Does receiving advice from Voter Advice Applications (VAAs) affect public opinion in deeply divided societies? Evidence from a field experiment in Northern Ireland

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Abstract:

Despite the global growth in the use of Voter Advice Applications (VAAs), which advise users on how similar their own policy views are to the policy positions of the political parties, there have been few field experiments that isolate the causal effects of VAA use on party support. Nor has there been much investigation of how VAAs may help to ameliorate ethnically based voting divisions by refocusing voter attention on other issues. This paper draws on evidence from a field experiment in the deeply divided context of Northern Ireland. We find that at the individual level party preferences are somewhat more closely related to voter ideology after the provision of advice. Yet, at the aggregate level, we find no evidence that advice leads to weaker ethno-national structuring of party support. These results suggest that while receiving advice from VAAs has some impact on users' party preferences, there is no observable overall impact on support levels for the ethno-national blocs in Northern Ireland.

The *bottom-up* interpretation of political divisions (Lipset, 1960; Lipset and Rokkan, 1967) emphasises the strength and durability of long-existing social conflicts, based on values and identities, and the importance of broad patterns of social division arising from a country's historic development. The *top-down* interpretation, by contrast, emphasises the importance of institutional design, party strategies and the media as key shapers of contemporary political divides. Duverger (1954), for example, focuses on the importance of the electoral system in structuring voter interests and channelling popular concerns into packaged policy programmes; Przeworski (1985) emphasises the role of parties in shaping social divisions into politically relevant divisions; Amorim-Neto and Cox (1997) concentrate on the importance of political leaders; and Bartels (1993) highlights the influence of the media. The top-down view sees voters as malleable since their attitudes and behaviour are a function of factors that may easily change, such as rules, strategies and information from the media about politics.

The same top-down and bottom-up processes are potentially at play in societies in which one division completely dominates political life – deeply divided polities. Some argue that a bottom-up approach makes most sense, given the historically rooted and highly durable identity divisions at play, and therefore advocate accommodative institutional strategies (Lijphart 1969, 1977). Others claim that divisions among voters are open to change and thus put forward institutional responses that will overcome them (Horowitz 1985). This top-down account means that changes to the institutional or party structure could dilute the salience of 'the divide' and increase the relevance of other issues.

Here we test the top-down interpretation that political views and behaviour in deeply divided places are malleable. Specifically we examine whether providing voters with information

about political parties on non-divide issues decreases the divide-based nature of party support. We focus on the possible impact of Voter Advice Applications (VAAs), the aim of which is to provide voters with policy relevant information on each of the parties in the system and advise voters about which party they are closest to, taking a wide range of policy matters into account (Garzia and Marschall 2012; Garzia and Marschall 2016; Garzia *et al*. 2014; Marschall and Garzia 2014; Rosema *et al*. 2014). The widespread, and growing, use of VAAs at elections means that some people are being provided with an information intervention that could affect their party preferences. When used in divided places, such VAAs would run radically counter to the assumption that politics is based simply on 'the divide' as VAAs typically afford equal weight and prominence to matters relating to economic policy, socio-moral issues, regional integration and other policy areas. The party scores that VAA users are given represent how close the voter is to each party taking *all* these policy issues into consideration. The advice (on which party is closest) thus starts from a premise that there is not simply one policy area that everyone cares about, but rather that a very wide range of issues – only a minority of which relate to the underlying divide – are important.

In theory, therefore, if people follow the advice of VAAs, divide-based voting may be reduced. Yet, given that the literature on VAAs does not uniformly show large effects in democracies that are not deeply divided, one ought to be cautious about expecting a substantial effect in the deeply divided context. Although several studies have concluded that VAAs have effects on party preference, the methodology is typically non-experimental and hence limited in terms of isolating the causal effect of VAA use on party support (Kamoen *et al*. 2015; Ladner *et al*. 2012; Waldgrave *et al*. 2008; Wall *et al*. 2014; Kleinnijenhuis *et al*.

2017).[1] Two exceptions include experimental work by Enyedi (2016) and Maheo (2016) which reveal minimal effects.[2] This means that applying VAAs to deeply divided places where politics is particularly crystallised may be regarded as an especially tough test for VAA effects.

