

<https://helda.helsinki.fi>

Do politicians' answers to voting advice applications reflect their sincere beliefs? Comparing publicly and confidentially stated ideological positions in a candidate-centred electoral context.

Ilmarinen, Ville

2022-10

Ilmarinen, V., Isotalo, V., Lönnqvist, J-E & von Schoultz, Å 2022, 'answers to voting advice applications reflect their sincere beliefs? Comparing publicly and confidentially stated ideological positions in a candidate-centred electoral context.', *Electoral Studies*, vol. 79. <https://doi.org/10.1016/j.electstud.2022.102504>

<http://hdl.handle.net/10138/354327>

<https://doi.org/10.1016/j.electstud.2022.102504>

cc_by

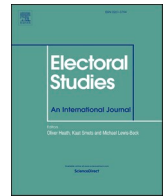
publishedVersion

Downloaded from Helda, University of Helsinki institutional repository.

This is an electronic reprint of the original article.

This reprint may differ from the original in pagination and typographic detail.

Please cite the original version.



Do politicians' answers to voting advice applications reflect their sincere beliefs? Comparing publicly and confidentially stated ideological positions in a candidate-centred electoral context[☆]

Ville-Juhani Ilmarinen^{a,*}, Veikko Isotalo^b, Jan-Erik Lönnqvist^a, Åsa von Schoultz^b

^a Swedish School of Social Science, University of Helsinki, Finland

^b Political Science, Faculty of Social Science, University of Helsinki, Finland

ARTICLE INFO

Keywords:

Ideological positioning
Political candidates
Sincerity
Finland
Structural equation modelling

ABSTRACT

Voting advice applications (VAAs) are online tools designed to match voters with specific parties and/or candidates. Because candidate-centred electoral systems incentivize strategic positioning to maximise personal vote shares, it is unclear if the information that candidates provide in VAAs reflect their sincere ideological positions. The aim of this study is to test the extent to which candidates' responses to VAAs is a function of their private beliefs or if it rather reflect strategic position taking. We do this by comparing candidates' pre-election responses to public VAAs with those provided in a post-election confidential survey in the context of the Finnish 2019 parliamentary elections. Our findings provide solid evidence of very similar responses by candidates in the two settings. There are hence good reasons to consider the information provided by candidates in public VAAs as sincere.

1. Introduction

Voting advice applications (VAAs) are online tools designed to match voters with specific parties and/or candidates at times of election. Over the last two decades these tools have grown in popularity and in some countries as many as half of the voters use these heuristic-generating instruments (Garzia and Marschall, 2019). While their effect on vote choices have proven difficult to disentangle, it is clear that VAAs, in countries where they are widely used by voters, offer an important platform for parties and political candidates.

In this study we set out to test the extent to which the information provided by individual political candidates in VAAs reflect their private beliefs or if they rather can be seen as strategic position taking in a candidate oriented political context. Theory informs us that politicians are vote-maximisers (Downs, 1957) and that electoral systems in which candidates compete for preference votes with many co-partisans provide candidates with high incentives to cultivate a personal vote (Carey and Shugart, 1995). There are hence solid reasons to expect candidates to act strategically by positioning themselves where they (believe that they) are able to maximise their vote shares. But is this in line with how they

behave? We provide an answer to this question by comparing candidates' responses to public VAAs with those provided in a confidential post-election survey.

VAAs potentially have many democratic virtues, not the least from a mobilising and civic education perspective. They offer a one-stop platform with easily accessible shortcuts to an informed, issue-based vote choice. They further allow citizens to learn about their own position relative to the electoral supply, without having to go through a complicated and burdensome process of information gathering from many different sources. In line with the civic voluntarism model (Verba et al., 1995) VAAs provide citizens with access to key political resources such as information and knowledge, likely to enhance political participation. VAAs can further contribute to level out differences in the quality of vote choices across voters with different levels of political sophistication (Luskin, 1990). The extent to which VAAs are able to deliver on the high expectations is, however, dependent on the quality of the information they entail. While an expanding line of research has studied the functionality and the effects of VAAs we bring in a, to our knowledge, overlooked perspective of the quality of the information that is derived from the answers of individual candidates competing to get

[☆] This research was supported by the Academy of Finland research grant 338891 to V.-J. I. and by the Academy of Finland research grant 309537 to J.-E. L., and by the Academy of Finland research grant 316239 to Å.v.S.

* Corresponding author. Swedish School of Social Science, University of Helsinki, Snellmaninkatu 12, PO Box 16, 00014, Helsinki, Finland.

E-mail address: ville-juhani.ilmarinen@helsinki.fi (V.-J. Ilmarinen).

<https://doi.org/10.1016/j.electstud.2022.102504>

Received 12 January 2022; Received in revised form 28 June 2022; Accepted 17 July 2022

Available online 3 August 2022

0261-3794/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

elected.

We investigate the extent to which candidates' responses to VAAs correspond to their sincere beliefs in the context of the Finnish 2019 parliamentary elections. The Finnish case can be considered ideal for the purpose of this study since the open-list proportional electoral system with mandatory preferential voting provides candidates with strong incentives to adjust their responses in order to maximise preference votes. If candidate responses to VAA and corresponding information provided in confidential settings match in Finland, they are likely to match in electoral systems with equal or weaker degree of personal incentives for candidates to provide strategic or arbitrary VAA responses, especially if the VAA system is well-established (see Cedroni and Garzia, 2010, for descriptions of strategic responding during the early days of VAAs).

We study the associations between pre-election VAA responses given by political candidates to the Finnish broadcasting company (YLE) and the largest newspaper *Helsingin Sanomat* (HS), and those anonymously provided by candidates to the post-election *Finnish Parliamentary Candidates Survey* (FCS). We pre-registered our study hypotheses, detailed methods and procedures, and the complete data analysis plan (including exclusion criteria). Our findings provide solid evidence of very similar responses by candidates in the two settings. There are hence good reasons to consider the information provided by candidates in public VAAs as reflecting candidates' sincere beliefs.

1.1. The democratic function of VAAs

VAAs are fundamentally heuristic-generating instruments that for a low cost (in terms of the time, knowledge, and energy voters need to invest) offer insights into candidates' and parties' issue positions (and ideological positions as a whole). They hence contribute to reducing the costs for voters to engage in informed issue voting (Walgrave et al., 2008). VAA outputs, which can be perceived as endorsements by the voters (Wall et al., 2014; Christensen et al., 2021), provide personalised comparisons of voters' own and candidates'/parties' issue stances. As VAA statements used to match the respondent with the candidates are focused on political issues, VAAs work best as a heuristic for voters who prefer to engage in proximity voting. The idea of voters choosing proximate parties originates in the work of Downs (1957) and according to the theoretical literature on representation, such a voting mechanism contributes to ensuring that elected representatives represent the interests of the citizens (Thomassen and van Ham, 2014).¹

Research on VAAs has expanded substantially over the last decade. While many studies in the field rely on less ideal cross-sectional and opt-in data that is susceptible to self-selection bias (e.g., Pianzola, 2014), findings indicate that VAAs can influence political behavior in a variety of ways. VAA usage has for example been shown to mobilise voters (Gemenis and Rosema, 2014; Garzia et al., 2017), to have positive cognitive effects (Schultze, 2014), and to influencing vote choices (Kleinnijenhuis et al., 2017). A meta-analysis conducted by Munzert and Ramirez-Ruiz (2021) has pointed out that although studies on VAA usage have found positive effects on turnout, political knowledge and vote choice, a large heterogeneity in effect sizes exists due to differences in study designs. International research on VAAs has, however, been mostly oblivious regarding the unit of voting advice provided by the VAAs, which varies across VAAs and electoral systems. Dumont, Kies, and Fivaz (2014) note that the majority of European VAAs are party-based (e.g., *Wahl-O-Mat*, *Kieskompas*, *Valkompassen*), whereas candidate-based VAAs have only been in use in countries that allow for preferential voting, including countries such as Switzerland, Luxembourg, Lithuania, Denmark, and Finland for legislative elections. Due to their limited prevalence, candidate-based VAAs have been on the

side lines of the VAA research even though they provide rich data with exceptionally high response rates regarding individual candidates' preferences.²

The output generated from a candidate-based VAA is generally a rank-ordered list based on matching of voters' and candidates' answers to a large number of issue statements, where the most proximate candidate is ranked the highest. This list is equivalent to a voting endorsement (Wall et al., 2014; Christensen et al., 2021), and has the persuasive element of being a tailor-made, personalised voting advice derived from a comparison of the issue stands of the individual voter and nominated candidates (Trechsel and Garzia, 2020).

