote against the status quo, typically driven by disillusionment or anger at the overall political situation or state of the country. A number of studies indeed found that votes for insurgent parties are oftentimes partly driven by a rejection of the establishment and the status quo (see, for example, Bowler and Lanoue, 1992; Denemark and Bowler, 2002; Ivarsflaten, 2008; Pop-Eleches, 2010; Cutts et al., 2011; Whitaker and Lynch, 2011; Ford et al., 2012; Hierro, 2016). However, voters' rejection of the establishment parties and of the political status quo are usually accompanied by their attraction to precisely the types of policies and ideas that insurgent parties for which they vote are proposing. For example, Birch and Dennison (2019) find that one of the most powerful predictors of voting for the Green party and UKIP in the United Kingdom are positions on issues "owned" by these parties. Thus, characterizing this type of behavior as a protest, even if partly motivated by a rejection of the status quo and establishment, does not really provide much additional insight into voters' behavior. These voters' choices may look different, but their behavior is not: they have still identified a party (the insurgent) as preferred to others (the mainstream), and cast their vote for it.

Another type of behavior that has also been identified as protest voting behavior is casting blank, null, or spoiled (BNS) ballots. While these types of ballots can be simply the result of voting errors (e.g., Ansolabehere and Stewart, 2005) and other times are simply a lack of

preference in a mandatory voting system (e.g., Superti, 2016), there are many circumstances in which this type of behavior can be viewed as a protest vote. In particular, rates of BNS voting have been attributed to alienation (Power and Roberts, 1995; Rosenthal and Sen, 1973), lower political rights (Uggla, 2008; Power and Garand, 2007), discontent with policy offers (Moral, 2016), and disappointment with a government the voters' previously voted for (Escolar et al., 2002). Related to BNS voting, selected jurisdictions allow voters to choose "None of the Above." Voters selecting this choice have been found to be motivated by a combination of ignorance and protest motivations (see, for example, Brown, 2011)

The final type of behavior, which is the focus of this article, has been defined as *strategic* protest voting. It has generally been understood as a vote intended to either convey dissatisfaction with some aspect of a voter's most preferred party or designed to send a signal to the body politic at large. Franklin et al. (1994) speculate that some voters may vote for a minor party rather than the major party they prefer, with the expectation that the major party might eventually adopt some of the policies of the minor party (long-term instrumental behavior). Kselman and Niou (2011) note that voters may also cast a vote for a minor party to signal some dissatisfaction with their preferred one, which they believe likely to win regardless of their actions. Myatt (2017) develops a theoretical model to explore this type of behavior. His model suggests that supporters of major parties likely to win should be more likely to cast a vote for a minor party with which they are aligned on an issue (or set of issues) of importance to them. Importantly, these voters still prefer the major party overall, and thus only use a vote for the minor party as a signal. Evidence for this type of behavior, however, is limited, partly because it has not been systematically studied. Weber (2011) finds no clear of evidence of this type of tactical behavior. Blais (2004) suggest that voters followed this type of behavior in the 2002 French Presidential Election, but that the tactic backfired, leading to the Socialist candidate being left out of the subsequent run-off.

This article focuses on protest voting as a potentially tactical/strategic decision made by voters. But what factors are expected to influence this type of behavior? First and foremost,

the idea behind this type of protest voting is that voters have a preferred party but cast a vote for some other party to send a signal of either dissatisfaction or of their interest in a particular issue or policy. As Myatt (2017) notes, casting this protest vote is risky, as it may reduce the chances that their preferred party wins. Therefore, a protest vote should, in principle, be more likely to occur when a voter's most preferred party is either very likely or very unlikely to win.

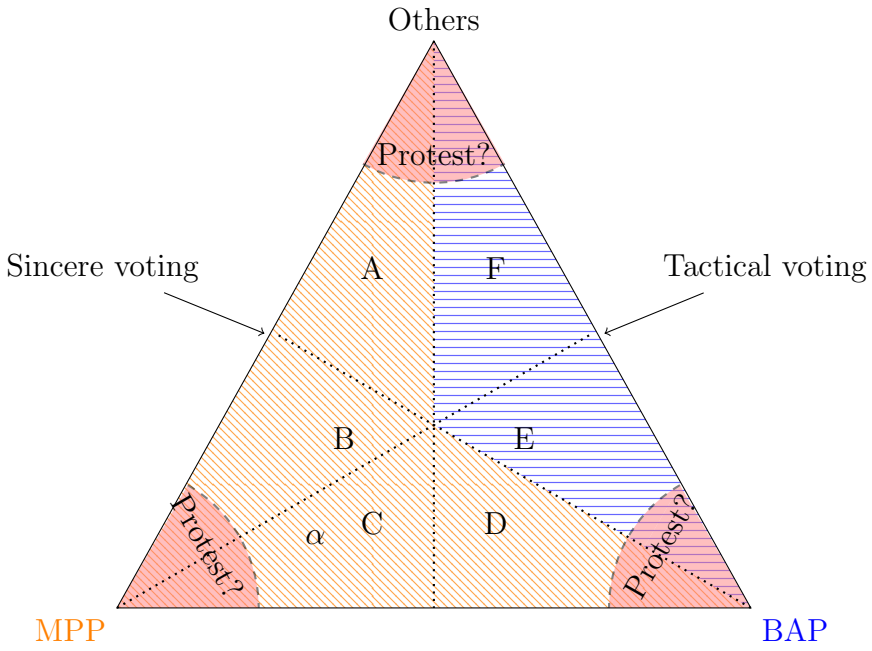
Myatt's theoretical model only considers the voter's preferred party and the protest alternative (and an implicit disliked other). However, voters sometimes face more complicated electoral environments, especially in the United Kingdom. In particular, voters sometimes face tactical incentives to vote for a less preferred party that has higher chances of winning than their most preferred one. The presence of a less preferred, but more viable party should alter the calculus of a protest vote, so that a protest vote should be more likely when an individual's choice is unlikely to affect the election outcome in favor of their most preferred party or a less preferred, but viable, alternative one.

Figure 1 shows a stylized representation of the incentives voters face and the decisions they might make as a consequence. Each point in the simplex represents the probability of winning for each of three alternatives: the voter's Most Preferred Party (MPP), the voter's Best Alternative Party (BAP), and the other parties. The voter's BAP is the party that would bring the voter the highest expected utility, other their MPP. The closer a point in the simplex to one of the vertices, the likelier to win is the party represented in that vertex. For example, the point denoted by α has coordinates equal to $(0.625, 0.251, 0.124)$. This represents a situation in which the voter's MPP is 62.5% likely to win, the BAP is 25.1% likely to win, and the Others are collectively 12.4% likely to win.