We focus on the particular case of Northern Ireland as an illustrative example of a deeply divided polity. Northern Ireland suffered ethno-national violence during three decades of 'The Troubles' from 1968 to 1997 and endures ongoing differences in national identity and constitutional preferences between Catholic nationalists who tend to favour a united Ireland and Protestant unionists who favour the continuation of Northern Ireland within the United Kingdom. Over 93 per cent of the population is from a Protestant or Catholic background (Census 2011). Party competition and voter behaviour in Northern Ireland is typically portrayed as strongly based on these ethno-national lines, between the main Protestant unionist parties, the Democratic Unionist Party (DUP) and the Ulster Unionist Party (UUP), and the main Catholic nationalist parties, the Social Democratic and Labour Party (SDLP)

[1] Kleinnijenhuis *et al.* (2017), for example, seek to identify what they refer to as 'genuine' effects of VAAs on party choice using panel data. They argue that 'the vast majority of studies that showed that issue-based advice from a VAA affected the vote, however, neglect the funnel of causality' (2017: 2) and do not take into account antecedent factors. Although their panel design helps overcome some of these problems, their data on VAA usage is from survey respondents who are asked to remember the advice they were given raising issues of recall quality. On the mobilising effect of VAAs on participation in elections, see for example, Garzia *et al.* (2017).

[2] Enyedi's results 'lend support to those studies that have found minimal impact in terms of direct preference change … Therefore, expectations concerning VAA-induced change need to be modest. It seems that the large majority of citizens are unwilling to follow last-minute suggestions, even if they come from trustworthy sources and even if they are formulated in unequivocal form' (2016: 1012-3). Maheo (2016) states that 'receiving non-confirmatory advice did not significantly push user to change their party preferences (compared to other users who received confirmatory advice'. See also Pianzola (2014) for similar findings.

and Sinn Féin. Two other smaller parties are clearly unionist: The Traditional Unionist Voice (TUV) and the United Kingdom Independence Party (UK). One significant cross bloc party operates (Alliance) as does a smaller non-aligned Green party.[3] Voting preferences are aligned along the ethno-national division almost precisely. In the 2016 Northern Irish Assembly election, which uses the single transferable vote, only four per cent of Catholics cast a first preference vote for a unionist party and only two per cent of Protestants cast a first preference vote for a nationalist party. Indeed, only eight percent of Catholics gave any preference at all to a unionist party and only four percent of Protestants gave any preference at all to a nationalist party (Coakley et al. 2016).

As Northern Ireland is the archetypal case of a divided society there is ongoing debate between those who favour a *top-down* and those who favour a *bottom-up* interpretation of ethno-national based party competition and vote choice. While these are not necessarily contradictory approaches they inform much of debate around the effect of the consociational power sharing institutions implemented after the 1998 Belfast/Good Friday Agreement. The power-sharing arrangements provide veto powers to each ethno-national community based on ethno-national designation by elected parliamentarians as either 'unionists' or 'nationalists'. Proponents of power sharing argue that it represents an accommodation of an enduring historically rooted ethno-national divide (McGarry and O'Leary 2004; O'Leary 2013). Conversely, critics of power sharing claim that the particular institutional design itself actively reinforces the underlying divide (Taylor 2009). This latter perspective suggests that power sharing undermines the possibility of vote choices being a function of a broad range of issues precisely because the institutions encourage party competition, political debate and media coverage of politics to be dominated by ethno-national issues. If this is the case, then a

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[3] Other smaller parties also include People Before Profit (PBP) and the Progressive Unionist Party (PUP).

VAA could plausibly serve as a device that bypasses the parties' electoral campaigning and the media, and directly steer voter choice at election time towards a broader scope of policy matters. This would suggest, per the top-down model, that the link between voter ideology and party choice is malleable as tweaks to the information supply can cause party choice change. This change means a greater alignment between voters' wide ranging policy views (rather than merely ethno-national views) and the party they choose.

We have two main expectations regarding the possible effects of VAAs in deeply divided contexts such as Northern Ireland: one relating to changes in choice at the individual level and one relating to changes in group level outcomes. First, we hypothesise that the advice that individual VAA users receive affects their party preferences. If people are informed that they are close to a particular party they will be more supportive of that party; if they are informed that they are far away from a party they will be less supportive of that party. We also expect that the strength of this effect will vary depending on how strongly wedded the VAA user already is to a particular political party; users with a strong partisan affiliation are likely to be less easily moved than those users less anchored to a single political party. Here we build on the findings of Wall *et al*. (2014) who find that the impact of VAA advice on users is strongest for those users who were contemplating voting for more than one party. In the Northern Ireland case we expect that those users with a definite prior intention to vote for a particular party will have party preferences which are less tractable than those without a definite vote intention.

H1   In terms of individual level choice, receiving VAA advice has an impact on party support, and this effect is larger for users who do not have a prior intention to vote for a particular party

Second, we hypothesise that VAAs will cause party support to become less structured by the ethno-national character of citizens. If issues other than those relating to the underlying ethno-national divide make up much of the issue content of the VAA this should have the effect of lessening the importance of the underlying divide. The advice given to users will not be 'this is the party you are closest to on the ethno-national divide'. Rather the advice will be 'this is the party you are closest to when a large and wide range of issues (including some relating to the ethno-national divide, but most not relating to that divide) are considered'. Accordingly, we might expect that Catholic VAA users will be somewhat more positively disposed to unionist parties and cross-community parties than they otherwise would be, and somewhat less positively disposed to nationalist parties. Similarly, Protestant VAA users will be somewhat more positively disposed to nationalist parties and cross-community parties than they otherwise would be, and somewhat less positively disposed to unionist parties. In short, the average support level for out-group and cross-group parties will rise and the average support level for in-group parties will decline.

