

Caught in the middle?

How voters react to spatial indifference

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Abstract

According to the tenets of the Spatial Theory of Voting (SToV), spatial indifference is positively associated with abstention. However, the political behaviour literature has not yet fully settled whether this is always the case and, if not, why individuals still vote despite the differential utility they extract from the two closest candidates equals zero. In this letter we explore the effect of spatial indifference on political behaviour by analyzing survey data from American elections since 1972 and through a survey experiment that randomizes candidates' ideological position on different dimensions. Findings show that spatially indifferent individuals are more likely to abstain—mainly moderate voters. Yet, around two-thirds still vote for a candidate. We advance two tentative explanations: First, when spatially equidistant, individuals that vote are more likely to consider valence attributes. Second, they are more likely to resort to a directional logic. Results have implications for our understanding of the spatial models and, in particular, of the behaviour of spatially equidistant individuals, which represent a non-negligible group of the electorate.

1 Introduction

One of the basic tenets of the Spatial Theory of Voting (SToV) is that a voter chooses the candidate that provides her with the highest utility. In the SToV framework, a voter prefers the candidate whose position on a given dimension is closest to her own. In other words, she considers the distance between her position and the different candidates and votes for the one that minimizes the distance—and hence generates the highest utility. The SToV has been very popular in the voting behaviour literature and is very often used to explain voting decisions in many situations, from elections (Schofield, 2018) to parliamentary decisions (Poole, 2005). However, and despite the amount of works employing the SToV, previous works have not fully addressed one of the phenomena embedded in the spatial framework: abstention due to spatial indifference. Thus, in a system with more than one party, some individuals are likely to fall onto an equidistant position between two alternatives. This situation is not a rare event. For instance, a common remark in different contexts is that candidates need to converge towards the centre in order to win the election. Yet, if they do, then centrist individuals are likely to become equidistant—and hence equally distant to both alternatives (Rodon, 2015). Or when there are two left-wing parties, some left-wing voters might be spatially “trapped” between the two options. Under such scenarios, do spatially indifferent individuals vote or abstain?

In his seminal *Economic Theory of Democracy*, Downs asserted that those “who are [spatially] indifferent have nothing to gain from voting, so they abstain. Hence when the cost of voting is zero, *every* citizen who is perfectly indifferent will abstain” (page 262, the emphasis is ours). Later on, Enelow and Hinich (1984) argued that individuals are more likely to abstain when the differential utility of the different political alternatives decreases—that is, abstention due to indifference. Despite these early suggestions, we still do not have a definitive answer on whether individuals that are spatially indifferent between two options vote for a candidate or whether they vote at all.

This article seeks to address this gap. Are equidistant voters more likely to abstain, as the classical SToV suggests? If spatially-equidistant individuals vote, how and why do they do so? It is noteworthy to mention that the answer to these questions does not affect a tiny group of the

electorate. For example, in 2016, and according to the ANES survey, for around 22% of the American electorate the differential utility between the perceived position of the Republican and the Democratic candidate on the liberal-conservative scale was zero. Overall, this letter aims at complementing previous works in at least four important ways.

First, the SToV has been an important theoretical approach in political science research on political behaviour. From a theoretical point of view, the SToV is grounded on several assumptions, such as that policy positions and preferences of candidates as well as of voters can be represented by positions in an ideological space. Despite early criticisms (Stokes, 1992), the SToV has been extremely popular (Schofield, 2018; Tomz and Houweling, 2008). According to the SToV, indifference-based abstention occurs when candidates provide the same utility and hence the extracted utility does not justify the cost of voting.¹ This practically means that an equidistant voter, for whom the spatial difference between the candidates is minimal or zero, should be more likely to abstain. By studying the extent to which this is the case, this letter makes an empirical contribution to this hitherto unexplored core assumption of the SToV.

Second, previous works looking at the effect of equidistance have generally used a formal theory approach (Schofield, 2018), considered indifference as a mix of spatial and attitudinal characteristics (Adams, Merrill and Grofman, 2005; Adams, Dow and Merrill, 2006) or have not taken abstention into account (Tomz and Houweling, 2008). In addition, and despite the number of experimental designs in the SToV literature has recently increased Tomz and Houweling (2008); Claassen (2009); Lacy and Paolino (2010); Kropko and Banda (2018), most empirical research is observational. This might be problematic as the relationship between an individual's location on a given dimension is endogenous to the (perceived) location of the candidates. Individuals tend to shorten the perceived ideological distance between themselves and the parties they favour, as well as exaggerate the distance to parties for which one does not intend to vote

¹According to Downs (1957), abstention also occurs when candidates are too distant from a voter to justify the cost of voting (alienation-based abstention). Although indifferent and alienation have different effects on political behaviour (Dassonneville and Hooghe, 2016), this letter focuses on indifference-based abstention, mainly for two reasons: First, considering alienation would have required a study to examine, among others, under what conditions one is more prevalent than the other—which would be out of the present analysis. Second, we depart from the assumption, which we deem more realistic, especially in the U.S. case, that people take into account the relative distance between his/her position and the different political alternatives. Yet, we encourage future works to delve more deeply into both aspects.

for (Merrill, Grofman and Adams, 2001).