All the areas represented in the simplex are highly approximate, and their specific sizes will depend on the relative utilities that voters derive from each party being elected.

The area in orange (A,B,C, and D) represents combinations of winning probabilities for which the voter should cast a sincere vote. In areas A, B, and C, the voter's MPP is more likely to win than their BAP, and thus the voter should cast a sincere vote. In area D, the voters

Figure 1: Incentives for Sincere, Tactical, and Protest Votes



Each point in the simplex represents the probability of winning for three parties: the Most Preferred (MPP), the Best Alternative (BAP), and another party. Relative size and specific locations of each region are highly stylized and will vary depending on preferences.

MPP is less likely to win than their BAP; however, the probability of some other (more disliked) party winning are small, so that the voter would still benefit from supporting their MPP.

In area E, the voter's MPP is relatively unlikely to win, but their BAP has good chances of defeating the Other parties. For voters facing this situation, it is thus optimal to cast a tactical vote in favor of their BAP. It is important to note here that the size of area E in reality depends on the relative utilities derived from each party. The situation depicted in Figure 1 corresponds to a case in which the voter is virtually indifferent between the MPP and BAP. The larger the utility gap between the MPP and the BAP, the smaller area E will be. In area F, the electoral circumstances favor the Other parties, but the voter's BAP has better chances of winning than their MPP. For this reason, voters facing a situation in area F should cast a tactical vote for their BAP. Similar to area E, the size of F depends on the relative utilities; the situation depicted here is one of virtual indifference between the MPP and BAP.[3]

[3]It is important to note here that other factors may also influence the size of the tactical voting areas, beyond relative utilities. For example, Feddersen et al. (2009) notes that voters may have a moral bias against

The final three areas depicted in the simplex correspond to the corners of the graph. In each of these corners, one party is very likely to be the winner in the constituency. That is, these are areas in which voters are most unlikely to be pivotal. Voters facing these situations may cast a rationally motivated protest vote. Their choice is unlikely to alter the outcome of the election, so sending any type of signal comes at a low cost, at least in terms of electoral outcomes.

The relative complexity of the decision-making process involving protest voting requires individuals to have a decent understanding of the political system, be fairly well informed, and also believe that their choices and signals matter. The literature on tactical voting finds that voters' with higher political knowledge and sophistication, as well as higher education levels, are more likely to cast tactical votes (see, e.g., Fisher, 2001; Alvarez et al., 2006; Eggers et al., 2022), and so are voters with higher levels of political interest (Fisher, 2001). For this reason, it is expected that individuals who pay more attention to the political process and campaigns will be more likely to cast a protest vote. At the same time, individuals with higher levels of political efficacy should also be more likely to cast a protest vote, in the right circumstances.[4]

Finally, a protest vote should be easier to cast when the expressive benefits of casting a sincere vote for their most preferred party are smaller. This is because when the voter's attachment to their most preferred party is weak, deviating from that choice and casting a vote for a different party incurs in both a smaller expressive loss, but it also leads to a smaller expected utility loss (were the voter be purely instrumental). Thus, the greater the ideological distance a voter perceives with their most preferred party, or the lower the voter rates their most preferred party, the higher the likelihood that the voter will cast a protest vote.

misrepresenting their preferences. The stronger this moral bias, the smaller the tactical voting area. And if this moral bias is absolute, then the tactical voting area vanishes completely.

[4]However, it could also be argued that individuals with low levels of political efficacy might also choose to cast a protest vote to signal dissatisfaction with a political system that they believe does not taken them into account. However, if an individual does not believe the political system takes them into account, then they should be more likely to abstain from voting than casting a protest vote, since a protest vote occurs within the system itself, which they do not believe functions properly.

3 Data and Methods

3.1 Outcome variable

To study protest voting behavior, I use data from the British Election Study (BES) Online Panel (Fieldhouse et al., 2020), covering data for the 2015, 2017, and 2019 United Kingdom General Elections. The data includes respondents in English, Scottish, and Welsh Westminster Constituencies.[5]

When casting a vote, voters can opt for different types of behavior. First, a voter can choose to abstain from voting, not casting a vote for any party. Second, a voter can cast a sincere vote for the party they prefer the most. Third, a voter can cast a tactical vote for a party they like (other than their most preferred) that is more likely to win the election. Finally, voters can potentially cast a vote for some other party. These other votes can either be a mistake, or they can be a conscious decision on the part of the voter.

In order to define a (potential) protest vote, it is first important to clearly define what sincere and tactical votes are. I define a voter's Most Preferred Party (MPP) as the party that the voter identifies as being ideologically closest to her. To do this, I rely on BES questions that ask respondents to place themselves and each of the parties on a scale from 0 (left) to 10 (right). I calculate each voter's ideological distance to each of the parties as the absolute difference between the rating they assign to themselves and the party.[6]

To define a tactical vote, I rely on a version of the measure of tactical incentives from Eggers and Vivyan (2020). Based on a combination of utilities (preferences) and pivotal probabilities derived from a Dirichlet model, they calculate a voter's tactical incentive as the difference in expected utility from casting their best non-sincere vote versus casting a sincere vote. When this tactical incentive is positive, voters would benefit from casting an insincere vote. I implement this measure using the aforementioned ideological distances to define voter utilities and actual

[5]The BES data does not include respondents from Northern Ireland. For this reason, this constituent country of the United Kingdom is not included in the analysis conducted here.

[6]Overall results do not differ very significantly if one defines a voter's most preferred party using feeling thermometers.

election results to define pivotal probabilities. From these, I define a voter's Best Alternative Party (BAP), as the party, over than their MPP, that provides them with the highest expected utility. Thus, a tactical vote is a vote for their BAP.

As previously mentioned, there are voters who neither abstain, nor vote sincerely for their MPP, nor tactically for their BAP. These voters may simply be making a mistake. One the other hand, voters may purposely not vote for their MPP nor their BAP because they are interested in sending some kind of message through their choice. Here, I focus on voters who indicated a most important issue, and identified a party, other than their MPP and BAP, as the best party to address that issue. I refer the party a voter identified as the best for their most important issue, as the Best On Most Important Issue (BOMII) party. From this, I define a protest vote as a vote for a voter's BOMII that is not simultaneously their MPP or their BAP. For example, these may be voters whose MPP are the Liberal Democrats and whose BAP is the Labour party; but identified the environment as their most important issue, and the Green Party as the best party to solve that. Under some circumstances, these voters may prefer to vote for the Green party to (hopefully) send a message that they care about the environment. I identify such a vote as a protest vote.