H2   In terms of group level outcomes, receiving VAA advice leads to decreased levels of support for in-group parties and increased levels of support for out-group and cross-group parties

Data and measures

The design of our VAA is similar to those used in other cases (Garzia and Marshall 2012; Garzia *et al*. 2014; Rosema *et al*. 2014) and almost identical to two previous Northern Ireland VAAs (Garry *et al*. 2017). Users were given a number of issue statements to which they can express varying degrees of agreement or disagreement (on a six-point scale). Parties are also

assigned positions with respect to each issue statement and the VAA matches users with the parties, generating a bar chart showing level of similarity for each party.[4] Our VAA included 30 issue statements (see Figure A1 in the appendix) which were selected according to the following criteria: (a) the statements related to issues that were at least somewhat salient, contentious and debated in the media in the two years prior to the 2016 election; (b) clear positions were adopted by the political parties on these issues, with some parties on one side of the issue and other parties on the other side; and (c) we expected that there was significant variation among voters on these issues. The issues included a range of economic, moral, EU and other themes as well as areas directly related to the dominant ethno-national division. We used the Delphi method to measure the official positions of each of the parties on each one of these 30 issue statements (Dalkey and Helmer 1963; Gemenis 2015). Five experts (PhD students or postdocs with expertise in Northern Ireland politics) independently coded all the parties on all of the issue statements.[5] In addition to the issue statements, the VAA also asked its users a number of supplementary questions. Of relevance here is that they were asked how they intended to vote in the election and the choice options included all the parties as well as the options 'I have not yet decided', 'I do not intend to vote' and 'I prefer not to say' which were available alongside specific party choices. Responses to this question allowed us to generate a variable capturing whether or not the user had a particular party vote intention or

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[4] The bar chart graphically represents user-party matches along a scale ranging from -100 (total disagreement) to +100 (total agreement). Scores of over 40 are flagged as a strong match.

[5] Each coder defended each one of their policy estimates with information they garnered from party statements found in policy documents, party manifestos or other sources. Each coder's individual estimates of each party on each item, and each coder's associated justification of each estimate, were fed back to the full panel of five coders anonymously for a second round of coding in which coders updated or confirmed their initial codes with the help of justifications from their fellow coders. We calculated an overall inter-rater agreement based on van der Eijk's alpha. For round 1, the overall agreement was .78, and after round two it was .91.

not. Users were also asked to indicate their religious background (Protestant, Catholic or other).

The VAA was open to anyone to complete and was widely publicised via a Facebook campaign. It also featured on the webpage of one of Northern Ireland's main newspapers. It is important to emphasise that our aim is to empirically examine users of a real world VAA in a real world election campaign, rather than assuming that this set of app users is 'representative' of the population. Indeed, the people that filled in the VAA are not representative of the population, but it seems reasonable to assume that they are representative of VAA users. In total 14,528 people fully completed the VAA and answered at least one 'propensity to vote for' (PTV) question. This represents around 2 per cent of all 2016 voters. In Britain 3.6 per cent of voters used the most popular VAA (Whoshouldyouvotefor.com) at the 2015 general election (Palese 2018), so these numbers are comparable to what we might expect in Northern Ireland in 2016.

What makes the 2016 Northern Ireland Assembly VAA different to other real world VAAs is that it contained an experimental manipulation. This is shown in Figure 1. Based on random assignment, one third of users were asked to indicate their support for the parties *after* being given their advice scores. The people from this third of users who answered the party support questions form our treatment group (group D). Two thirds of VAA users were asked to indicate their support for the parties *before* being given their advice scores by the VAA. Our control group is people from this 2/3 of users who opted in to answering further socio demographic and attitudinal questions after being given their advice results (group B). Treatment and control groups are thus directly comparable. We are comparing people that are equally likely to continue answering questions after being given their advice scores.

FIGURE 1 ABOUT HERE

Our dependent variable is party support. This was measured by asking users to indicate on a 0 to 10 scale their likelihood of voting for each of the main parties: the DUP, UUP, TUV, Sinn Féin, SDLP, Alliance, Greens and UKIP.[6] Excluding multiple entries and people who were not eligible to vote, we end up with 3,012 people and 21,549 PTVs. We generate a stacked dataset in which cases are person*party combinations. This means that if someone gave a level of support (on the 0 to 10 scale) for each of the eight parties, the user would occur as a case in the stacked dataset eight times. We analyse the resulting data using a hierarchical model to account for this clustering.