Third, the letter also explores whether the response to equidistant alternatives is different for different voters. For instance, centrist individuals, when equidistant, are (ideologically) pressured by both sides. In such scenario, if they vote at all, the decision of the “kingmaker” is not neutral as it implies tilting the balance to either the left or the right of the political spectrum (Rodon, 2015). Conversely, being spatially equidistant on other ideological positions might be perceived differently. For instance, if a liberal voter is equidistant between two (liberal) candidates, the decision she faces is between choosing an extreme versus a more moderate left-wing candidate, but *within* the same ideological camp—akin to the decision many voters face in primaries. As we illustrate in the findings, and with the exception of moderate voters, equidistant individuals that vote are more likely to support the candidate on their ideological camp.

Finally, we explore why some individuals, despite having a null differential utility, still vote for one of the candidates. By doing so, we advance a theoretical way of understanding how spatially-indifferent individuals behave. In particular, we test whether equidistant voters are more likely to rationalize their vote on the basis of valence issues (Stokes, 1992) or by switching to a directional logic (Rabinowitz and Macdonald, 1989). As we show below, the vote choice among some equidistant individuals is not random: some voters, when equidistant, are more likely to consider valence attributes and to switch their voting logic from a spatial to a directional one. In other words, when equidistant, some individuals want to “make a point” by signalling the direction to which the policy position should go.

2 Research Design

We empirically test the effect of spatial indifference in vote choice and turnout in two steps. The first step employs data from the American National Election Study (ANES).² Since 1972, ANES has consistently asked Americans about their reported ideological self-placement, as well as party’s perceived placement on the ideological scale. We use a total of thirty-one

²Available at <http://www.electionstudies.org/>

waves (1972-2016), which overall include a representative sample of around 20,000 American citizens.

We use a categorical outcome that distinguishes whether the respondent recalls having voted for Democrats (our reference category), Republicans or abstained. Our main explanatory factor is the variable spatial indifference, which, following the spatial voting literature (Enelow and Hinich, 1984), we define as follows:

$$I_i = -DU_{idr} = -|(V_i - P_d)^2 - (V_i - P_r)^2|, \quad (1)$$

where I_i is voter i 's indifference; V_i is the voter i 's position on a given dimension (here the liberal-conservative scale); and P_d and P_r are the d (democratic) and r (republican) parties' position on the same dimension; DU_{idr} is the voter i 's differential utility between the democrats, d , and the republicans, r . When voters fall into a perfectly equidistant position, or when candidates are on exactly the same position, the indicator takes on the value of zero. As the equidistant "tie" breaks, the indicator takes on negative values. Therefore, and if indifference leads to abstention, this term is expected to have a positive coefficient on abstention.

To complement the external validity of the previous approach, the second empirical part is based on an experimental test. Our design randomly varied candidates' policy positions on different issues (taxes, abortion and immigration) and on the liberal-conservative scale. The survey experiment was administered to a convenience sample of the U.S. voting-age population in two different waves: the first took place between 3-17 February 2016 in Amazon's Mechanical Turk (MTurk). The second was implemented between 12-17 May 2017 in Prolific Academic. In both cases, individuals received an economic compensation for their participation. We collected 1,327 respondents in MTurk and 1,577 in Prolific. We collected data in two waves in order to minimise the effect of contextual circumstances³. Although the sample is not fully representative of the American population—on average individuals are younger and more educated, the experimental design aims at providing internal validity to our test.

³All models include a dummy that captures the source of the sample. The online appendix provides further details of the characteristics of the sample, the experimental design, balance tests and several robustness checks.