3.2 Independent and Control Variables

To study the determinants of protest voting, as defined in the previous subsection, I focus on a few important explanatory variables. First, a protest vote is expected to be a strategic protest vote if the voter is unlikely to influence the electoral outcome in favor of their MPP or BAP; that is, if the voter is in a safe seat (for some party). To implement this idea, I rely on a measure of electoral safety defined as the maximum of the probability of their MPP and their BAP carrying the seat. When this measure of safety is low, neither their MPP nor BAP are likely to win (and the voter is not pivotal) and therefore voters are in a position to cast a protest vote in a strategic manner (sending a message without high costs). If the measure of safety is high, either their MPP or their BAP are likely to win, and therefore voters are also

in a position to cast a protest vote in a strategic manner, also sending a message without a high cost to the election winner. In the middle levels of the safety measure, voters are, to some degree, pivotal in electing either their MPP or BAP, and a protest vote has a higher cost and should thus be less likely to occur.

The second independent variable is a measure of political attention derived directly from a BES question on this matter. This measure goes from 0 (pay no attention) to 10 (pay a great deal of attention). The third independent variable is a measure of political efficacy, which is derived as the first principal component from a series of 5 questions measuring efficacy in different ways. All these questions are measured as 5-point agreement scale and include: understanding the most important political issues facing the country, that politics takes too much time and effort, that it is difficult to understand politics and government, that politicians don't care what normal people think, and that it doesn't matter which party is in power. The political efficacy measure is coded so that higher values indicate higher political efficacy.

The next independent variables measure the strength of voters' preference towards their Most Preferred Party. I use four alternative measures. The first measure is the simple ideological distance mentioned before and used to define the MPP, BAP, and tactical incentives. The second is similar measure but based exclusively on voters' views on European integration (and their perceptions of the parties positions). This measure is mostly included in light of the potential role of the Brexit referendum on protest voting. The third one is also a similar measure but based on preferences for redistribution. The final measure is a feeling thermometer for voters' Most Preferred party.

In addition to these independent variables of interest, I also include a variety of demographic controls. These include respondents' age, gender, indicators for household income terciles, two indicators for education (A levels or similar, and University degree or higher), two indicators for home ownership or renting status, as well as the number of children in the family.

3.3 Statistical Model

The analysis focuses exclusively on voters who indicated both a most important issue as well as identifying a party best suited to address it. This limits the sample to about 65% of the original BES data, as approximately 35% of respondents did not identify either a most important issue or indicated that none of the parties is capable of addressing it.

From this subsample, I estimate the following multinomial logit model:

$$P(y_i = k) = \Lambda\big(\alpha_k + \beta_{1k} PA_i + \beta_{2k} PE_i + \sum_q \beta^q_{3k} safe^q_{c[i]} + \sum_p \beta^p_{4k} PMPP^p_i + \gamma_k Controls_i\big) \quad (1)$$

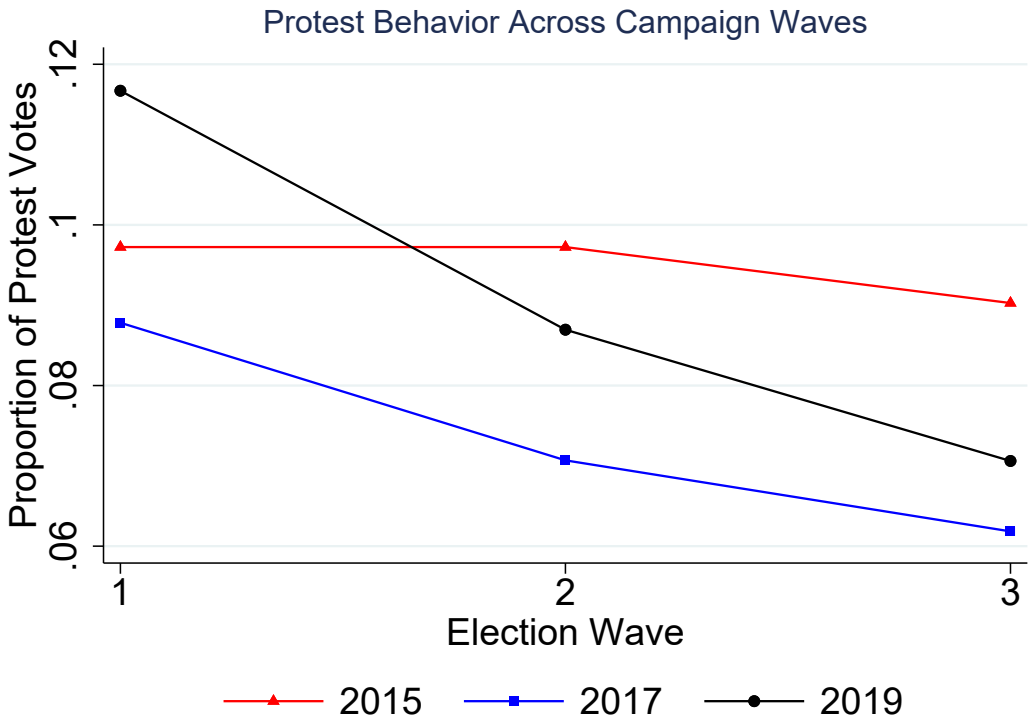
where y_i indicates whether the respondent abstained ($k = 0$), voted sincerely for their MPP ($k = 1$), voted tactical for their BAP ($k = 2$), cast a protest vote for their BOMII (not MPP and not BAP) ($k = 3$), or cast a vote for some other party ($k = 4$). PA_i is the measure of political attention for respondent i; PE_i is the measure of political efficacy for respondent i; $safe_{c[i]^q}$ are deciles ($q = 1, ..., 10$) of the safety measure defined in the previous subsection for respondent i in constituency c; and $PMPP^p_i$ are the different measures of i's preference for their Most Preferred Party ($p \in$ {ideology, integration, redistribution, thermometer}. Finally, $Controls_i$ includes the demographic control variables described in the previous subsection as well as fixed effects by deciles of the tactical incentives measure (Eggers and Vivyan, 2020); i's Most Preferred party; and election year.[7]

4 Results

Before presenting the results from the model in equation 1, it is useful to understand the extent of the different types of voter behavior observed in the sample. Approximately 58% of voters cast a sincere vote for their Most Preferred Party (MPP), whereas about 26% cast a tactical vote for their Best Alternative Party (BAP). About 8% of voters cast a protest vote, defined here as a vote for their Best On Most Important Issue (BOMII) party, that is not their

[7]Please note that the model pools the data from all three election years together.