VAAs can be particularly useful in contexts where voters are confronted with complex choice-settings, for example when there are many candidates and parties on display, and when voters due to mandatory preference voting cannot resort to simply casting a party vote (Garzia and Marschall, 2019). On the other hand, VAAs can be also useful when voters have scarce information regarding the election, i.e., in low-information elections (McDermott, 1997). The group of voters who are likely to benefit the most from VAAs are those who do not follow politics closely (Ruusuvirta, 2012), and for example first-time voters without much experience with voting (Kristensen and Solhaug, 2017; Borg and Koljonen, 2020). Despite their potential to assist (in particular) less sophisticated voters in their vote choices, it is well established that VAA users are on average more interested in politics than nonusers (Marschall, 2014).

A debated aspect of VAAs is how the responses are to be collected: via self-placements or via expert evaluations. Strategic manipulation of candidate and party responses has been reported as a potential drawback of using self-placement as the collection method (see Gemenis and van Ham, 2014; Kauppinen, 2007). To counter the challenges of strategic party positioning in VAAs, expert surveys have been used as an alternative way to position parties on issues. According to Gemenis and van Ham (2014), expert evaluations are however also associated with drawbacks such as challenges to estimate party positions on specific issues rather than on general policy scales, or personal biases that might affect the evaluations (Curini, 2010). Parties might also gravitate to unrealistic positions if diverging expert opinions are aggregated (Tilley and Wlezién, 2008). These challenges have led to the development of two iterative methods: Delphi (Gemenis, 2015) and Kieskompas (Krouwel and van Elfrinkhof, 2014), which claim to generate more valid and reliable party positions. However, none of these expert survey reliant methods are viable in the Finnish candidate-based VAAs, where experts would have to code thousands of candidates without sufficient source material on which they could base their evaluations.

1.2. Do candidates' responses in VAAs reflect their sincere beliefs?

Downs' (1957) highly influential *Economic Theory of Democracy* postulates that political actors are vote-maximisers. They are primarily interested in winning governmental positions, and the choice of a particular policy platform is a means to that end. Down's median voter theorem has inspired work on spatial theories pointing towards ideological positioning being key to vote-earning, with voters casting their votes either for the ideologically most proximate candidate (Downs, 1957), or, according to the directional model of voting, for candidates which takes on more extreme positions compared to themselves (Rabinowitz and Macdonald, 1989).

Similar assumptions are found in the literature on open-list proportional electoral systems, which are generally acknowledged to incentivize candidates to cultivate a personal reputation (Carey and Shugart, 1995). While a personal reputation can be obtained by emphasising different traits such as political experience or local roots, it has also been

¹ This can be contrasted with a voting strategy based on evaluations of candidates' personal characteristics or background (Cutler, 2002).

² Although these datasets have become increasingly popular among a set of scholars (see e.g., Tromborg, 2021; Isotalo et al., 2020).

theorized that candidates can benefit electorally from carving out distinct ideological positions (Cox, 1990; Ames, 1995; Persson and Tabellini, 2005).

Deriving from classic political science assumptions, and from the literature on personal vote-seeking in open-list proportional electoral systems, both of which assume that candidates can maximise the number of votes they win by strategically positioning themselves at beneficial ideological positions, it appears reasonable to assume that politicians use VAAs to market what they believe are views that might cause them to win more votes.

Arguments along the same lines can also be found in other fields of research. Social identity theory, which is one of the most prominent theoretical frameworks within social psychology, has argued and shown that leadership endorsement is based on how prototypical the leader is perceived to be; i.e., the group member best representing the ingroup in contrast to a relevant outgroup is the one most likely to exert the greatest influence within the ingroup (e.g., van Knippenberg et al., 2000; van Knippenberg et al., 1994; van Knippenberg and Wilke, 1992). And it is this most prototypical ingroup member who is most likely to be perceived as embodying the behaviors of the group and who emerges as a leader (Hogg, 1996; Turner et al., 1987; van Knippenberg, 2000). In order to maximise votes, candidates responding to VAAs could thus be expected to seek to appear as close to the prototypical group member as possible in terms of ideological positions.

The social psychology literature on similarity-attraction effects leads us in the same direction. One of the most robust effects in this literature is that perceived similarity with a target – with respect to attitudes, personality traits, or a number of other attributes – is associated with increased attraction to the target (for a review, see Montoya et al., 2008). Again, a candidate seeking to appear attractive to as many voters as possible would want to respond as similarly as possible to the voter he or she targets.

Additional fuel for questioning the sincerity of candidates' responses is found in the industrial organisational psychology literature. The literature has firmly established that applicants responding to self-rating questionnaires can generally be assumed to respond in such a way as to convey as positive an image of themselves as possible (e.g., Donovan et al., 2014; Griffith et al., 2007; Lönnqvist et al., 2007). Faking hence regularly distorts the outcomes of the selection procedure (Donovan et al., 2014; Griffith et al., 2007; Paunonen and LeBel, 2012). If elections are interpreted as a selection context, there is a possibility that candidates, like applicants for an educational program or a job position, will adjust their responses in order to maximise their chances of being elected.

Some recent empirical studies have tackled the issue of to which extent candidates' ideological positions actually matter for their vote-winning prospects, and the extent to which it is beneficial for candidates to deviate from the party median. Findings from the Finnish context (von Schoultz and Papageorgiou, 2021; Isotalo et al., 2020), confirm that position taking matters, and that candidates pursuing the (intra-party) median voter gather more votes. There are also anecdotal accounts that candidates tend to moderate their responses, in order to appeal to the widest range of voters, as it has been reported that voters prefer to cluster around the middle of the response scales (Wagner and Ruusuvirta 2012, 406).

The theoretical and empirical reasoning outlined above all depart from candidates and their personal incentives to adjust their public image in line with what (they believe) voters want. It is however important to acknowledge that candidates running for election in proportional electoral systems are nominated by parties, and compete for votes within the context of parties. While the individual candidate under electoral systems with preference voting tend to care primarily about their own election, parties seek to maximise the number of seats the number of seats won by the party collective (Shugart, 2013). Theoretically we would expect the main priority of seat (and vote) maximising parties to be not to miss out on any potential votes, and therefore

attempt to manage candidates' VAA responses. Parties might hence influence candidates to modify their personal preferences, but in which way?

Parties' pursuit to appear unified can be seen as one of the two main strategies that parties can take when they seek to influence their candidates' VAA responses. Having a unified issue profile can improve voters' perception of the party's competence in those issues (Greene and Haber, 2015). Deriving from the literature on intra-party competition we would however expect that (at least major) parties would favour fielding a diverse set of candidates to attract as many potential (sub-sections of) voters as possible (Swindle, 2002; Arter, 2013). Parties might also be tempted to field independent candidates with a large personal following since these can bring in new supporters (Cain et al., 1987; Tavits, 2009). This would involve encouraging candidates to disperse their VAA answers (Tromborg, 2019).

In sum, we cannot really predict in what direction politicians' responses would be distorted, but a variety of theoretical perspectives informs us that candidates have incentives to respond to VAAs in a strategic, rather than sincere way. They might also be pressured to do so by their party. Such incentives are not present when responding in a confidential post-election setting, which might undermine the associations between VAA and confidentially provided responses.

2. The Finnish context

Our empirical explorations of the extent to which candidates modify their ideological positions when they respond to public VAAs will be carried out in the candidate-oriented Finnish electoral context. The Finnish electoral system is an open-list proportional representation system with mandatory preferential voting. In the 2019 parliamentary election eight parties gained representation in the parliament.³ All votes are hence casted for individual candidates (it is not possible to cast a vote for a party list), but these votes are pooled at the party level to determine how many seats a specific party will win. The seat(s) won by a party is (are), in the following step, allocated to the candidate(s) who attained the highest number of individual preference votes within each party. Most parties present their candidates in alphabetical order and the number of personal votes determine which candidates will become elected from each party list. (von Schoultz, 2018).

The Finnish electoral system is highly competitive at both the inter- and the intraparty level. Candidates compete against (primarily) their co-partisans by organising personalised campaigns, but there is little room for negative campaigning as it could hurt the party's overall vote share (Karvonen, 2010). Due to the high level of competition at the candidate level, not the least within the framework of the same party, candidates have incentives to position themselves strategically in order to attract more votes.