Results

In order to test whether advice has an effect at the individual level, we compare our treatment group (users who received the advice prior to indicating their support for each of the parties) to our control group (users who did not receive the advice prior to indicating their support for

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[6] The decision to select these parties for inclusion in the VAA was based on vote-share in previous elections and expert predictions of party performance in the 2016 election. This scale is often called a 'propensity to vote' (PTV) measure (van der Eijk 2002) and was also used as the dependent variable by Alvarez *et al*. (2014). In contrast to our experimental design Alvarez *et al*. asked respondents to indicate PTVs before and after receiving the VAA advice. By comparing these two scores for someone's 'most preferred party' the authors found that only 8 per cent 'switched' party in the sense of moving (at t_2) to a most preferred party that was in line with the advice given. Here we are more focused on analysing variation in the full range of party support rather than just most preferred party. The question wording was as follows: "How probable is it that you will ever vote for the following parties? Use the dial around the parties to indicate your answer where '0' means 'Not at all probable' and '10' means 'Very probable'. Scroll clockwise to increase the number and counter-clockwise to decrease it."

each of the parties) in terms of how strongly their ideological closeness to a party matches their indicated support for the party. We expect a stronger match for users in our treatment group as they will have been informed by the VAA how close they are to each of the different parties. Modelling this is straightforward and we use an OLS regression (albeit multilevel to account for the fact that the PTVs are clustered by person). The dependent variable is the PTV, and there are two independent variables: advice score for that party and a treatment dummy variable.[7] The advice score ranges from -1 (no agreement with the party) to +1 (total agreement with the party). We interact the advice score with the treatment. This interaction tells us whether advice scores are more closely related to PTVs for people who were able to act on the advice. Two separate models are shown in Table 1. The first is for people with a vote intention, the second for people without a vote intention.

TABLE 1 ABOUT HERE

In both models, greater ideological closeness is associated with greater propensity to support the party, but more importantly the interaction between advice and treatment is statistically significant. This means that people's party preferences are more closely related to their ideology when they are told which party best represents their ideological views. The interaction effect is larger for people who did not already have a vote intention, but this difference in the effect size between people with a vote intention and those without a vote intention is not statistically significant at the 5 per cent level. Nonetheless, our findings provide support for hypothesis 1. After using a VAA, people match their own ideological

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[7] We also include a series of dummy variables that measure which party is the subject of the PTV, as some parties are on average more popular than others. The full models which include these variables are shown in Appendix Table A1.

preference more closely to the parties, and this is somewhat more pronounced for people who do not know for which party they will vote. This is important. Even in circumstances where we might expect no effect of a VAA – a real world situation with a representative set of VAA users in a deeply divided society – we see some movement in people's opinions of the parties. Nonetheless we should not exaggerate the size of these effects. Someone with a vote intention who is given an advice score of +50 for a party, on the -100 to +100 information, will rate that party on the 0-10 PTV scale only 0.23 points higher if they receive the advice before they indicate their PTV score than if they receive the advice after they indicate their PTV score. Our results indicate that while VAAs affect party preferences, it is only at the margins. Few people's vote choices will be changed by this information.

FIGURE 2 ABOUT HERE

What of hypothesis 2 and the aggregate level effects of the VAA? Here we compare average party support levels in our treatment group to average party support levels in our control group. We break this down by the type of party: nationalist, unionist or cross-bloc and then by religious background. Figure 2 shows these mean effects of the treatment and reveals that there is little support for hypothesis 2. For example, while treatment means that Catholics support non-bloc parties a little more, Protestants in the treatment group are actually less supportive of those parties. Equally, the effects on in-group and out-group parties are inconsistent and of a very small magnitude. In fact, as Appendix Table A2 shows none of the aggregate effects are statistically significant. Overall, it appears that receiving advice does little to help cross-bloc and out-bloc parties, and does little to hinder in-bloc parties.[8] This

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[8] We also conduct robustness tests for the main findings reported here. Using propensity score matching for the treatment and control groups we replicate Table 1 and report the results in Appendix Table A3: the results are

suggests that information has little effect on the strength of the electoral divide. VAAs are not a panacea for divided societies.[9]

Conclusion

We demonstrate that in the deeply divided context of Northern Ireland real world VAA users are influenced by the advice they receive, although the effect is not large. Importantly, this effect is observable for people whose party views we may imagine would be hard to move (those with a definite vote intention) as well as those whose views we may imagine would be easier to influence (those without a definite vote intention).