Figure 2: Protest Behavior by Campaign Wave and Election Cycle



Wave 1 corresponds to about two months before the election; wave 2 to the month prior to the election, and wave 3 is the post-election wave. Protest vote is calculated as a proportion of all voters (including abstainers).

MPP nor BAP. Finally, about 4% of these voters abstain and another 3.5% cast a vote for some other party.[8]

Figure 2 shows how protest voting changes as the election nears for the three election cycles under analysis. Election wave 1 corresponds to two months before the election; wave 2 to the month before the election; and wave 3 is the post-election wave. For waves 1 and 2 the outcome is *intended* protest vote, as captured by voters' vote intention. There is a clear difference between the 2015 cycle and the other two. In particular, protest voting throughout the 2015 election cycle remained quite stable. For the other two cycles, however, the amount of protest voting dropped dramatically between the early campaign period and the actual election.

Figure 3 shows voters' assessments of the chances of winning for each party, depending on

[8]It is important to note here that the proportion of abstentions is quite low. This is for two reasons. First, voters tend to over-report voting. But additionally, the subsample considered in this article are voters who indicated a most important issue and identified a party best positioned to deal with it. These voters are more likely to vote than the general population, which partly explains the low levels of abstentions in the sample.

their behavior. These subjective probabilities were re-scaled so that they add up to one.[9] The "All" panel on the top right, shows the distribution of subjective winning probabilities for all voters. It should be noted that the figure contains a substantial proportion of observations along the left and right edges, which is not fully appreciated in this graphical representation. The "Sincere" panel shows the probability assessments of voters who decided to cast a sincere vote for their Most Preferred Party (MPP). The probability assessments of these voters tend to be concentrated on the left half of the figure, which is consistent with their sincere behavior: these are voters that expect their MPP to outperform their Best Alternative Party (BAP), and thus should vote sincerely.

The "Tactical" panel on the bottom left, shows the probability assessments of voters who decided to cast a tactical vote in favor of their BAP. The behavior of these voters is also consistent with expectations: they perceive their BAP as more likely to succeed than their MPP, and thus optimally choose to cast a tactical vote. The final panel, "Protest" on the bottom right, shows the probability assessment for voters who cast a protest vote for their BOMII (that is not simultaneously their MPP nor BAP). These voters tend to be predominantly located on the upper half of the simplex, which means they are voters that assign a relatively high change of winning to other parties, rather than their MPP or BAP.[10] Overall, the probability assessments of voters who cast protest votes (as defined in this article) does not fully follow expectations outlined in Figure 1. There are two deviations from the expectations: first, and most important, there is almost no evidence of protest behavior among voters who expect their most preferred party to win almost surely; second, there is little evidence of protest behavior among voters who expect their BAP to win almost surely.

Figure 5 presents a related descriptive analysis, but focusing on the measure of electoral safety. The left panel shows the proportion of voters abstaining, voting sincerely, voting tacti-

[9]It is common for respondents to report winning probabilities for the parties that add up to substantially more than one.

[10]The range of protest behavior extends to probability assessments that also give the MPP or the BAP a decent chance of winning. It should be noted, however, that the figure does not fully illustrate a relatively high concentration of voters who assign an extremely high chance of winning to other parties (top vertex of the simplex) or an extremely high chance of winning for their BAP (right vertex).