2.1. Finnish VAAs

The functionality and usage of VAAs vary across countries (Marchall, 2014; Wagner and Ruusuvirta, 2012). In the Finnish context, the Finnish Public Broadcasting Company (YLE) introduced the first VAA in 1996, and other media actors were soon to follow (Suojanen, 2007). The number of VAAs in Finland reached its peak in 2007, when 30 VAAs were available for voters (Haukio, 2012, 8). In the 2019 parliamentary election, there were 22 VAAs out of which 15 were provided by media outlets and the rest were provided by various civic organisations (Borg and Koljonen, 2020). However, VAAs hosted by national media outlets attracted most of the users. YLE (the Finnish Public Service Media Company) and Helsingin Sanomat (the largest newspaper in Finland) are

³ The Center Party, Christian Democrats, The Finns Party, The Greens, The Left Alliance, The National Coalition Party, The Social Democratic Party, and Swedish People's Party.

the two most popular VAA-providers, as their VAAs gathered the highest number of users among the Finnish electorate and their VAAs also obtained over 85 per cent response rates of individual candidates (Borg and Koljonen, 2020). Therefore, we chose to focus on these two VAAs in our study.

Voters have embraced the proliferation of VAAs, with nearly half (49%) of the electorate using at least one VAA during the 2019 parliamentary election campaign (Tilastokeskus, 2019). The usage rates are even higher for young voters and the majority of these voters perceive that their candidate choice was influenced by the recommendations provided by the VAAs (ibid.). Voters under the age of thirty consider VAAs as their primary source of election related information (Borg and Koljonen, 2020). Thus, VAAs play an important part in assisting Finnish voters to form their vote choice.

The majority of Finnish VAAs are candidate-oriented, which means that users are primarily matched with candidates (Suojanen, 2007; Borg and Koljonen, 2020), which is a logical response to the preferential voting system. However, most of the Finnish candidate-based VAAs also provide voting advice regarding parties, yet the party positions do not reflect official party stances on issues, as they are aggregated (mean or median) positions of parties' candidates. Both YLE and Helsingin Sanomat offered such party voting advice in their 2019 parliamentary election VAAs (see Isotalo, 2020).

2.2. Ideological dimensions in Finnish politics

In many European countries political conflict has traditionally been played out along the lines of a single ideological dimension, the left–right dimension, also described as a “super-dimension” (Klingemann and Inglehart, 1976, 244). However, due to its multidimensionality, Finnish politics have not converged very well with this general pattern (Kestilä-Kekkonen et al., 2018). Paloheimo (2008) has identified as many as seven dimensions of relevance for Finnish party politics: 1) left–right, 2) center–periphery, 3) national–international, 4) people–elite, 5) Finnish–Swedish, 6) conservative–liberal and 7) ecology–materialism.

Considering recent developments in Finnish politics, we however argue that two ideological dimensions: the left–right and GAL–TAN (which stands for green-alternative-libertarian vs. traditional-authoritarian-nationalist) are sufficient to describe the current political competition. The left–right dimension captures stances on socio-economic issues and the GAL–TAN on socio-cultural issues (see Marks et al., 2006; Rovny and Edwards, 2012). Political candidates are expected to take positions on these two ideological scales to compete for votes on the inter- and intra-party dimensions.

Cultural issues reflected in Paloheimo's national–international, people–elite, conservative–liberal and ecology–materialism dimensions have converged into the GAL–TAN-dimension.⁴ Socio-cultural issues have in Finland, as in many other western democracies, become increasingly salient, a trend that has generally been linked to the growing electoral influence of green and populist radical right parties (e. g., Abou-Chadi, 2016; Jungar and Jupskås, 2014). This has also been the case in Finland, as Arter (2020) remarks that parties on opposite ends of the GAL–TAN-dimension won 40% of all votes in the 2019 parliamentary election.

⁴ The two missing dimensions: center–periphery and Finnish–Swedish -dimensions are reflected directly in the Finnish party system by the existence of two parties (Center Party and Swedish People's Party). We believe that Finnish voters relate these dimensions to party labels more than to stances of individual candidates, and we hence excluded items pertaining to these dimensions from analysis.

3. Hypotheses

The purpose of the present study is to investigate whether candidates' VAA responses reflect their sincere beliefs, i.e. are the responses genuine or are they confounded by strategic thinking; i.e., either personal or party-level strategizing intended to maximise vote-shares? We will evaluate the sincerity of candidates' public pre-election VAA responses, by comparing them with responses to a confidential post-election survey.

The context of the study is the Finnish 2019 Parliamentary Elections and we utilised data from two public VAAs and the confidentially administered FCS that allowed for the computation of left-right and GAL-TAN dimensions. We preregistered our six hypotheses⁵ which pertain to our specific expectations regarding the associations between candidates' responses to public pre-election VAAs and the confidential post-election survey.

While most of the theoretical work that we have outlined in earlier sections deals with reasons as to why we would expect candidates not to respond sincerely to VAAs, our formulated hypotheses are rooted in the opposite, more positive assumption; that is, that the information candidates provide reflect their sincere positions. If our hypotheses are confirmed, there are good reasons for voters to rely on VAAs and the potential democratic benefits of VAAs are more likely to be realised.

The first set of hypotheses deals with the association, across candidates, between publicly and privately provided answers, with one hypothesis specified for each of the ideological dimensions.

H1. Left-right placement as computed from responses to the pre-election public VAAs is positively associated with left-right placement as computed from responses to the confidentially administered post-election FCS. This association is stronger than any associations between the left-right and GAL-TAN dimensions.

H2. GAL-TAN placement as computed from responses to the pre-election public VAAs is positively associated with GAL-TAN placement as computed from responses to the confidentially administered post-election FCS. This association is stronger than any associations between the left-right and GAL-TAN dimensions.

The following two hypotheses target within-party associations. Again, we formulate one hypothesis for each ideological dimension:

H3. Within-party placement on left-right as computed from responses to the pre-election public VAAs is positively associated with within-party placement on left-right as computed from responses to the confidentially administered post-election FCS. This association is stronger than any within-party associations between the left-right and GAL-TAN dimensions.

H4. Within-party placement on GAL-TAN as computed from responses to the pre-election public VAAs is positively associated with within-party placement on GAL-TAN as computed from responses to the confidentially administered post-election FCS. This association is stronger than any within-party associations between the left-right and GAL-TAN dimensions.

In the last set of hypotheses, we utilise the fact that the FCS also provides us with information regarding candidates' self-placements on the left-right scale and their perceived position of their own party's average voter on the same scale. In H5 and H6 these positions are contrasted with the association between candidates' responses provided confidentially and publicly, with (H6), and without (H5) controlling for party.

H5. Left-right self-placement in the confidentially administered post-election FCS is positively associated with left-right as computed from responses to the pre-election public VAAs. This association is stronger than the association between placement of an imagined party voter in

⁵ The hypotheses presented here are not identical in formulation to the pre-registration version. These minor alterations are only related to the applied concepts, not to their content or meaning.

the confidentially administered post-election FCS and left-right as computed from responses to the pre-election public VAAs.

H6. Within-party left-right self-placement in the confidentially administered post-election FCS is positively associated with left-right as computed from responses to the pre-election public VAAs. This association is stronger than the within-party association between placement of an imagined party voter in the confidentially administered post-election FCS and left-right as computed from responses to the pre-election public VAAs.

4. Methods

4.1. Participants and procedure

Participants were candidates nominated in the Finnish parliamentary elections in 2019. Of the total number of candidates ($n = 2468$), 95.8% ($n = 2365$; representing 21 different parties) responded to at least one of the surveys and were thus included in the present study. Prior to the elections (April 14th), almost all participants ($n = 2320$) had provided responses to the two public VAAs utilised in this study.⁶ After the elections, a subset of participants ($n = 753$, 31%) responded to a confidentially administered survey (The Finnish Parliamentary Candidates Survey; FCS; Kestilä-Kekkonen and von Schoultz, 2020). The FCS was carried out as a post-election survey (field period 1.5–30.9.2019). Candidates were invited via post to respond to the survey online or using a paper questionnaire. Several reminders ($n = 5$) were distributed to non-respondents, using both post and email. The FCS assessed, besides political attitudes that allowed for the computation of the two dimensions, also self-placement and imagined voter placement on the left-right dimension.