Yet the overall effect of advice is not to move the party system in a less ethno-national direction. This suggests that while party support is malleable, the dominance of the underlying divide in structuring political preferences is not. It does not appear to be affected by broad ranging party policy information. This suggests that much of the party preference movement that occurs as a function of the VAA occurs with respect to the parties *within* each bloc, rather than the VAA causing dramatic preference change with respect to parties in the

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extremely similar. Similarly, we replicate Figure 2 and report the results, which again are extremely similar, in Appendix Figure A2. Using propensity score matching is essentially a further check to ensure that the randomisation design generated a control group and a treatment group that are the same in all respects apart from the experimental manipulation. We used the R package MatchIt (Ho *et al*. 2011) for conducting the propensity score analysis with a one-to-one matching ratio, i.e. for every respondent in the treatment group we found the closest match from the control group. Matching involves nine variables. Six categorical variables used exact matching: gender, age, education, political interest, vote intention and religious community. We also used nearest neighbour matching for three continuous issue scales: placement on the economic left-right, social conservative-liberal and unionist-nationalist axes. We report the similarities between the control and treatment group on this range of variables in Appendix Table A4.

[9] See Vassil (2012) for similar findings on effects at the individual, but not the aggregate, level.

rival bloc. Hence, the 'top-down' example of providing political information to citizens may well have an effect but is not a powerful enough intervention to disturb the basic ethno-national structuring of party blocs. This may mean that both the top-down and bottom-up approaches to understanding the structure of division, between and within blocs, are simultaneously at play. While people's political views about the out-group may be set in stone, novel information may shape preferences within those blocs.

Clearly further research in this area is needed in order to be confident about the electoral relevance, or irrelevance, of any VAA effects. We only observe effects on party support in the short term, but clearly it would be useful to track these up to, and including, election-day. Specifically, we suggest a design in which VAAs are constructed as field experiments tracking users over time to identify actual voting behaviour. This will allow assessment of how changes to party support prompted by the VAA survive to the polling booth.

We also suggest that further work could examine the effect of the presentation of the VAA advice in divided places. Divided places are typically characterised as having distinct party systems rather than a single system, with one set of parties competing for votes in Community A and another set of parties competing for votes in Community B. VAA designers could, in theory, choose to provide users from Community A with simply the set of parties in Community A to facilitate a 'best match with the party representing your community'. Or, as was the case in our study, users could be presented with the full set of parties in the system. Further research could identify whether the sheer range of the choice set offered to the user has an effect on in-group party support.

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Figure 1: *The experimental design*

(2/3 randomly assigned)   **(1/3 randomly assigned)**

Demographic questions	Demographic questions

⬇ ⬇

30 policy questions	30 policy questions

⬇ ⬇

Party support questions	

⬇ ⬇

Receive advice	Receive advice

↙ ↘   ↙ ↘

Opt out of further questions	Opt in to further questions	Opt out of further questions	Opt in to party support questions