Figure 3: Subjective Winning Probabilities by Chosen Behavior

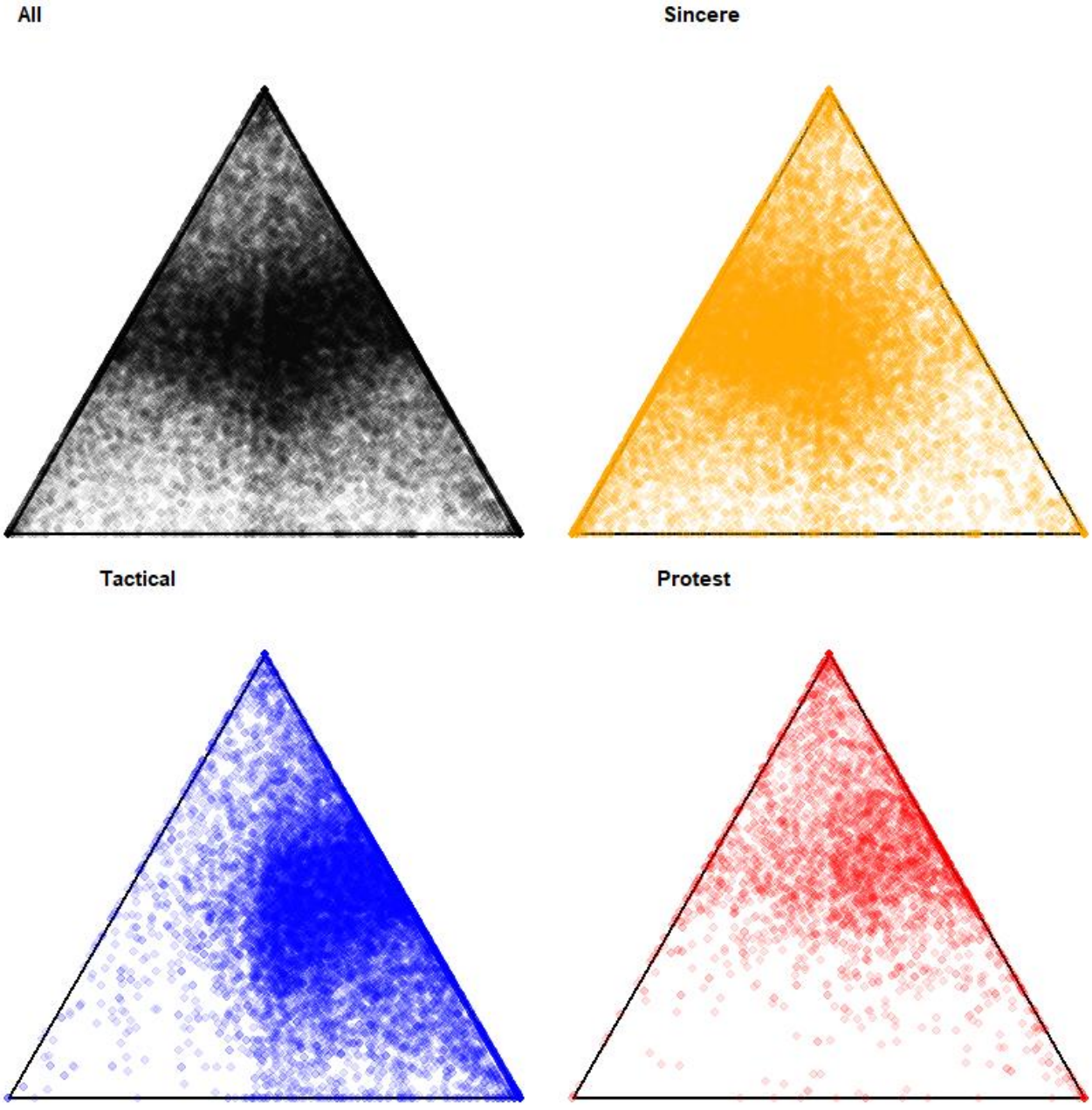


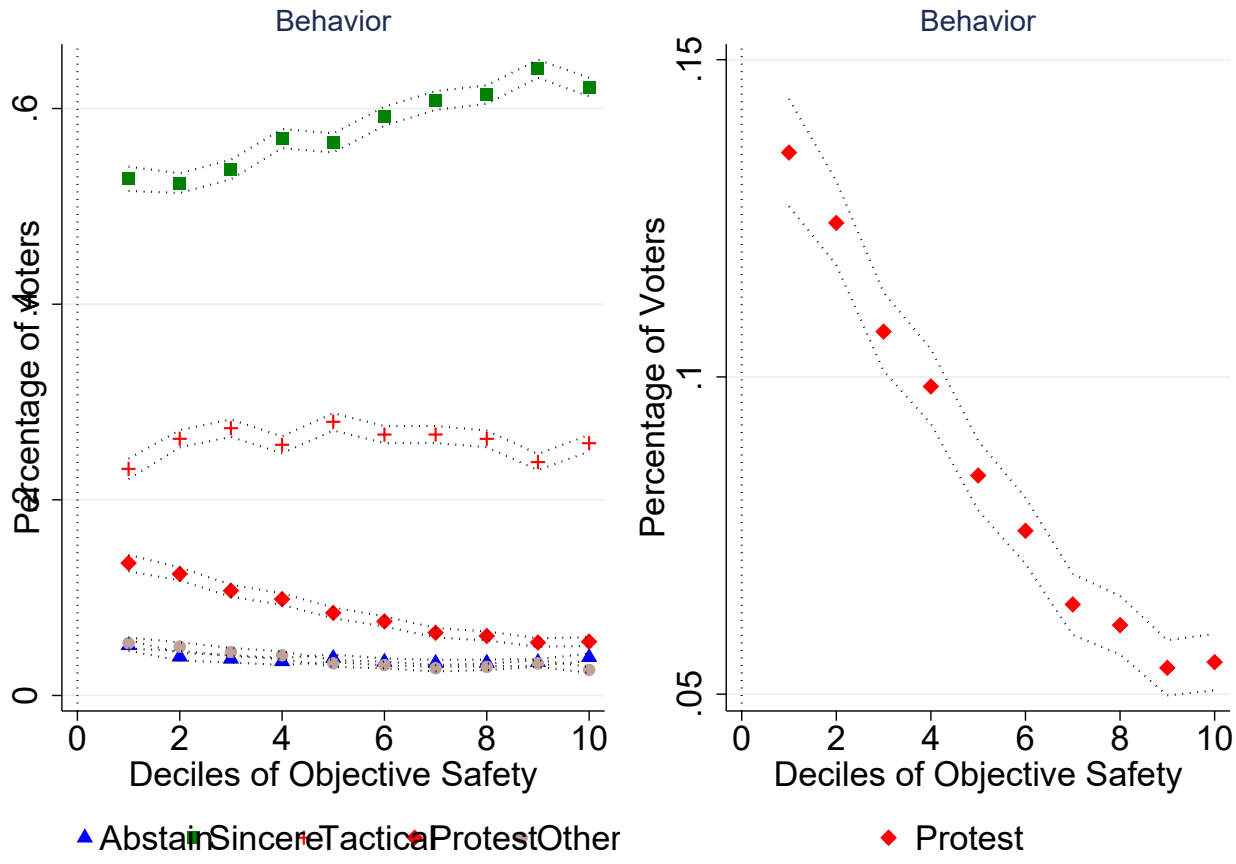
Figure 4: *Each point corresponds to individual's assessments of the chances of winning for each party (re-scaled to add up to 1). The top right panel includes abstainers and other behaviors. In each panel, the left vertex corresponds to the MPP, the right vertex to the BAP, and the top vertex to the other parties. Areas with fuller color contain more voters.*

cally, casting a protest vote, or voting in some other way as a function of deciles of the safety measure. Contrary to the results from Figure 3, this figure relies on objective measures of the probability of winning. Appendix Figure A1, presents similar results using the safety measure calculated from subjective probabilities instead (and shows similar results). The first thing to notice is that for all levels of electoral safety, sincere voting behavior is the most likely choice. This sincere behavior is more likely in constituencies that are safe for the voter's MPP or BAP. Tactical voting is the second most likely behavior, and does not vary noticeably with electoral safety. Protest voting, as defined in this article, is more likely among voters whose MPP and BAP are both unlikely to carry their seat. The right panel of Figure 5 shows a closeup view of the change in protest behavior as a function of electoral safety, which make it clear that protest behavior is much more likely among voters living in constituencies in which neither their MPP nor BAP are likely to win. Among voters in the lowest decile of safety, almost 14% cast a protest vote, compared to only about 5% in safe constituencies.

The evidence presented in Figure 5 is only partially consistent with the observed protest voting being a strategic type of protest vote. If voters were fully strategic in casting their protest votes, they should be just as likely to cast them when their constituency is very safe for their preferred parties (decile 10) as when their preferred parties are unlikely to win (decile 1). Protest voting should be at the lowest in the middle levels of the safety measure, when neither their MPP nor BAP are guaranteed to win or lose the seat. The general pattern observed in this figure does not dramatically change when estimating the different levels of protest voting as a function of electoral safety in the context of equation 1.