We deem the representativeness of the collected VAA and FCS candidate samples to be adequate to be reflective of the total candidate population. When exploring the prevalence of key demographic and political experience variables among the full candidate registry and the FCS and VAA samples, the VAA candidate data proved to be nearly identical with the full candidate population across all metrics. Regarding the FCS data, we found indications of minor underrepresentation of middle-aged candidates and candidates running for the National Coalition party. These results are reported in [Supplementary Figs. S1–S4](#).

4.2. Measures

Item selection for the VAA left-right (five items) and VAA GAL-TAN (six items) dimensions were based on a prior exploratory factor analysis (Isotalo et al., 2020). Response scales ranged from one (*completely disagree*) to five (*completely agree*). (See [Table 1](#)).

Three and seven items in the FCS questionnaire were constructed to represent the left-right and GAL-TAN dimensions, respectively. Items were responded to on a scale from one (*completely disagree*) to five (*completely agree*). (See [Table 2](#)).

The FCS questionnaire included two left-right scales, responded to on an eleven-point scale (0–10). Candidates were asked to position themselves (Self-Placement scale), as well as their imagined average party voter (Imagined Party Voter scale) applying the same scale. We use these scales for further tests of the sincerity of candidates' publicly stated ideological positions, as outlined in H5 and H6.

4.3. Statistical analysis

Before any analyses connecting VAA and FCS responses were run, the entire analysis plan and all hypotheses were pre-registered (for

⁶ Either the one hosted by YLE, the national broadcasting company, or Helsingin Sanomat, the largest and most important national newspaper.

Table 1
Voting Advice Application items.

Item	Description	<i>n</i>	<i>M</i>	<i>SD</i>
<i>Left-Right</i>				
h26	If there will be a situation where one is forced to either cut public services and social benefits or increase taxes, tax increases are a better choice (r.)	2046	3.49	1.35
h27	Large income inequalities are acceptable for compensating differences in people's talents and work ethic	2045	2.54	1.39
h25	Public services should be outsourced more than they are now for private companies	2046	1.96	1.14
h28	In the long run, the current extent of services and social benefits are too heavy for public economy	2046	2.73	1.42
y19	Public authorities should be the main provider of social and healthcare services (r.)	2259	4.24	1.03
<i>GAL-TAN</i>				
h21	Gay and lesbian couples should have the same marriage and adoption rights as straight couples (r.)	2046	3.84	1.52
h22	If the government proposes to establish a refugee center in my home municipality, the proposal should be accepted (r.)	2046	3.20	1.54
h13	For Finland, the advantages of the EU outweigh the disadvantages (r.)	2046	3.64	1.44
h29	Economic growth and creation of jobs should be given primacy over environmental issues, when these two collide	2046	2.22	1.25
h24	Traditional values such as home, religion and fatherland form a good value base for politics	2046	3.31	1.53
y25	Finland must adopt tough measures to defend order and protect regular citizens	2217	2.94	1.48

Note. r. = item was reverse scored. h = Helsingin Sanomat y = YLE.

Table 2
Finnish Parliamentary Candidate Survey (FCS) items.

Item	Description	<i>n</i>	<i>M</i>	<i>SD</i>
<i>Left-Right</i>				
C2b	The state should not interfere in economic activities	748	2.11	1.11
C2g	Providing a stable social security network should be a state priority (r.)	751	3.84	1.13
C2h	The state should take measures to reduce income disparities (r.)	752	3.87	1.26
<i>GAL-TAN</i>				
C2a	Immigrants should adapt to Finnish habits	751	4.11	0.96
C2c	Stronger measures should be taken to protect the environment (r.)	753	3.87	1.20
C2d	Same Sex Marriages should be prohibited by law	751	1.96	1.42
C2e	Women should be favored in job search and promotion (r.)	752	2.54	1.15
C2f	People who break the law should be punished more severely	750	3.46	1.15
C2i	Immigrants are good for the Finnish economy (r.)	752	3.42	1.28
C2j	Deciding on abortion issues should be a women's right (r.)	753	4.10	1.26

Note. r. = item was reverse scored.

deviations from the analysis plan, see Supplementary Materials).⁷ All hypotheses were tested with confirmatory factor analysis (CFA) within the structural equation-modelling framework. For H1 and H2, the CFA model consisted of four factors (left-right and GAL-TAN from VAAs and FCS) and 21 indicator items (presented in [Tables 1 and 2](#) above). The focal parameter estimates of interest were the correlations between the latent factors, of which there were six in total. H1 and H2 were tested according to the criteria used for multi-method multi-trait examinations of convergent validity (Campbell and Fiske, 1959). We predicted a positive association between ideological positions on the same dimension measured with different methods (convergent validity; association

⁷ <https://osf.io/jyed4/>.

between VAA–left–right and FCS–left–right for H1 and association between VAA–GAL–TAN and FCS–GAL–TAN for H2), and that these associations would be stronger than any of the association between theoretically different dimensions (discriminant validity), also estimated in the model. For H5, self–placement and imagined party–voter placement on the left–right dimension were added to the model. The correlations between these variables and their correlations with all four latent factors were freely estimated. H5 predicted that the VAA–left–right factor would show a stronger correlation with self–placement than with placement of the imagined party–voter.

To complement the CFA models, we pre–registered three residual correlations between indicators of different factors (but between similar dimensions). These considered income disparity,⁸ same–sex marriage rights,⁹ and environment¹⁰. In case of poor model fit, our plan was to relax the assumption that the latent factor associations could exhaustively account for the associations between these items by including these residual correlations.

Hypotheses 3, 4, and 6 made essentially the same predictions as Hypotheses 1, 2, and 5, respectively, whilst controlling for the possibly confounding effect of the party. We sought to rule out the possibility that average differences between political parties could fully account for the possible correlations between candidates’ VAA and FCS responses. The possibly confounding effects of party was removed by centring all item responses on VAAs and FCS around their respective party mean levels. Following this, exactly the same CFA that was used for testing H1, H2, and H5 was used for testing H3, H4, and H6. The only alteration was that differences between parties were now removed. All analyses were conducted in R with lavaan–package (Rosseel, 2012).¹¹

5. Results

5.1. Validity of VAAs when not controlling for party

H1 and H2 predicted positive associations between VAA–left–right and FCS–left–right, and between VAA–GAL–TAN and FCS–GAL–TAN, respectively (convergent validity), and that these associations would be stronger than any of the associations across the left–right and GAL–TAN dimensions (discriminant validity). Fitting the specified four–factor model led to a non–positive definite covariance matrix for the latent variables. After the three pre–registered residual correlations were added, the fit of the model was adequate (CFI = 0.874, TLI = 0.853, RMSEA = 0.061, and SRMR = 0.076). Standardised parameter estimates from the model, presented in Table 3, supported H1 and H2. There was a very strong ($r = 0.915, p < .001$) correlation between VAA–left–right and FCS–left–right, and it was notably stronger (difference between correlations = 0.491, $p < .001$) than the strongest of the correlations between different dimensions. The correlation between VAA–GAL–TAN and FCS–GAL–TAN was also very strong ($r = 0.990, p < .001$), and notably stronger than the strongest of the correlations between different dimensions (difference between correlations = 0.566, $p < .001$).

Model fit was only adequate, so we ran some explorative (not pre–registered) analysis to investigate whether the model could be improved and whether that would change the results. These analyses

⁸ VAA–left–right: “Large income inequalities are acceptable for compensating differences in people’s talents and work ethic” and FCS–left–right: “The state should take measures to reduce income disparities”.

⁹ VAA–GAL–TAN: “Gay and lesbian couples should have the same marriage and adoption rights as straight couples” and FCS–GAL–TAN: “Same Sex Marriages should be prohibited by law”.

¹⁰ VAA–GAL–TAN: “Economic growth and creation of jobs should be given primacy over environmental issues, when these two collide” and FCS–GAL–TAN: “Stronger measures should be taken to protect the environment”.

¹¹ Analysis script, and data for reproducing the results are openly available at: <https://osf.io/sa3wt/>.

Table 3

Standardised parameter estimates from preregistered confirmatory models examining convergent validity.