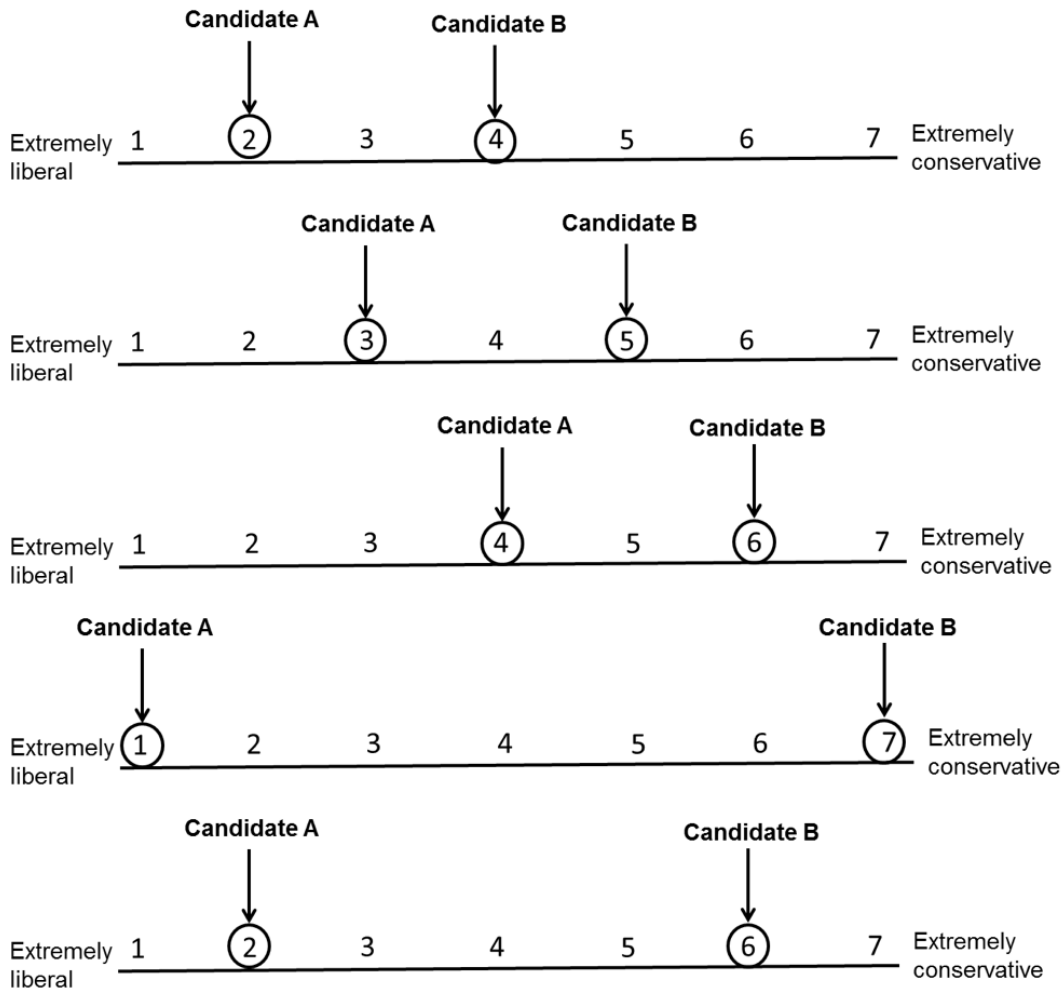
The experimental design worked as follows: After a few attitudinal introductory questions, the survey asked a respondent's position on a 1-7 scale on one of the four issues. Besides focusing on the traditional L-C dimension, we also considered three relevant issues on American politics tapping an economic dimension (the trade-off between taxes and social spending), a moral dimension (abortion) and a dimension related to values and economic concerns (immigration). After self-locating themselves on the scale, a vignette appeared showing the position of two anonymous candidates on the same scale. After the vignette, respondents had to ask whether they would vote for candidate A, B or abstain. Once the voting question for the first issue was answered, the survey went on repeating the same procedure for the other three issues. No other questions were included between the issues. To sum up, for any given dimension, respondents always saw first the self-placement scale question and, once answered, the (exogenous) candidates' policy position on the same dimension was displayed. In order to avoid recency effects, the order of appearance of the different issues was randomized.

As an example, Figure 1 shows some of the treatments for the candidates' position on the Liberal-Conservative scale. Each respondent randomly saw one scenario. This design allowed us to have control over several potential important aspects: First, candidates' policy position was exogenously placed after the respondent's self-reported position on the scale and, therefore, a candidate's position on the same dimension was not affected by people's perception of where the candidates should be, avoiding the endogenous relationship between both (Merrill, Grofman and Adams, 2001). Second, candidates did not have labels, minimizing their connection with real political candidates. Finally, and most importantly, almost all simulated policy positions were constructed so that candidates were symmetrically placed. Therefore, we exogenously imposed some equidistant scenarios to some voters, who ended up, by default, with a differential utility equal to zero.

3 Observational approach

In the first step of the empirical analysis, we assess the effect of spatial indifference using ANES data. We run the model using two measures. In model 1, we compute the indifference measure