A   **B**   **C**   **D**

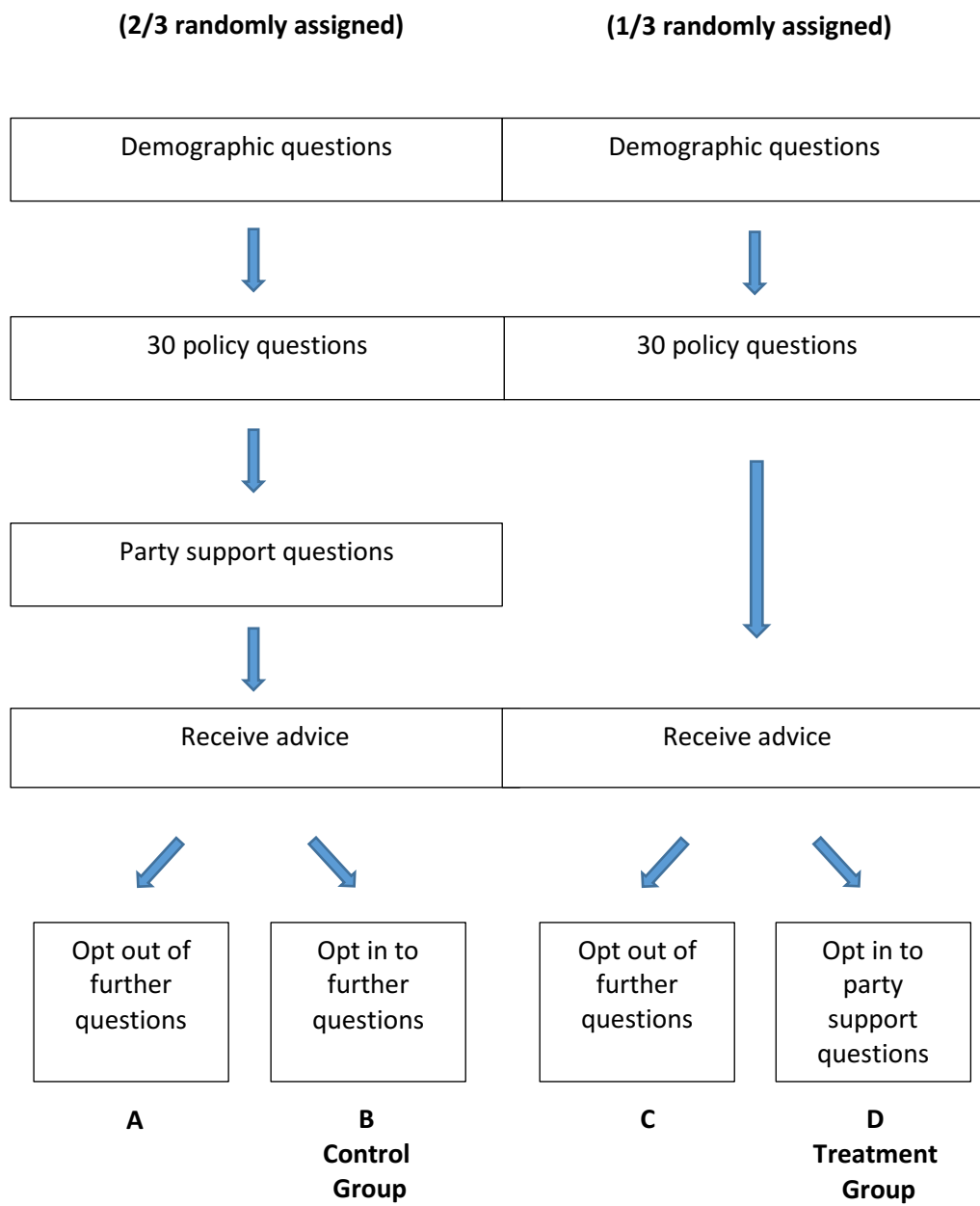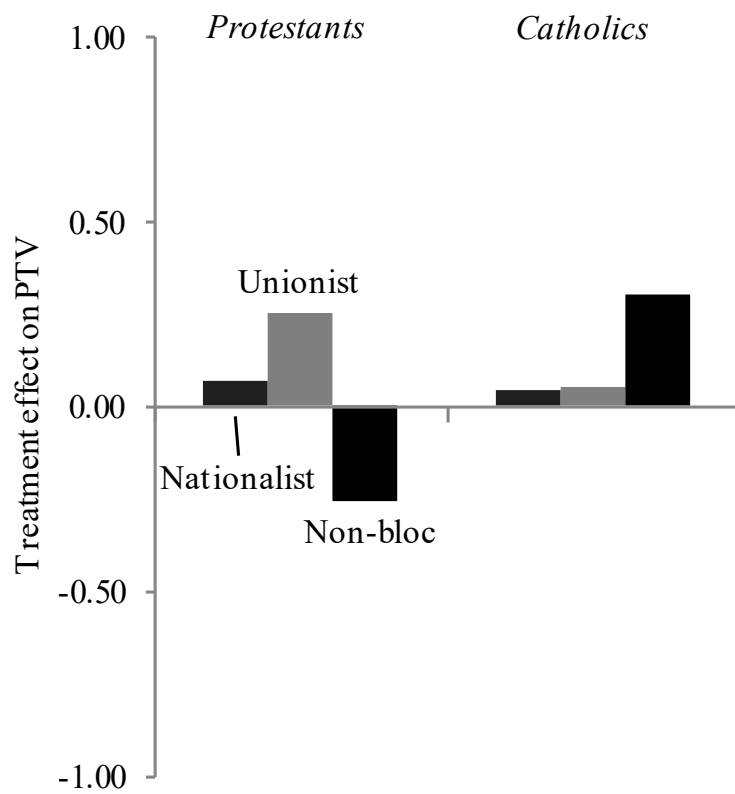**Control Group**   **Treatment Group**

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Table 1:   *Multilevel OLS regression model predicting party preference*

	Model 1 (people with a vote intention)		*Model 2 (people with no vote intention)*	
	B	*SE*	*B*	*SE*
Advice score	8.34*	0.13	6.92*	0.24
Treatment	0.04	0.06	-0.07	0.11
Advice*treatment	0.46*	0.17	0.67*	0.31
N (respondents)	2,228		784	
N (PTVs)	15,917		5,632	

Note: * = p<0.05. This table shows the results of two multilevel OLS regression models predicting PTVs. Model 1 is for people who expressed a vote intention, model 2 for people who did not express a vote intention. The key independent variables are the respondent's advice score for each party and whether they were treated. Treatment is being given advice scores before being asked the PTV question. Also included in the models (but not shown) are fixed effects for party and a constant (see Appendix Table A1 for the full model).