Loadings	Overall			Unfounded			
	est.	SE	p	est.	SE	p	
VAA–left–right	h26	.76	.01	<.001	.56	.03	<.001
	h27	.71	.01	<.001	.45	.03	<.001
	h25	.72	.01	<.001	.57	.03	<.001
	h28	.71	.01	<.001	.43	.03	<.001
	y19	.65	.02	<.001	.43	.03	<.001
VAA–GAL–TAN	h21	.71	.01	<.001	.40	.03	<.001
	h22	.74	.01	<.001	.51	.03	<.001
	h13	.47	.02	<.001	.32	.03	<.001
	h29	.61	.02	<.001	.38	.03	<.001
	h24	.76	.01	<.001	.44	.03	<.001
	y25	.71	.01	<.001	.53	.03	<.001
FCS–left–right	C2b	.45	.03	<.001	.28	.05	<.001
	C2g	.64	.02	<.001	.56	.05	<.001
	C2h	.86	.02	<.001	.76	.05	<.001
FCS–GAL–TAN	C2a	.64	.02	<.001	.49	.05	<.001
	C2c	.71	.02	<.001	.38	.05	<.001
	C2d	.64	.02	<.001	.34	.05	<.001
	C2e	.29	.04	<.001	.17	.06	.003
	C2f	.53	.03	<.001	.39	.05	<.001
	C2i	.74	.02	<.001	.58	.04	<.001
	C2j	.45	.03	<.001	.17	.06	.003
	C2k	.45	.03	<.001	.17	.06	.003
<i>Residual correlations</i>		est.	SE	p	est.	SE	p
h27	C2h	.28	.05	<.001	.29	.06	<.001
h21	C2d	.66	.02	<.001	.55	.04	<.001
h29	C2c	.27	.04	<.001	.22	.05	<.001
<i>Factor correlations</i>		est.	SE	p	est.	SE	p
VAA–left–right	VAA–GAL–TAN	.42	.02	<.001	.17	.04	<.001
FCS–left–right	FCS–GAL–TAN	.35	.04	<.001	.16	.07	.027
VAA–left–right	FCS–left–right	.92	.02	<.001	.78	.06	<.001
VAA–GAL–TAN	FCS–GAL–TAN	.99	.01	<.001	.96	.05	<.001
VAA–left–right	FCS–GAL–TAN	.41	.03	<.001	.19	.07	.006
VAA–GAL–TAN	FCS–left–right	.34	.04	<.001	.11	.07	.103
<i>Hypotheses</i>		est.	SE	p	est.	SE	p
H1		.49	.03	<.001			
H2		.57	.02	<.001			
H3					.59	.09	<.001
H4					.77	.08	<.001

Note. VAA = Voting Advice Application. FCS = Candidate Survey.

revealed only one misspecified residual correlation for which the expected absolute parameter change would be stronger than 0.20 (Saris, Satorra, and van der Veld 2009).¹² Although including this parameter improved the model (CFI = 0.899, TLI = 0.881, RMSEA = 0.055, and SRMR = 0.073), the results for the hypothesis tests were virtually identical in this revised model (see Table S1 in the supplementary materials for standardised parameter estimates). H5 predicted that VAA–left–right would be more strongly associated with FCS–left–right self–placement than with FCS–left–right imagined party–voter placement. The latter two were included in the model that included the three pre–registered residual correlations. The fit of the model was adequate (CFI = 0.883, TLI = 0.861, RMSEA = 0.057, and SRMR = 0.076). Standardised parameter estimates from the model presented in Table 4 supported H5. Specifically, the association between VAA–left–right and FCS–left–right self–placement was strong ($r = 0.829, p < .001$) and stronger than the association between VAA–left–right and FCS–left–right imagined party–voter ($0.739, p < .001$; the difference between correlations = 0.090, $p < .001$). Explorative analysis revealed the same misspecified residual correlation as above. Although inclusion of this parameter improved model fit (CFI = 0.903, TLI = 0.885, RMSEA = 0.052, and SRMR = 0.073), the test for H5 gave identical results (see Table S2).

¹² Between the VAA–left–right items “Public services should be outsourced more than they are now for private companies” and “Public authorities should be the main provider of social and healthcare services”.

Table 4

Correlation estimates and hypothesis tests from preregistered confirmatory models including self-placement (SP) and imagined party-voter placement (IPV).

Residual correlations		Overall			Unconfounded		
		est.	SE	p	est.	SE	p
h27	C2h	.28	.05	<.001	.29	.06	<.001
h21	C2d	.66	.02	<.001	.55	.04	<.001
h29	C2c	.27	.04	<.001	.22	.05	<.001
<i>Factor correlations</i>		est.	SE	p	est.	SE	p
VAA-left-right	VAA-GAL-TAN	.43	.02	<.001	.18	.04	<.001
FCS-left-right	FCS-GAL-TAN	.35	.04	<.001	.17	.08	.023
VAA-left-right	FCS-left-right	.92	.02	<.001	.80	.05	<.001
VAA-GAL-TAN	FCS-GAL-TAN	.99	.01	<.001	.96	.05	<.001
VAA-left-right	FCS-GAL-TAN	.41	.03	<.001	.19	.07	.006
VAA-GAL-TAN	FCS-left-right	.34	.03	<.001	.12	.07	.086
VAA-left-right	FCS-SP-left-right	.83	.02	<.001	.47	.05	<.001
VAA-left-right	FCS-IPV-left-right	.74	.02	<.001	.07	.06	.250
VAA-GAL-TAN	FCS-SP-left-right	.54	.03	<.001	.22	.06	<.001
VAA-GAL-TAN	FCS-IPV-left-right	.50	.03	<.001	.08	.06	.176
FCS-left-right	FCS-SP-left-right	.75	.02	<.001	.45	.05	<.001
FCS-left-right	FCS-IPV-left-right	.64	.03	<.001	.12	.06	.028
FCS-GAL-TAN	FCS-SP-left-right	.53	.03	<.001	.19	.06	.001
FCS-GAL-TAN	FCS-IPV-left-right	.49	.03	<.001	.09	.06	.139
<i>Hypotheses</i>		est.	SE	p	est.	SE	p
H1		.49	.03	<.001			
H2		.56	.02	<.001			
H3					.60	.07	<.001
H4					.72	.07	<.001
H5		.09	.02	<.001			
H6					.42	.06	<.001

Note. VAA = Voting Advice Application. FCS = Candidate Survey. SP = Self-placement. IPV = Imagined party voter placement.

The predictions formulated in hypotheses 1, 2 and 5 were hence all confirmed. This demonstrates that candidates' responses to public VAAs before the election converge to a very high degree, and that this is true for both the left-right and the GAL-TAN ideological dimensions. In the following, we will present the results when the possibly confounding effect of party are controlled for.

5.2. Validity of VAAs when controlling for party

The modelling for H3 and H4 was identical to the one described for H1 and H2, except that now all observed variables were centred around the party mean. As pre-registered, only the eight parties that won multiple seats in parliament were included.

Prior to centring the variables, we looked at the intra-class correlations (ICC) indicating the proportion of between-party variation in item responses (Table S3). On average, 40.1% of the variation in each item was between-parties (SD = 14.4%), ranging from 10.3% to 64.7%. ICCs were somewhat larger in VAA items (average ICC = 0.49) as compared to FCS items (average ICC = 0.33) indicating that the party-line could be more influential when responding to the former.

As above, adding the three pre-registered residual correlations to the model was necessary for avoiding a non-positive definite covariance matrix for the latent variables. After this, the fit of the model was

adequate according to RMSEA and SRMR, but inadequate according to CFI and TLI (CFI = 0.819, TLI = 0.788, RMSEA = 0.039, and SRMR = 0.062). Standardised parameter estimates from the model (Table 3) supported H3 and H4. There was a strong ($r = 0.782, p < .001$) correlation between VAA-left-right and FCS-left-right, and it was notably stronger (difference between correlations = 0.593, $p < .001$) than the strongest of the correlations between different dimensions. The correlation between VAA-GAL-TAN and FCS-GAL-TAN was also very strong ($r = 0.956, p < .001$), and notably stronger than the strongest of the correlations between different dimensions (difference between correlations = 0.767, $p < .001$).

Model fit was not optimal, so we again ran some explorative analysis to investigate whether it could be improved and whether that would influence the results. These now revealed two misspecified residual correlations.¹³ Adding these parameters improved the model (CFI = 0.866, TLI = 0.842, RMSEA = 0.033, and SRMR = 0.059), but did virtually nothing for the results of the hypothesis tests (Table S1).