Figure 1: Treatments–Examples



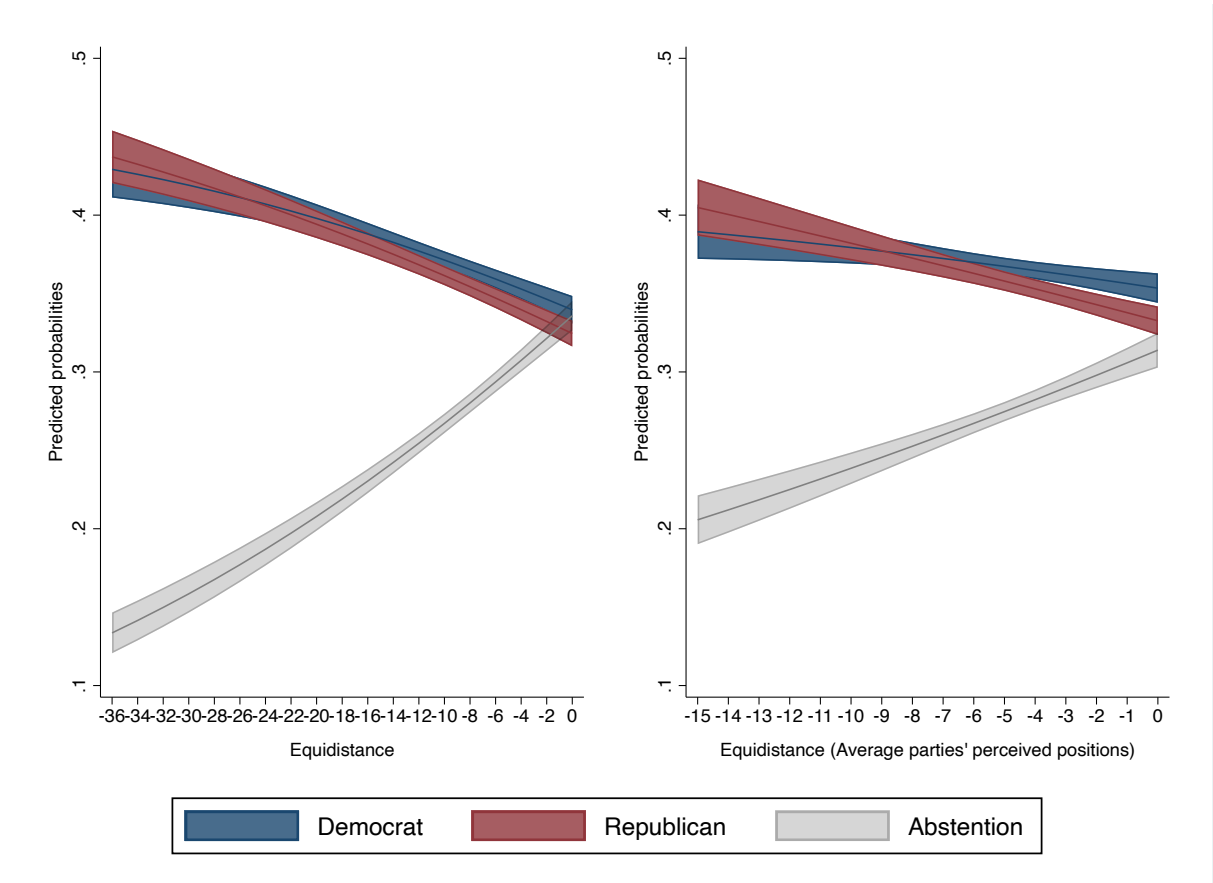
based on people’s perceived ideological distance of both the Democratic and the Republican candidate. In model 2, in order to minimize projection and contrast effects in observational data (Merrill, Grofman and Adams, 2001), we employ the average position of both candidates as perceived by voters. Descriptively, if we use the first measure and look at individuals that are perfectly equidistant (differential utility equals zero), we already see that 38% recall having abstained, while the rest answered they voted for the Democratic (32.9%) or the Republican (28.9%) candidate. Thus, it seems an important proportion of equidistant voters still vote for one of the candidates, despite both of them offer the same ideologically-based utility.

Figure 2 confirms this pattern. It shows the predicted probability of voting for one of the candidates or abstaining as a function of the differential utility. As spatial equidistance between the candidates increases, the probability of abstaining also increases. When perfectly equidistant,

individuals are as likely to abstain as to vote for either candidate. From a substantive point of view, moving from a situation in which one of the parties is one point closer to an individual, and the other 3 points away, to a situation in which an individual is perfectly equidistant, implies that the probability of abstaining increases 10 percentage points.

Therefore, when candidates' differential utility decreases, we observe that people are indeed more likely to abstain. However, as the predicted effects illustrate, approaching a differential utility of zero does not lead everyone to abstain.

Figure 2: The effect of equidistance on vote choice and abstention (observational analysis)