Figure 2:   *Effect of advice provision on support for unionist, nationalist and non-bloc parties*

Note: The scores report differences between the treatment group and the control group separately for Catholics and Protestants. Full model details in Table A2 in appendix.

Appendix

Figure A1:   *List of 30 Policy Questions in the VAA*

1.   Government spending should be cut further in order to balance the budget.
2.   The number of public sector employees in Northern Ireland should be reduced.
3.   Inheritance tax should be abolished.
4.   The top rate of income tax should be increased.
5.   Tax credits to supplement wages are too costly and should be abolished.
6.   The recreational use of cannabis should be decriminalised.
7.   Less serious crimes should be punished with community service, not imprisonment.
8.   Women should be free to decide on matters of abortion.
9.   Same sex and heterosexual couples should enjoy the same rights to marry.
10.   Doctors should be allowed to help terminally ill patients to die, if they so wish.
11.   Northern Ireland should be more confident about its Christian heritage.
12.   Businesses should be allowed to refuse custom to those who hold views contrary to their religious faith.
13.   Young people should be given the right to vote at the age of 16.
14.   The Northern Ireland government should continue to block the extraction of shale gas (fracking).
15.   Post-primary schools in Northern Ireland should be able to select pupils according to ability.
16.   University tuition fees should be scrapped.
17.   Private sector involvement in the NHS should be reduced.
18.   The UK should remain within the European Union.
19.   Overall, EU membership has been a bad thing for Northern Ireland.
20.   The right of EU citizens to work in the United Kingdom should be restricted.
21.   For social housing, priority should be given to people whose parents and grandparents were born locally.
22.   State benefits should only be available to those who have lived in the UK for at least five years.
23.   Northern Ireland should remain part of the United Kingdom.
24.   The IRA's violent campaign during the Troubles was totally unacceptable and always wrong.
25.   There should be strict limits on the number of days the Union flag can be flown on public buildings.
26.   Parades should only be allowed after talks between marchers and residents.
27.   The British security services should be required to release all material related to troubles-related offences.
28.   Legislation to promote and protect the Irish language should be introduced in Northern Ireland.
29.   A referendum on Irish reunification should be held during the lifetime of the next Assembly.
30.   Legislation passed by the Assembly should require support from a majority of Unionist and a majority of Nationalist MLAs.

Table A1:   *Multilevel OLS regression model predicting party preference (full model of*

    Table 1 including controls)

	Model 1 (people with a vote intention)		Model 2 (people with no vote intention)	
	B	*SE*	*B*	*SE*
Advice score	8.34*	0.13	6.92*	0.24
Treatment	0.04	0.06	-0.07	0.11
Advice*treatment	0.46*	0.17	0.67*	0.31
Alliance (ref)	-		-	
DUP	-1.61*	0.09	-1.44*	0.14
Greens	-0.43*	0.09	-0.37*	0.13
SDLP	-1.68*	0.09	-0.98*	0.13
Sinn Fein	-2.57*	0.09	-2.11*	0.13
TUV	-1.52*	0.10	-1.67*	0.15
UKIP	-1.99*	0.10	-2.11*	0.14
UUP	-1.43*	0.09	-1.23*	0.14
Constant	3.55*	0.08	3.16*	0.12
N (respondents)	2,228		784	
N (PTVs)	15,917		5,632	

Note: * = p<0.05. This table shows the results of two multilevel OLS regression models predicting PTVs. Model 1 is for people who expressed a vote intention, model 2 for people who did not express a vote intention. The key independent variables are the respondent's advice score for each party and whether they were treated. Treatment is being given advice scores before being asked the PTV question. Also included are fixed effects for party.

Table A2:   *Multilevel OLS regression model predicting party preference*

|	Model 1 (Protestants)		Model 2 (Catholics)	
	B	*SE*	*B*	*SE*
Treatment	0.07	0.15	-0.05	0.12
PTV for unionist party	1.35*	0.12	-4.99*	0.10
PTV for cross-bloc party	3.78*	1.34	-0.03	0.11
PTV for nationalist party	-		-	
*Treatment*unionist*	0.18	0.17	0.00	0.15
*Treatment*cross-bloc*	-0.32	0.20	0.25	0.16
*Treatment*nationalist*	-	-	-	-
Constant	1.64*	0.10	5.50*	0.08
N (respondents)	1,316		1,183	
N (PTVs)	9,474		8,337	

Note: * = p<0.05. This table shows the results of two multilevel OLS regression models predicting PTVs. Model 1 is for Protestants and model 2 for Catholics. The key independent variables are type of party being rated and treatment. Treatment is being given advice scores before being asked the PTV question.