Figure 6 presents the average semi-elasticity effects of the main independent variables on the probability that a voter casts a tactical vote (see also Appendix Table A1). The full model is the one labeled as m6. The others are variations from the main model that include only some of the main independent variables. The model m1 only includes political attention and political efficacy (plus controls); m2 adds the measure of preference for the MPP based on ideological distance; m3 uses instead ideological distance for the MPP based on preferences for Euroepan

Figure 5: Vote Choices and Electoral Safety



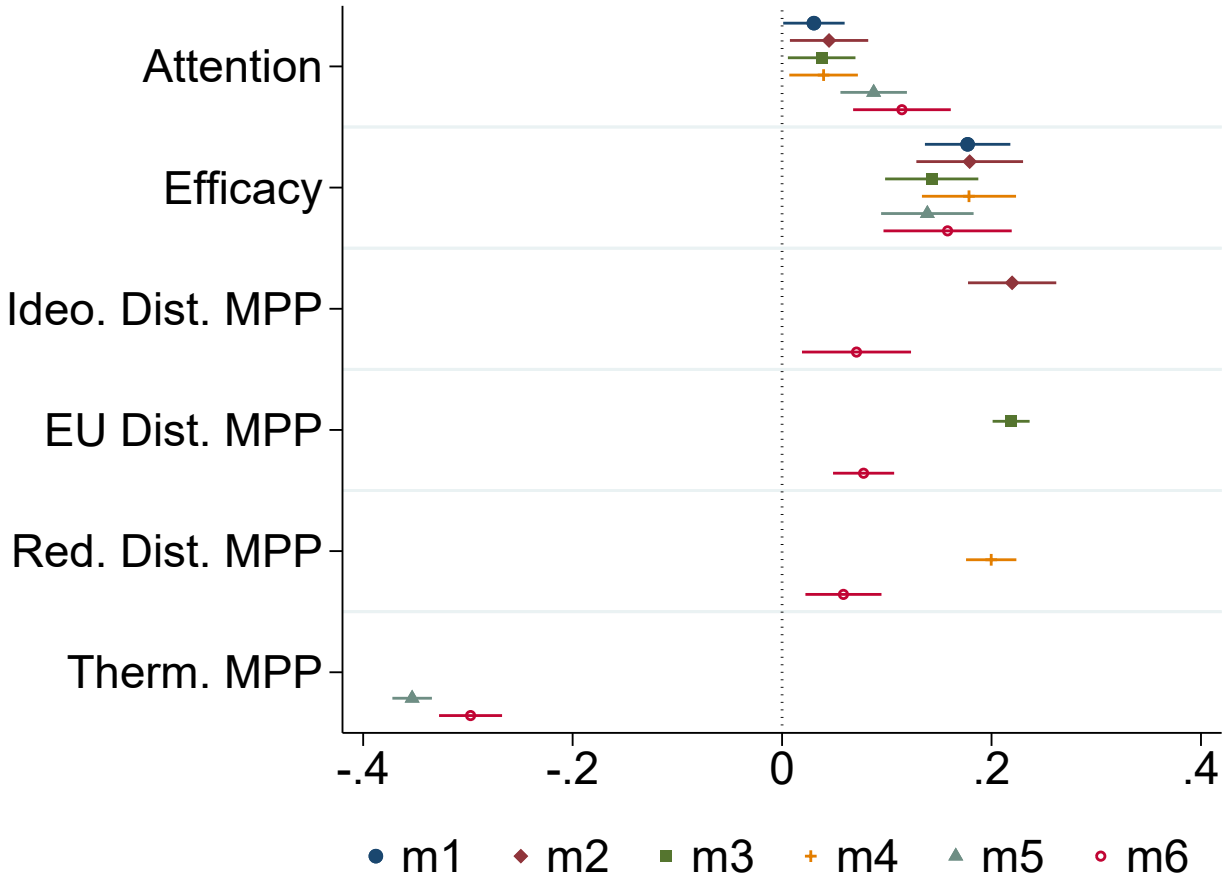
All behaviors are calculated as a proportion of all voters. Objective safety is defined as the maximum of the probability of winning for the MPP and BAP.

integration; m4 uses ideological distance based on redistribution preferences; and m5 uses the feeling thermometer for the Most Preferred party instead. The following discussion focuses on the full model, m6.

Respondents who pay more attention to politics are more likely to cast a protest vote. In particular, based on the results from the full model (m6), a 1 point increase in political attention (measured from 0 to 10), increases the likelihood of a protest vote by 11.4% (equivalent to a 1.12% average marginal effect).[11] Additionally, respondents with higher levels of political

[11]Since these effects are semi-elasticities, it means that if the baseline probability of a tactical vote is 8%, then a 1 point increase in the political attention measure leads to a level of tactical voting of 9.12%. The corresponding average marginal effect is thus 1.12%.

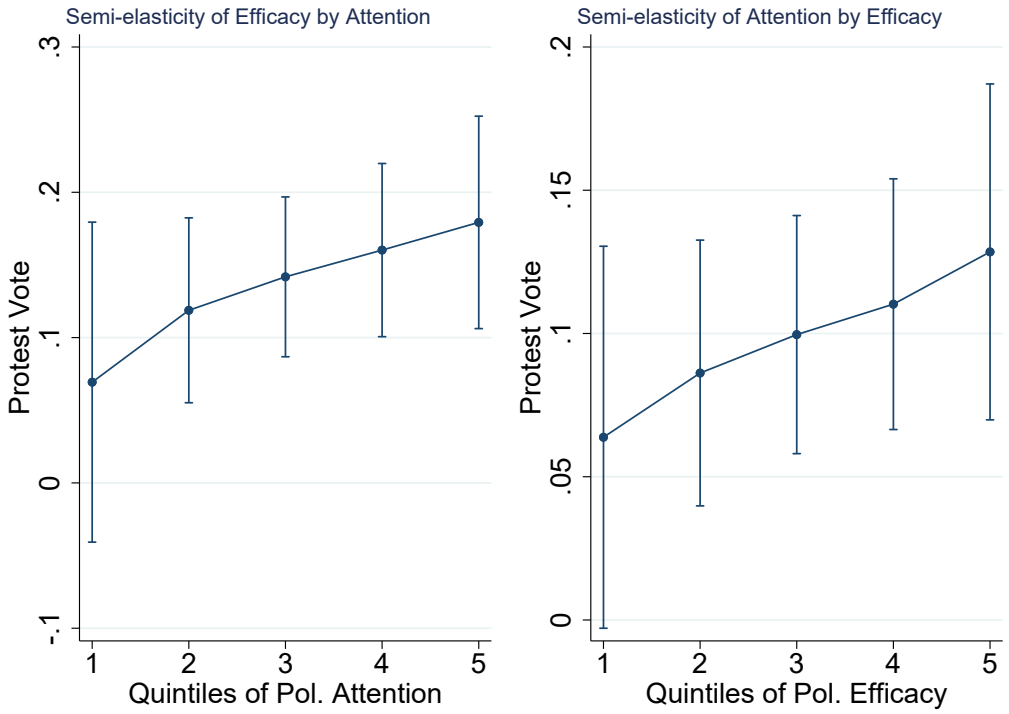
Figure 6: Average Semi-elasticity Effects on Protest Voting Behavior