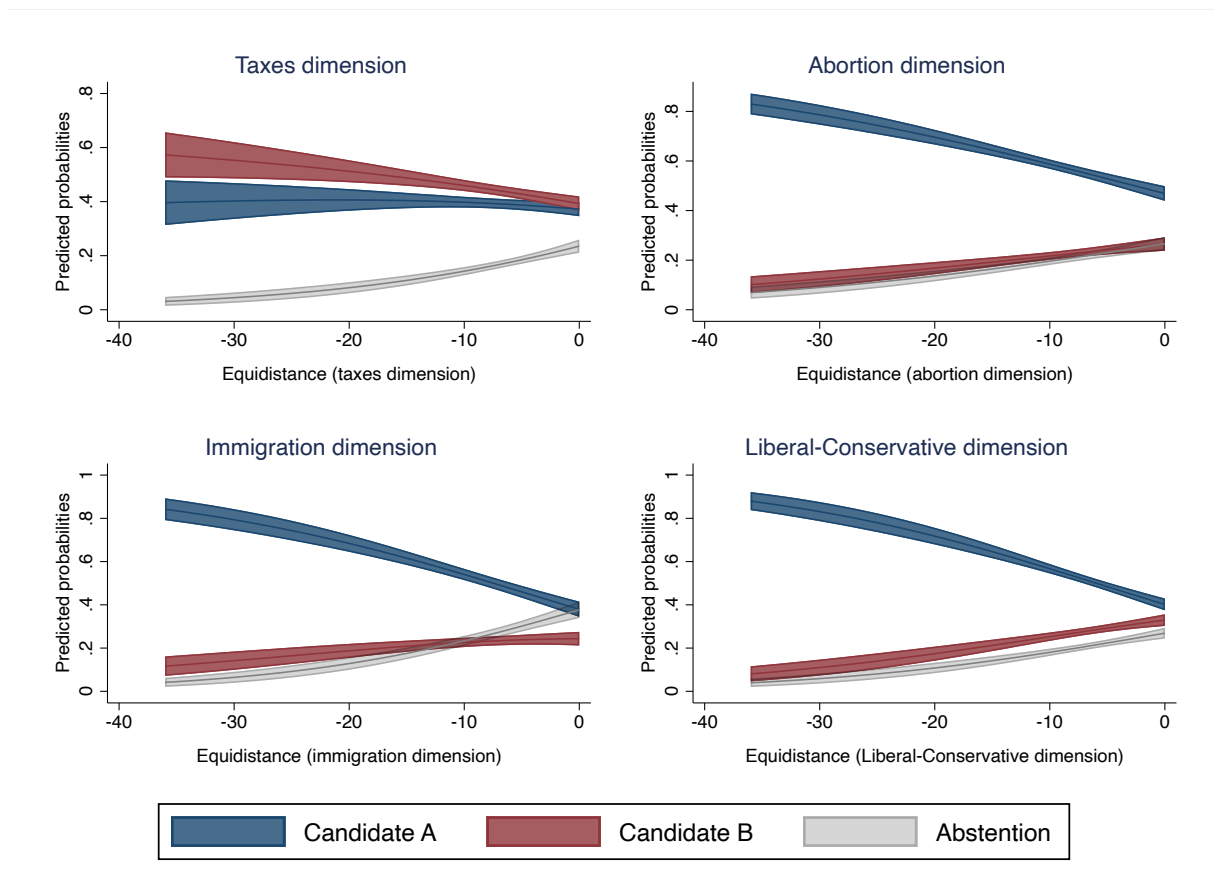
4 Experimental approach

Looking at the experimental part, we first show Figure 3, which displays the effect of spatial equidistance on abstention on the three issue scales included in the surveys, as well as the L-C dimension.⁴ Results come from a multinomial logit with standard sociodemographic controls. Across the four different models, the equidistance coefficient is positive and statistically significant. For instance, looking at the L-C scale, we observe that, when equidistance increases one point, the relative probability of abstaining rather than voting for Candidate A (the reference category), is on average 0.8 percentage points higher than when equidistance is kept constant. Also, compared to the observational analysis, results show, in three out of four scenarios, that the probability of voting for candidate B increases when equidistance increases.⁵ In addition, the analysis shows that the effect of spatial equidistance in the experimental design especially occurs in the immigration and the L-C dimension and is slightly lower than in the observational analysis. All in all, both the experimental and the observational approach give credit to Downs's (1957) original expectation—echoed by many other subsequent works—, but they also show spatial indifference does not lead *every* equidistant individual to abstain.

⁴To validate respondent's understanding of the treatment, in the Prolific sample we included a treatment that portrayed both candidates on the same position on the scale. On this particular case, the majority of respondents that saw it decided to abstain (75%). Or, conversely, one-quarter of the respondents may have flipped a coin.

⁵This might be due to different reasons, such as the convenience sample employed in the experimental part, the fact that candidates were not labelled or that abstaining in an experimental scenario is less consequential.