To test H6, the party-mean centred FCS-left-right self-placement and imaginary party-voter placement were included in the model that also included the three pre-registered residual correlations. The fit of the model was adequate according to RMSEA and SRMR but inadequate according to CFI and TLI (CFI = 0.818, TLI = 0.785, RMSEA = 0.037, and SRMR = 0.061). Standardised parameter estimates from the model (presented in Table 4) supported H6. Specifically, the association between VAA-left-right and FCS-left-right self-placement was moderately strong ($r = 0.469, p < .001$) and stronger than the association between VAA-left-right and FCS-left-right imaginary party-voter placement (0.069, $p = .250$; difference between correlations = 0.400, $p < .001$). Regarding the ICCs, there was strong between-party variation (ICC for self-placement = .683; ICC for imagined party voter placement = .767). Explorative analysis indicated the same misspecified residual correlations as above. Adding these parameters improved the model (CFI = 0.862, TLI = 0.835, RMSEA = 0.033, and SRMR = 0.058), but did virtually nothing for the results of the hypothesis tests (Table S2).

In sum, the overall pattern established in the previous section did not change when controlling for the possibly confounding effects of political parties. The three hypotheses that we formulated to test this (H3, 4 and 6) were all confirmed, which means that candidates' responses in the two settings were correlated even when centred around the party mean (convergent validity), and that these correlations were stronger than any of the other associations across the left-right and GAL-TAN dimensions (discriminant validity). To conclude, these patterns consistently demonstrated that candidates' responses to public VAAs before the election converged to a high degree with those provided confidentially after the election.

6. Concluding discussion

VAAs are online tools designed to identify suitable vote choices for voters engaging in proximity voting. An extensive literature has pointed towards the challenge ideologically based voting poses to voters – in particular in complex electoral contexts with many candidates to choose from (Cunow et al., 2021; Söderlund et al., 2021) – and that most voters rely on heuristics to identify an ideologically proximate candidate, rather than collecting detailed information about policy positions (Mondak, 1993; Lupia, 1994). VAAs have the potential of making such low-information rationality (Popkin, 1991), or heuristic-based decision-making redundant, and can contribute to increasing the average quality of vote choices. The promise of VAAs does however depend on

¹³ FCS-GAL-TAN items “Immigrants should adapt to Finnish habits” and “People who break the law should be punished more severely”, and between the VAA-left-right items “Public services should be outsourced more than they are now for private companies” and “Public authorities should be the main provider of social and healthcare services”.

them being trustworthy. This, in turn, depends on the quality of the information that candidates provide. It should also be acknowledged that inconsistencies in candidates' policy positions in different survey media do not necessarily mean that candidates' VAA positions are untrustworthy, as long as strategically placed VAA positions are actually pursued in the policy-making process. This, however, is outside the scope of the present study.

A challenge to the more widespread use and influence of VAAs could be that voters believe politicians are manifestly untrustworthy—politicians face such strong incentives to act strategically that the perception of politicians as liars has become quite ubiquitous (Davis and Ferrantino, 1996). If VAA responses are treated with the same apathy and disbelief as campaign promises (Naurin, 2011), then the public may abstain from using VAAs altogether or decide not to let VAA recommendations influence their voting behavior. In case such disbelief in VAA responses is unfounded, the democratic process would benefit from voters learning that VAAs actually reflect candidates' sincere beliefs.

In this study we have put candidates' VAA responses to a hard test. Considering the broad usage of VAAs by voters in the Finnish context, and the high level of intra-party competition in the open-list proportional electoral system, it can be seen as a context where it is very likely that candidates (and potentially also parties) would use VAAs as a platform for strategic positioning. Therefore, the Finnish system provides an optimal testbed for the extent to which the information provided by VAAs reflect genuine rather than strategic positions. If candidates—motivated by the prospects of increasing their personal vote shares—are to provide strategic, rather than sincere responses to VAAs, Finland appears to be one of the places where this could happen.

Our empirical analyses did, however, not provide any distinct proof of strategic positioning on behalf of candidates. To the contrary, with regards to convergent validity we found that candidates' positions in the public VAAs on both ideological dimensions (GAL-TAN and left-right) showed very high correspondence with their positions in the confidential candidate survey, and that these associations were only very slightly weaker when controlling for the potentially confounding effects of party membership. Moreover, candidates' left-right positions calculated based on specific issue items were more strongly associated with where they positioned themselves on the left-right scale, as compared to where they positioned the average party-voter using the same scale. All tests of discriminant validity also stood the test. There were hence no unexpected correlations strong enough to challenge those that demonstrated convergent validity.

Although no systematic evidence of parties meddling with candidates' VAA responses was found, there were some weak indications that the party-line may have been somewhat more evident in VAA responses as compared to the candidate survey. There are also anecdotal accounts of Finnish parties providing guidance to their candidates on how to respond to the VAAs (Suojanen, 2007, 21). However, only the Feminist Party (a minor party without parliamentary representation) is actually known to have centrally coordinate their candidates' responses to the 2019 parliamentary election VAAs (Mäkinen, 2019). Our results are consistent with the notion that if parties do meddle with candidates VAA responses, this is happening on a very minor scale.

The main conclusion from this study is that there is little reason for voters not to rely on VAAs when looking for information on candidates' political views. Most candidates seem to respond to these public platforms in a sincere way, and not to adjust their expressed options according to strategic considerations. Our results further suggests that in those cases where candidates deviate from the general party-line it is not – as has been suggested in the literature (Cox, 1990; Ames, 1995; Persson and Tabellini, 2005) – primarily motivated by strategic vote-seeking. Instead deviations appear to reflect personal beliefs.

It should be acknowledged that our study has focused on overarching patterns. We have studied ideological positions rather than specific issue stands and we have not conducted detailed analyses of differences across party contexts of across specific groups of candidates. With regards to

the first, we can expect that greater variation in response patterns will be revealed when comparing specific policy items. It is, however, likely that such a pattern would be less related to strategic positioning on behalf of candidates, and rather reflect a corresponding response inconsistency found among voters (Zaller and Feldman, 1992). A more interesting path to pursue in future research could be to explore systematic differences among candidates. It might for example be that certain types of candidates, for example candidates who are on the verge of becoming elected, are more inclined than others to engage in strategic positioning. As the example mentioned above regarding party meddling demonstrates, it might also be the case that parties with a distinct need to present a unified front would be more inclined than other parties to steer candidate responses. Unfortunately, the relatively limited number of respondents to the FCS survey prohibited us from exploring such systematic patterns within the context of this study.

To conclude, the findings presented here regarding the sincerity of candidates' responses to VAAs are potentially good news for the future quality of vote choices. If VAAs continue to grow in popularity and more voters trust the information they entail and rely on these tools when deciding how to vote, it can increase the average voter's ability to identify an ideologically proximate candidate. As such it can improve the quality of political representation and perhaps even the overall legitimacy of the political system.

Declaration of competing interest

The authors declare none.

Data availability

I have share the link to my data at Attach File step. The location is also mentioned in the manuscript file.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.electstud.2022.102504>.

References

- Abou-Chadi, Tarik, 2016. Niche party success and mainstream party policy shifts – how green and radical right parties differ in their impact. *Br. J. Polit. Sci.* 46 (2), 417–436. <https://doi.org/10.1017/S0007123414000155>.
- Ames, Barry, 1995. Electoral strategy under open-list proportional representation. *Am. J. Polit. Sci.* 406–433.
- Arter, David, 2013. The 'hows', not the 'whys' or the 'wherefores': the role of intra-party competition in the 2011 breakthrough of the true Finns. *Scand. Polit. Stud.* 36 (2), 99–120. <https://doi.org/10.1111/1467-9477.12001>.
- Arter, David, 2020. When a pariah party exploits its demonised status: the 2019 Finnish general election. *W. Eur. Polit.* 43 (1), 260–273. <https://doi.org/10.1080/01402382.2019.1635799>.
- Borg, Sami, Koljonen, Kari, 2020. Käyttöliittymä Vaaleihin: Tutkimus Vaalikoneista Kansalaisten, Ehdokkaiden Ja Journalismin Näkökulmista. Tampere University Press. <https://library.oapen.org/handle/20.500.12657/42891>.
- Cain, Bruce, Ferejohn, John, Morris, Fiorina, 1987. *The Personal Vote: Constituency Service and Electoral Independence*. Harvard University Press, Cambridge.
- Campbell, D.T., Fiske, D.W., 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychol. Bull.* 56 (2), 81–105. <https://doi.org/10.1037/h0046016>.
- Carey, John M., Shugart, Matthew Soberg, 1995. Incentives to cultivate a personal vote: a rank ordering of electoral formulas. *Elect. Stud.* 14 (4), 417–439. [https://doi.org/10.1016/0261-3794\(94\)00035-2](https://doi.org/10.1016/0261-3794(94)00035-2).
- Cedroni, Lorella, Garzia, Diego, 2010. *Voting Advice Applications in Europe: The State of the Art*. ScriptaWeb, Napoli.
- Christensen, Henrik Serup, Järvi, Theodora, Mattila, Mikko, von Schoultz, Åsa, 2021. How voters choose one out of many: a conjoint analysis of the effects of endorsements on candidate choice. *Polit. Res. Exch.* 3 (1), 1892456 <https://doi.org/10.1080/2474736X.2021.1892456>.
- Cox, Gary W., 1990. Centripetal and centrifugal incentives in electoral systems. *Am. J. Polit. Sci.* 903–935.
- Cunow, Saul, Desposato, Scott, Janusz, Andrew, Sells, Cameron, 2021. Less is more: the paradox of choice in voting behavior. *Elect. Stud.* 69 (February), 102230 <https://doi.org/10.1016/j.electstud.2020.102230>.