All estimates are semi-elasticities calculated from variations of the model in equation 1. Standard errors are clustered at the constituency level. All confidence intervals are at the 95% confidence level.

efficacy are also more likely to cast a protest vote. In particular, a one standard deviation increase in the measure of efficacy is associated with a 15.8% increase in the likelihood of protest voting behavior. Figure 7 shows interaction effects between political attention and political efficacy. These interactions are calculated for the different quintiles of the two variables. The results show that political attention and political efficacy reinforce each other: the largest impact on protest voting being among voters who pay the most attention to politics and see themselves as the most efficacious. These results are consistent with protest voting behavior, as defined in this article, being a purposeful choice made by voters following a rational decision-making process, rather than a mistake, an accident, or purely expressive behavior. Instead, it is

Figure 7: Interaction Effects between Efficacy and Attention



All estimates are semi-elasticities calculated from a version of the model in equation 1 that includes interaction terms between attention and efficacy. Standard errors are clustered at the constituency level. All confidence intervals are at the 95% confidence level.

those voters who pay the most attention to politics and who simultaneously perceive themselves as being more influential or relevant in the political process that are the most likely to cast a protest vote.

The different measures of preferences for the Most Preferred Party capture the degree to which the strength of a voter's preference may intervene in the probability of casting a tactical vote. The results from all the preference measures are consistent. Models m2, m3, and m4 obtain higher effects for the ideology distances than in m6. This is due to some degree of collinearity between the three measures, so that when used simultaneously (as in m6) effects of each of them are smaller. Regardless of the specifics, the more closely aligned a voter's preferences are with that of their most preferred party, the less likely the voter is to cast a protest vote. Based on the full model, m6, the strongest effect comes from a voter's feeling thermometer. A 1 point increase in the feeling thermometer for the most preferred party (a

ten-point scale), reduces the likelihood of a protest vote by almost 30%. This is the equivalent of going, for example, from an 8% chance to a 5.6% chance of casting a protest vote. The ideological measures have a smaller, but consistent, impact. A 1 point increase in the left-right ideology distance to the Most Preferred Party increases the likelihood of a protest vote by 7.1%. The effects for European integration and redistribution are 7.8% and 5.9%.

In terms of the demographic control variables, there are few effects that are consistently statistically significant. The only demographic characteristic that shows consistently statistically significant effects across models is identification as racial/ethnic identification. Respondents who identify as White British, are significantly less likely to cast a protest vote. For some models, there is some evidence that respondents with higher income levels and higher educational levels are less likely to cast a protest vote, controlling for efficacy, attention, and the other variables included in the model. Finally, there is also some evidence, in some of the models, that female respondents are less likely to cast a protest vote compared to male respondents.

5 Conclusion

In this article, I focused on a specific definition of a protest vote: a vote for a party the voter identifies as the best one to deal with an issue they identify as their most important one, that is not simultaneously a vote for their sincere best preferred party, nor an instrumental tactical vote for a party that brings them the highest expected utility (i.e., a less preferred party that is more likely to win).

Under this definition, I find that voters are more likely to cast a protest vote when their Most Preferred and Best Alternative parties are unlikely to be successful. This is consistent with a form of rational (strategic) behavior: when voters are unlikely to influence the ultimate outcome of the election, they cast a vote that signals the importance of a particular issue to them. However, voters are the least likely to cast a protest vote when their Most Preferred or Best Alternative parties are very likely to be successful, another case in which voters' are also unlikely to influence the ultimate outcome of the election. Thus, not all protest votes

fit neatly into the logic described by Myatt (2017). That said, there are other factors that suggest that protest votes, as defined here, are the result of rational calculations on the part of voters. In particular, voters with higher levels of political efficacy and who pay more attention to politics are more likely to cast protest votes. Finally, protest votes are also more likely when the preferences for the Most Preferred party are weaker.

There are a number of avenues to pursue for future research to better understand protest voting. A natural extension is to consider voters' changes in intended behavior through the campaign period. As noted in Figure 2, protest vote intentions during the 2017 and 2019 Election cycles was higher early in the campaign period. It is possible that the reduction of protest vote intention by election day is evidence of related type of behavior: protest signalling through election polls that is not followed through at the ballot box.

Another extension is to consider the degree to which voters view each of the parties as capable to handle the voters' most important issue, as this can bring important nuances into voters' decisions. Relatedly, a more comprehensive measure of voters' potential benefits from casting a protest vote is necessary. In particular, a better measure of voters' incentives to cast a protest vote should directly address the instrumental trade-offs involved (a protest vote may increase the visibility of an issue of importance for the voter, but also alters the chances of winning for the different parties) as well as the expressive trade-offs (the expressive value of signaling comes at the cost of expressing the voters' overall preferences for their Most Preferred party).

Finally, an important consideration in the study of protest voting in the UK context is the Brexit referendum and the political situation surrounding it. In particular, prior to the referendum, it is possible that voters who favored Brexit and didn't see themselves aligned with the major parties on this particular issue were more likely to cast a protest vote for a party like UKIP. However, with the passage of the referendum vote, the motivation for these voters to cast a protest vote (on this specific issue) was significantly reduced, although there were still issues with the actual implementation of the referendum outcome. Thus, studying the same voters

across elections can shed more light into protest voting behavior associated with the specific Brexit issue.