Figure 3: The effect of equidistance on vote choice and abstention (experimental analysis)

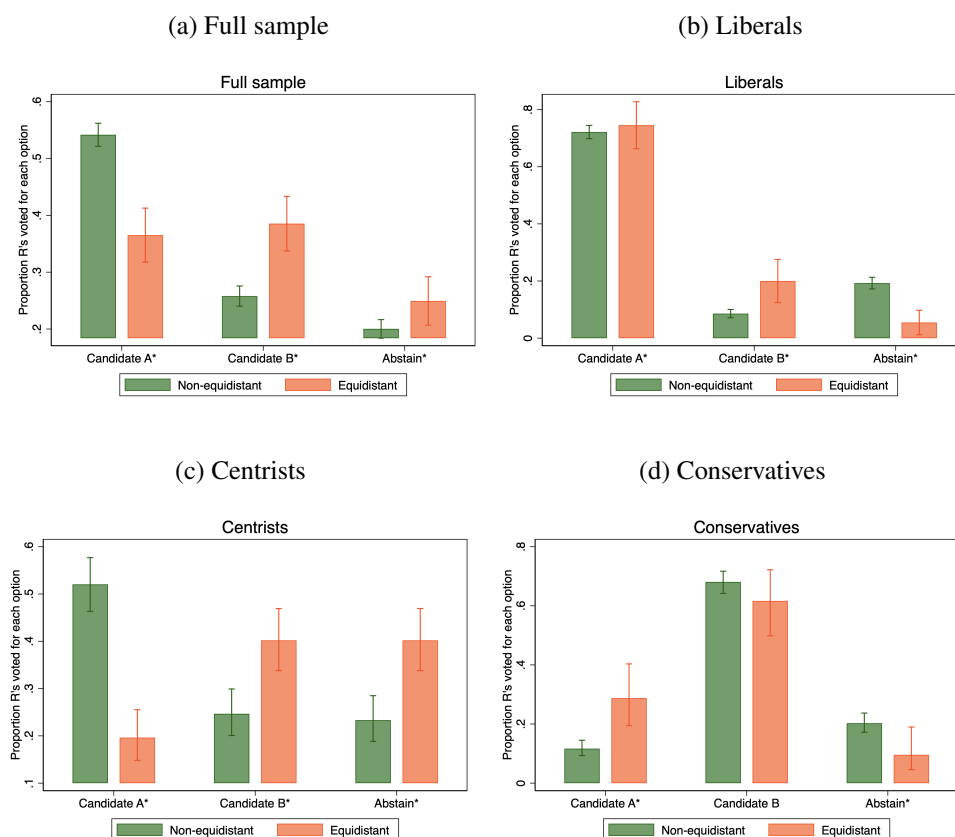


Another way of looking at the effect of being equidistant on abstention is by directly examining how individuals that are perfectly equidistant behave, compared to those individuals whose differential utility is not zero. Thus, and using the L-C scale, we created a binary indicator distinguishing between purely equidistant respondents—those that fall in-between the two candidates on the L-C and hence have a differential utility of zero—and the rest. We then calculated, and plot on Figure 4, the proportion of people who supported Candidate A, B or Abstain between equidistant vs non-equidistant respondents. The Figure shows (Figure 4a) that the proportion of equidistant individuals abstaining is higher than non-equidistant ones. Yet, as we highlighted in the observational part, the majority of them (about 75%) still votes for one of the two alternatives.

We then examine whether this general pattern is consistent across ideological positions. Although

respondents' self-placement was not primed and, hence, one should be cautious about the causal interpretation, the previous analysis reveals that some respondents, when equidistant, are more likely to vote for the candidate on their ideological camp. In other words, some equidistant respondents abstain but those who vote seem to do so for the candidate located on the extreme of their ideological side of the scale. Figures 4(b-d) confirms this behaviour using the ideology scale. When we split the sample and consider only liberal individuals (positions 1-3), we see in Figure 4b that 74% of equidistant liberals vote for candidate A, the option that was always exogenously placed on the (extreme) left. As Figure 4d shows, the opposite pattern arises for conservatives (positions 5-7): equidistant conservatives are more likely to vote for candidate B, the candidate whose (exogenous) position was always to the (extreme) right of candidate A. Finally, we observe that centrist respondents are significantly more likely to abstain when they are equidistant—around 40%.

Figure 4: Choice among equidistant/non-equidistant (% voted for each option); ideology scale



Note: Vertical lines represent 95% CI. An * next to the label indicates whether the two-way comparison is statistically significant at the 95% level.

5 Why do equidistant voters still vote?

As shown previously, some equidistant individuals abstain, but others do not. Crucially, when they vote for a candidate, it seems they do not do it randomly: a substantial proportion of equidistant individuals are more likely to support the candidate on the the same ideological camp. Why is it the case? We tentatively explore two potential explanations.