- Curini, Luigi, 2010. Experts' political preferences and their impact on ideological bias: an unfolding analysis based on a Benoit-Laver expert survey. *Party Polit.* 16, 299–321.
- Cutler, Fred, 2002. The simplest shortcut of all: sociodemographic characteristics and electoral choice. *J. Polit.* 64 (2), 466–490. <https://doi.org/10.1111/1468-2508.00135>.
- Davis, Michael L., Ferrantino, Michael, 1996. Towards a positive theory of political rhetoric: why do politicians lie? *Publ. Choice* 88 (1–2), 1–13. <https://doi.org/10.1007/BF00130405>.
- Donovan, John J., Dwight, Stephen A., Schneider, Dan, 2014. The impact of applicant faking on selection measures, hiring decisions, and employee performance. *J. Bus. Psychol.* 29 (3), 479–493. <https://doi.org/10.1007/s10869-013-9318-5>.
- Downs, A., 1957. *An Economic Theory of Democracy*. Harper & Row, New York.
- Dumont, Patrick, Kies, Raphaël, Fivaz, Jan, 2014. Being a VAA candidate: why do candidates use voting advice applications and what can we learn from it? In: Diego, Garzia, Stefan, Marschall (Eds.), *Matching Voters with Parties and Candidates: Voting Advice Applications in a Comparative Perspective*. ECPR Press, Colchester, 145–60.
- Garzia, Diego, Marschall, Stefan, 2019. Voting advice applications. In: *Oxford Research Encyclopedia of Politics*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228637.013.620>.
- Garzia, Diego, Trechsel, Alexander H., De Angelis, Andrea, 2017. Voting advice applications and electoral participation: a multi-method study. *Polit. Commun.* 34 (3), 424–443. <https://doi.org/10.1080/10584609.2016.1267053>.
- Gemenis, Kostas, 2015. An iterative expert survey approach for estimating parties' policy positions. *Qual. Quantity* 49 (6), 2291–2306.
- Gemenis, Kostas, Rosema, Martin, 2014. Voting advice applications and electoral turnout. *Elect. Stud.* 36 (December), 281–289. <https://doi.org/10.1016/j.electstud.2014.06.010>.
- Gemenis, Kostas, van Ham, Carolien, 2014. Comparing methods for estimating parties' positions in voting advice applications. In: Garzia, Diego, Marschall, Stefan (Eds.), *Matching Voters With Parties And Candidates: Voting Advice Applications In a Comparative Perspective*. ECPR Press, pp. 33–48.
- Greene, Zachary David, Haber, Matthias, 2015. The consequences of appearing divided: an analysis of party evaluations and vote choice. *Elect. Stud.* 37 (March), 15–27. <https://doi.org/10.1016/j.electstud.2014.11.002>.
- Griffith, Richard L., Chmielowski, Tom, Yoshita, Yukiko, 2007. Do applicants fake? An examination of the frequency of applicant faking behavior. *Person. Rev.* 36 (3), 341–355. <https://doi.org/10.1108/00483480710731310>.
- Haukio, Jenni, 2012. Suomalaisten Vaalikoneiden sisällöt: mediajatkeista Kohti Yksilöllistä Yhteisöllisyyttä? *Politiikka* 54 (1). <https://journal.fi/politiikka/article/view/60144>.
- Hogg, Michael A., 1996. Intragroup processes, group structure and social identity. In: Peter Robinson, W. (Ed.), *Social Groups and Identities: Developing the Legacy of Henri Tajfel*. Butterworth-Heinemann, Oxford.
- Isotalo, Veikko, 2020. Designing Voting Advice Applications: the Finnish Case". Master's Thesis. <http://urn.fi/URN:NBN:fi:aalto-2020112918207>.
- Isotalo, Veikko, Mattila, Mikko, von Schoultz, Åsa, 2020. Ideological mavericks or party herd? The effect of candidates' ideological positions on intra-party success. *Elect. Stud.* 67 (October), 102187 <https://doi.org/10.1016/j.electstud.2020.102187>.
- Jungar, Ann-Cathrine, Jupskås, Anders Ravik, 2014. Populist radical right parties in the Nordic region: a new and distinct party family? *Scand. Polit. Stud.* 37 (3), 215–238. <https://doi.org/10.1111/1467-9477.12024>.
- Karvonen, Lauri, 2010. *The Personalisation of Politics: A Study of Parliamentary Democracies*. ECPR Press, Colchester.
- Kauppinen, Tommi, 2007. Vaalikoneiden tekninen toteutus ja kehittämistarpeet. In: Suojanen, Maria, Talponen, Jarmo (Eds.), *Vallaton Vaalikone*, 127–156. SoPhi, p. 103.
- Kestilä-Kekkonen, Elina, von Schoultz, Åsa, 2020. *Ehdokkaat Vaalikentillä: Eduskuntavaalit 2019*. Oikeusministeriö. <https://helda.helsinki.fi/handle/10138/320173>.
- Kestilä-Kekkonen, Elina, Tiihonen, Aino, Westinen, Jussi, 2018. Vääriä kysymyksiä vai vääriä vastauksia? Vasemmisto- Oikeisto-Ulottuvuus vuosien 2003-2015 vaalitutkimusten valossa. *Politiikka* 60 (2), 92–111.
- Kleinnijenhuis, Jan, van de Pol, Jasper, van Hoof, Anita, Krouwel, André, 2017. VAAs as sources of volatility and fragmentation: self-selection effects and genuine effects. *J. Elections, Public Opin. Parties* 27 (1), 75–96. <https://doi.org/10.1080/17457289.2016.1268143>.
- Klingemann, Hans-Dieter, Inglehart, Ronald, 1976. Party identification, ideological preference, and the left-right dimension among western mass publics. In: *Party Identification and beyond*. Wiley, pp. 234–273.
- Kristensen, Niels Nørgaard, Solhaug, Trond, 2017. Students as first-time voters: the role of voter advice applications in self-reflection on party choice and political identity. *J. Soc. Sci. Educ.* 32–42. <https://doi.org/10.4119/JSSE-819>.
- Krouwel, André, van Elfrinkhof, Annemarie, 2014. Combining strengths of methods of party positioning to counter their weaknesses: the development of a new methodology to calibrate parties on issues and ideological dimensions. *Qual. Quantity* 48 (3), 1455–1472.
- Lönnqvist, Jan-Erik, Paunonen, Sampo V., Verkasalo, Markku, Leikas, Sointu, Tuulio-Henriksson, Annamari, Lönnqvist, Jouko, 2007. Personality characteristics of research volunteers. *Eur. J. Pers.* 21 (8), 1017–1030. <https://doi.org/10.1002/per.655>.
- Lupia, Arthur, 1994. Shortcuts versus encyclopedias: information and voting behavior in California insurance reform elections. *Am. Polit. Sci. Rev.* 88 (1), 63–76. <https://doi.org/10.2307/2944882>.
- Luskin, Robert C., 1990. Explaining political sophistication. *Polit. Behav.* 12 (4), 331–361. <https://doi.org/10.1007/BF00992793>.
- Mäkinen, Esa, 2019. Feministit Ovattellisesti Hyvin Lähellä Vihreitä, Mutta Erojakin Ehdokkaiden Vaalikonekannoissa Löytyy. Helsingin Sanomat. <https://www.hs.fi/politiikka/art-200006033697.html>. March 13.
- Marks, Gary, Hooghe, Liesbet, Nelson, Moira, Edwards, Erica, 2006. Party competition and European integration in the East and West: different structure, same causality. *Comp. Polit. Stud.* 39 (2), 155–175. <https://doi.org/10.1177/0010414005281932>.
- Marschall, Stefan, 2014. Profiling users. In: Diego, Garzia, Stefan, Marschall (Eds.), *Matching Voters with Parties and Candidates: Voting Advice Applications in Comparative Perspective*. ECPR Press, Colchester, pp. 93–104.
- McDermott, Monika L., 1997. Voting cues in low-information elections: candidate gender as a social information variable in contemporary United States elections. *Am. J. Polit. Sci.* 41 (1), 270–283. <https://doi.org/10.2307/2111716>.
- Mondak, Jeffery J., 1993. Public opinion and heuristic processing of source cues. *Polit. Behav.* 15 (2), 167–192.
- Montoya, R. Matthew, Horton, Robert S., Kirchner, Jeffrey, 2008. Is actual similarity necessary for attraction? A meta-analysis of affect and perceived similarity. *J. Soc. Pers. Relat.* 25 (6), 889–922. <https://doi.org/10.1177/0265407508096700>.
- Munzert, Simon, Ramirez-Ruiz, Sebastian, 2021. Meta-analysis of the effects of voting advice applications. *Polit. Commun.* 1–16. <https://doi.org/10.1080/10584609.2020.1843572>. January.
- Naurin, E., 2011. *Election Promises, Party Behaviour and Voter Perceptions*. Springer.
- Paloheimo, Heikki, 2008. Ideologiat ja ristiriitaisuudet. In: Heikki, Paloheimo, Tapio, Rautio (Eds.), *Suomen Puolueet Ja Puoluejärjestelmä*. WSOY Oppimateriaalit, pp. 27–60.
- Paunonen, Sampo V., LeBel, Etienne P., 2012. Socially desirable responding and its elusive effects on the validity of personality assessments. *J. Pers. Soc. Psychol.* 103 (1), 158–175. <https://doi.org/10.1037/a0028165>.
- Persson, Torsten, Tabellini, Guido E., 2005. *The Economic Effects of Constitutions*. MIT press.
- Pianzola, Joëlle, 2014. Selection biases in voting advice application research. *Elect. Stud.* 36 (December), 272–280. <https://doi.org/10.1016/j.electstud.2014.04.012>.
- Popkin, Samuel L., 1991. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. University of Chicago Press, Chicago.
- Rabinowitz, George, Macdonald, Stuart Elaine, 1989. A directional theory of issue voting. *Am. Polit. Sci. Rev.* 83 (1), 93–121. <https://doi.org/10.2307/1956436>.
- Rossee, Y., 2012. Lavaan: an R package for structural equation modeling. *J. Stat. Software* 48 (2), 1–36. <https://doi.org/10.18637/jss.v048.i02>.
- Rovny, Jan, Edwards, Erica E., 2012. Struggle over dimensionality: party competition in western and Eastern Europe. *East Eur. Polit. Soc.* 26 (1), 56–74. <https://doi.org/10.1177/0888325410387635>.
- Ruusuvirta, Outi, 2012. Vaalikoneet ja rationaalinen päätöksenteko. *Politiikka* 54 (1). <https://journal.fi/politiikka/article/view/60151>.
- Saris, Willem E., Albert, Satorra, van der Veld, William M., 2009. Testing structural equation models or detection of misspecifications? *Struct. Equ. Model.: A Multidiscip. J.* 16 (4), 561–582. <https://doi.org/10.1080/10705510903203433>.
- Schultz, Martin, 2014. Effects of voting advice applications (VAAs) on political knowledge about party positions. *Pol. Internet* 6 (1), 46–68. <https://doi.org/10.1002/1944-2866.POI352>.
- Shugart, Matthew S., 2013. Between science and engineering: reflections on the APSA presidential task force on political science, electoral rules, and democratic governance: why ballot structure matters. *Perspect. Polit.* 11 (3), 818–820. <https://doi.org/10.1017/S1537592713002223>.
- Söderlund, Peter, von Schoultz, Åsa, Papageorgiou, Achillefs, 2021. Coping with complexity: ballot position effects in the Finnish open-list proportional representation system. *Elect. Stud.* 71 (June), 102330 <https://doi.org/10.1016/j.electstud.2021.102330>.
- Suojanen, Maria, 2007. Vaalikoneen lyhyt historia. In: Vaalikone, Vallaton (Ed.), *Maria Suojanen and Jarmo Talponen*. Minerva, pp. 13–28.
- Swindle, Stephen M., 2002. The supply and demand of the personal vote: theoretical considerations and empirical implications of collective electoral incentives. *Party Polit.* 8 (3), 279–300. <https://doi.org/10.1177/1354068802008003002>.
- Tavits, Margit, 2009. The making of mavericks: Local loyalties and party defection. *Comp. Polit. Stud.* 793–815. <https://doi.org/10.1177/0010414008329900>.
- Thomassen, Jacques, van Ham, Carolien, 2014. Failing political representation or a change in kind? Models of representation and empirical trends in Europe. *W. Eur. Polit.* 37 (2), 400–419. <https://doi.org/10.1080/01402382.2014.887881>.
- Tilastokeskus, 2019. 2. Puolet Äänioikeutetuista Käytti Vaalikoneita Ennen Eduskuntavaaleja. http://www.stat.fi/til/sutivi/2019/sutivi_2019_11-07_kat_002.fi.html.
- Tilley, James, Wlezién, Christopher, 2008. Does political information matter? An experimental test relating to party positions on Europe. *Polit. Stud.* 56, 192–214.
- Trechsel, Alexander H., Garzia, Diego, 2020. Voting advice applications: the power of self-persuasion. In: Suhay, Elizabeth, Grofman, Bernard, Trechsel, Alexander H. (Eds.), *The Oxford Handbook of Electoral Persuasion*, vols. 924–45. Oxford University Press. <https://oxfordhandbooks.com/view/10.1093/oxfordhb/9780190860806.001.0001/oxfordhb-9780190860806-e-51>.
- Tromborg, Mathias, 2019. Issue salience and candidate position taking in parliamentary parties. *Polit. Stud.* 67 (2), 307–325. <https://doi.org/10.1177/0032321718765520>.
- Tromborg, Mathias Wessel, 2021. Appealing broadly while appearing unified: resolving an electoral Dilemma. *Eur. J. Polit. Res.* 60 (1), 131–152. <https://doi.org/10.1111/1475-6765.12393>.
- Turner, John C., Hogg, Michael A., Oakes, Penelope J., Reicher, Stephen D., Wetherell, Margaret S., 1987. *Rediscovering the social group: a self-categorization theory*. In: *Rediscovering the Social Group: A Self-Categorization Theory*. Cambridge, MA, US. Basil Blackwell.