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Appendix A Additional Tables and Figures

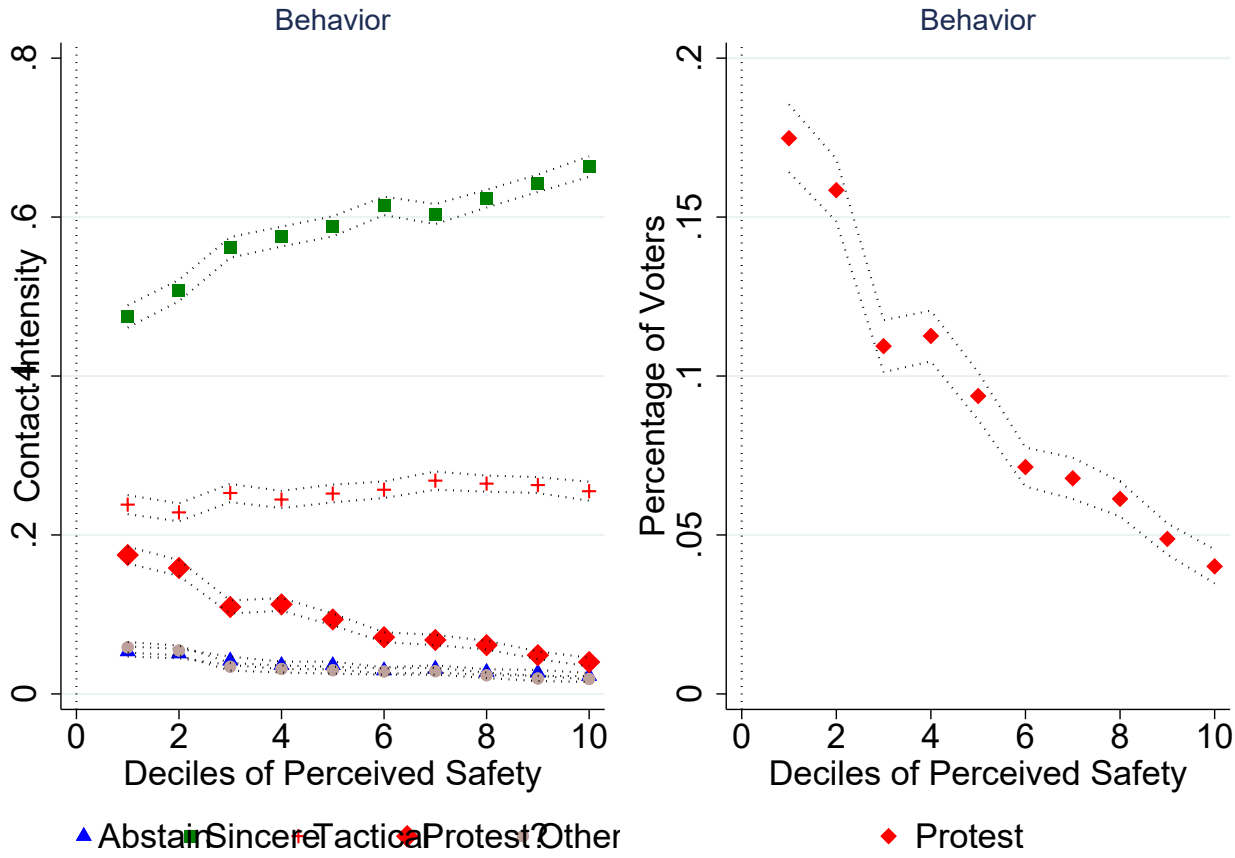
Table A1: Average Semi-elasticity Effects for Protest Voting

	m1	m2	m3	m4	m5	m6
Attention	0.030*	0.045*	0.038*	0.040*	0.087***	0.114***
	[2.03]	[2.35]	[2.30]	[2.37]	[5.40]	[4.81]
Efficacy	0.177***	0.179***	0.143***	0.178***	0.139***	0.158***
	[8.52]	[6.89]	[6.29]	[7.79]	[6.16]	[5.06]
Age	-0.001	-0.003	-0.007**	-0.002	-0.004	-0.005
	[-0.37]	[-1.22]	[-2.99]	[-0.71]	[-1.86]	[-1.68]
White Brit.	-0.176*	-0.167	-0.254**	-0.169	-0.222**	-0.283*
	[-2.15]	[-1.62]	[-2.92]	[-1.94]	[-2.63]	[-2.44]
Income T2	-0.018	-0.096	-0.016	-0.092	-0.050	-0.191*
	[-0.32]	[-1.28]	[-0.25]	[-1.44]	[-0.80]	[-2.15]
Income T3	-0.072	-0.072	-0.024	-0.155*	-0.090	-0.153
	[-1.13]	[-0.89]	[-0.34]	[-2.22]	[-1.34]	[-1.64]
Female	-0.149**	-0.190**	-0.155**	-0.149**	-0.035	-0.113
	[-3.08]	[-3.08]	[-2.94]	[-2.79]	[-0.67]	[-1.51]
A Levels	-0.125	-0.150	0.002	-0.160*	-0.051	-0.123
	[-1.86]	[-1.76]	[0.03]	[-2.13]	[-0.70]	[-1.17]
University	-0.187**	-0.223**	-0.003	-0.139*	-0.083	-0.053
	[-3.21]	[-3.04]	[-0.04]	[-2.17]	[-1.34]	[-0.60]
Renter	0.022	-0.068	0.025	-0.010	0.082	-0.057
	[0.33]	[-0.78]	[0.34]	[-0.14]	[1.15]	[-0.56]
Full Owner	0.017	0.014	0.039	0.004	0.007	-0.004
	[0.27]	[0.18]	[0.58]	[0.05]	[0.11]	[-0.04]
Children	0.119	0.136	0.143*	0.135*	0.119	0.163
	[1.93]	[1.75]	[2.15]	[2.03]	[1.82]	[1.79]
Ideo. Dist. MPP		0.220***				0.071**
		[10.22]				[2.68]
EU Dist. MPP			0.219***			0.078***
			[24.26]			[5.23]
Red. Dist. MPP				0.200***		0.059**
				[16.29]		[3.16]
Therm. MPP					-0.353***	-0.297***
					[-36.66]	[-19.38]

t statistics in brackets

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure A1: Vote Choices and Perceived Electoral Safety (Subjective)



All behaviors are calculated as a proportion of all voters. Perceived safety is defined as the maximum of the probability of winning for the MPP and BAP, as reported by each voter (after re-scaling to 1).