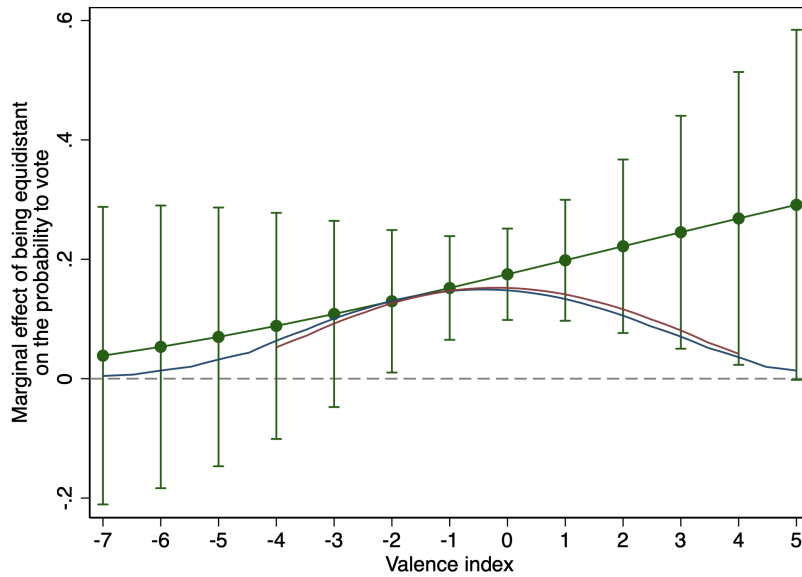
5.1 Valence

One possible interpretation is that, when individuals are perfectly equidistant between two options, the spatial proximity logic ceases to be applicable in a voter's decision-making process.

In other words, instead of considering the utility extracted from one of the two options, voters base their decision on other considerations. As suggested by Stokes (1992), valence issues are the most common and viable alternative. Recently, Johns and Kölln (2020) have shown that there is a relationship between a party's left-right position and its perceived competence. Therefore, one plausible alternative is that equidistant individuals that vote do so because they switch from spatial considerations to a valence reasoning.

In order to explore this logic, the survey included a battery of indicators with the aim of tapping into respondent's perceived importance towards different issues when deciding whom to vote for. After the the last dimension presented to respondents, we asked how important to them were different aspects when deciding whom to vote for. The response options included two candidate-based valence issues (Stone and Simas, 2010), honesty and trustworthiness; and two ideological ones, policies and ideology. We first subtracted the sum of valence and ideological issues and created an index that ranges from -7 (respondent only cares about ideology) to 5 (respondent only cares about valence issues). We later ran a logistic model exploring whether there is an interaction between this indicator and whether respondents are perfectly equidistant or not on voting for either one of the candidates (or not). Figure 5 illustrates the results of the interaction. Although we did not randomly prime individuals with different valence-based characteristics and hence results should be taken with caution, the graph shows that equidistant individuals seem to give greater weight to valence issues than non-equidistant ones. As it can be seen, this finding should be taken with care, as the uncertainty estimates do not allow for a definitive conclusion.

Figure 5: The effect of being equidistant on voting across valence values (marginal effects)



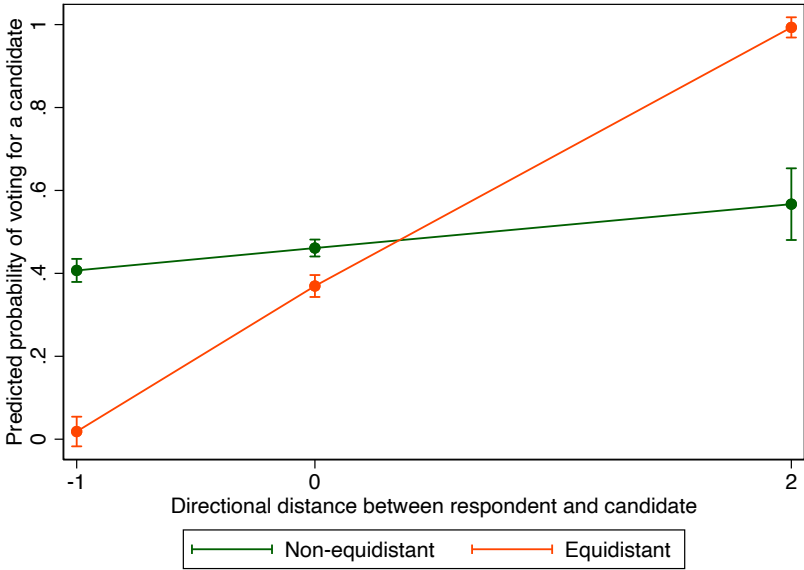
5.2 Directional

A second potential explanation for why voters still support one of the candidates, despite being equidistant, is the potential role of the directional logic. In other words, instead of using a non-spatial heuristic like valence issues, voters who are equidistant might still employ the spatial framework, but not resorting to the proximity logic, but to the directional one. According to Tomz and Houweling (2008), the proximity logic seems to be prevalent, but around 15% of voters use a directional rationale when deciding whom to vote for (see also Moral and Zhirnov (2018)). Similarly, and as shown by Bølstad and Dinas (2017), voters' utility function should in some occasions reflect whether parties fall into the same broad category as themselves. Thus, it could be argued that, in our case, when voters are equidistant, they can no longer apply a proximity logic as the basis of their decision-making process. In such scenario, voters might switch to a directional logic. Another way of understanding this switch is that, despite voters can fall onto an equidistant position, they still possess latent ideological preferences, which they want to express by switching to a logic that allows them to signal the direction and the intensity they want policies to move to.