Table A3:   *Robustness test for Table 1 using matched treatment and control groups*

	Model 1 (people with a vote intention)		Model 2 (people with no vote intention)	
	B	*SE*	*B*	*SE*
Advice score	8.49*	0.20	7.21*	0.39
Treatment	0.05	0.07	-0.22	0.14
Advice*treatment	0.52*	0.25	1.14*	0.53
N (respondents)	962		307	
N (PTVs)	7,583		2,420	

Note: * = p<0.05. This table shows the results of two multilevel OLS regression models predicting PTVs. Model 1 is for people who expressed a vote intention, model 2 for people who did not express a vote intention. The key independent variables are the respondent's advice score for each party and whether they were treated. Treatment is being given advice scores before being asked the PTV question. Also included in the models (but not shown) are fixed effects for party and a constant. Treatment and control groups are matched using propensity score analysis. Matching is one-to-one and uses nine variables. Six categorical variables based on exact matching (gender, age, education, political interest, vote intention and religious community) and nearest neighbour matching for three continuous issue scales (placement on economic left-right, social conservative-liberal and unionist-nationalist axes).

Figure A2:   *Robustness test for Figure 2 using matched treatment and control groups*
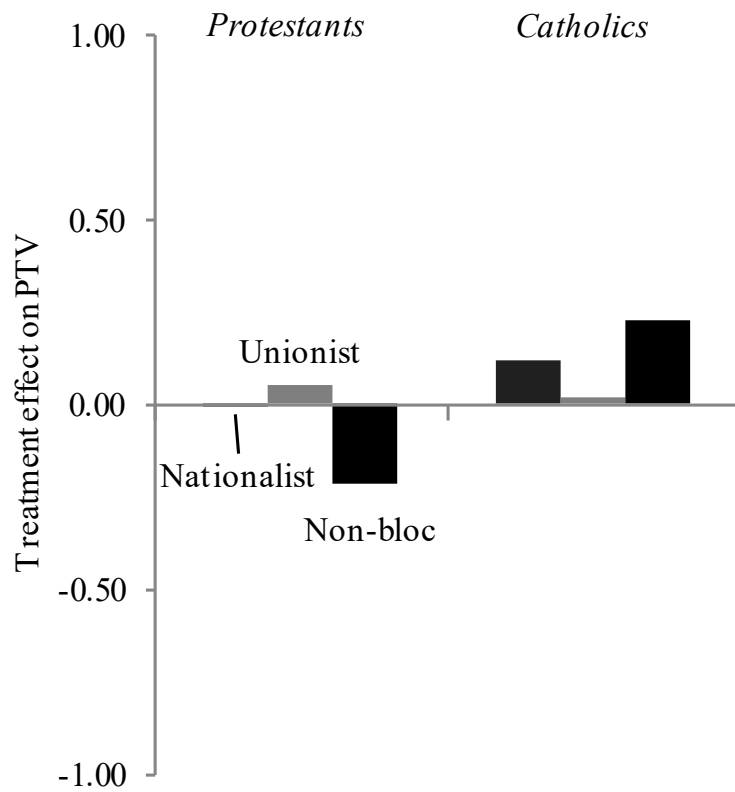
Note: The scores report differences between the treatment group and the control group separately for Catholics and Protestants. Treatment and control groups are matched using propensity score analysis. Matching is one-to-one and uses nine variables. Six categorical variables based on exact matching (gender, age, education, political interest, vote intention and religious community) and nearest neighbour matching for three continuous issue scales (placement on economic left-right, social conservative-liberal and unionist-nationalist axes).

Table A4:   *Comparison of control group and treatment group*

Variable	Control group	Treatment group
Women	33.7%	34.3%
Education level 1	1.3%	0.7%
Education level 2	8.5%	7.8%
Education level 3	14.3%	17.1%
Education level 4	6.4%	7.9%
Education level 5	69.5%	66.6%
Political interest: none at all	1.1%	1.7%
Political interest: not very much	8.0%	10.8%
Political interest: some	31.7%	32.7%
Political interest: quite a lot	37.2%	35.4%
Political interest: a great deal	22.1%	19.4%
Community background: Protestant	46.3%	45.1%
Community background: Catholic	36.9%	39.0%
Community background: none	13.2%	13.0%
Community background: other	3.6%	2.9%
First vote: Unionist party	15.5%	16.2%
First vote: Nationalist party	19.9%	20.0%
First vote: Non-aligned party	44.4%	38.1%
First vote: undecided	20.3%	25.7%
Mean placement on economic left-right	-0.24	-0.20
Mean placement on conservative-liberal	-0.52	-046
Mean placement on unionist-nationalist	0.12	0.10