Following this rationale, we examined the effect of directional voting among equidistant and

non-equidistant voters. We first calculated the directional utility, that is, the product of a candidate’s distance from the centre multiplied by that of the voter. Then, and following Bølstad and Dinas (2017), we stacked the data and ran a logit model in which we interacted the directional product and a binary indicator distinguishing whether an individual was perfectly equidistant or not. In addition, we control for whether the respondent falls on the same ideological side than that of the candidate. Although the effect of the directional product among equidistant individuals can only be tested for those scenarios in which candidates are located on 2-4 and 4-6, the following test will help us understand whether there is a potential switch to a directional logic, even if the conclusions are to be taken with a grain of salt. Figure 6 shows the results. Positive values imply that the candidate has a policy position in the same direction than that of the respondent. As it can be seen, individuals are more likely to vote for a party as a function of their directional utility when they are equidistant. Conversely, when they are not equidistant, the probability of voting for a candidate when the directional utility is higher, increases much less. This test provides (indirect) evidence that some equidistant individuals are less likely to abstain and, when they vote, they are more likely to use the directional logic. This points to the idea that, when some voters are equidistant, they want to “make a point” by supporting the candidate on the same ideological side of their ideological position.

Figure 6: The effect of directional voting among equidistant and non-equidistant individuals



6 Robustness

First, although our equidistant scenarios were designed in a way that made candidates' policy position exogenous to a voter's perception, it might be the case that we are only capturing whether an individual is interested (or not) in the issue. On one hand, an equidistant voter might decide to abstain not because she was presented with two equidistant alternatives, but because she deems the issue as less relevant. On the other, an individual very interested in the issue might be less likely to abstain because she might be more likely to vote at random. To alleviate these concerns, our survey included a pre-treatment question on how important respondents thought each issue was to them. Using this indicator, we distinguish between those that perceived the issue as important vs unimportant and we ran an interaction with the indifference indicator. Results show that the effect of indifference is similar across both. In other words, equidistant individuals with a low interest towards a given issue are as equally likely to abstain as equidistant individuals that find the issue important.

Second, by definition, respondents that placed themselves on the extremes of the scale (1 or 7) could never be spatially equidistant. We excluded them or added a control for extremeness and re-ran the analysis. Results are robust.

Finally, one might argue that abstention in an online environment occurs due to the largely costless act of voting. To check this possibility, some respondents were exposed to a subtle voting cost. More concretely, next to the candidate's label, the following sentence was randomly shown to some individuals: "[candidate A] you will continue reading party A's platform (estimated time [randomize] 1/3 min)". In an online survey environment, in which participants want to maximize their economic returns, spending one or three minutes reading a party's platform undoubtedly represents a cost that, all else equal, participants are likely to avoid. Yet, even when we control for the presence of this cost, results do not change.

7 Conclusions and Discussion

When candidates set their policy position, some individuals will inevitably become spatially equidistant between some political alternatives. According to the Spatial Theory of Voting, abstention is more likely when the differential utility between candidates approaches zero. Despite this assumption has always been part of the political behaviour literature, the effect of spatial indifference on abstention has until now been overlooked. This letter, through an observational and an experimental approach, aimed at filling this gap.

Our findings are essentially three: First, as predicted by most works, being equidistant increases an individual's likelihood to abstain, but the effect is not absolute. Second, most equidistant individuals (around two-thirds) still vote for one of the candidates, despite none of them offers a larger utility. Third, this behaviour is largely explained because individuals switch their spatial voting logic to other considerations. In line with recent works (Bølstad and Dinas, 2017; Johns and Kölln, 2020), we have explored and tentatively confirmed two explanations: on one hand, equidistance leads individuals to resort to valence considerations. On the other, they transition from a proximity rationale to a directional one. Our interpretation of the directional results is that, when equidistant, some individuals want to “make a point” by signalling their preferences. In other words, when a voter is “trapped” between two options, it seems she wants to signal the ideological direction she wants to bring the policy to. This last finding could help us explain, for instance, why some primaries result in the nomination of extreme candidates. Primary voters might be likely to be ideologically equidistant between two alternatives, which leads them to support the most extreme candidate in order to signal a future policy direction. Future works should confirm this conclusion by testing, among others, whether accounting for an individual's regions of acceptability, an important element in the directional theory of voting (Rabinowitz and Macdonald, 1989), changes the results and in what direction.

All in all, these findings are not only relevant because they shed light on the behaviour of spatially equidistant individuals (around a quarter of the electorate), but also because they show that individuals switch their spatial voting logic as a function of candidates' policy positions. Future research can further explore this finding and examine more combinations of candidates'

placement, in different party systems, the interplay between indifference and alienation or the extent to which there is a trade-off between different spatial logics.

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