- van Knippenberg, Daan, 2000. Work motivation and performance: a social identity perspective. *Appl. Psychol.* 49 (3), 357–371. <https://doi.org/10.1111/1464-0597.00020>.
- van Knippenberg, Daan, Lossie, Nathalie, Wilke, Henk, 1994. In-group prototypicality and persuasion: determinants of heuristic and systematic message processing. *Br. J. Soc. Psychol.* 33 (3), 289–300. <https://doi.org/10.1111/j.2044-8309.1994.tb01026.x>.
- van Knippenberg, Daan, van Knippenberg, Barbara, van Dijk, Eric, 2000. Who takes the lead in risky decision making? Effects of group members' risk preferences and prototypicality. *Organ. Behav. Hum. Decis. Process.* 83 (2), 213–234. <https://doi.org/10.1006/obhd.2000.2907>.
- van Knippenberg, Daan, Wilke, Henk, 1992. Prototypicality of arguments and conformity to ingroup Norms. *Eur. J. Soc. Psychol.* 22 (2), 141–155. <https://doi.org/10.1002/ejsp.2420220204>.
- Verba, Sidney, Schlozman, Kay Lehman, Brady, Henry E., 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Harvard University Press, Cambridge.
- von Schoultz, Åsa, 2018. Electoral systems in context: Finland. In: Herron, Erik S., Pekkanen, Robert J., Shugart, Matthew S. (Eds.), *Oxford Handbook of Electoral Systems*. Oxford University Press, pp. 600–626. <http://oxfordhandbooks.com/view/10.1093/oxfordhb/9780190258658.001.0001/oxfordhb-9780190258658-e-42>.
- von Schoultz, Åsa, Papageorgiou, Achillefs, 2021. Policy or person? The electoral value of policy positions and personal attributes in the Finnish open-list system. *Party Polit.* 27 (4), 767–778. <https://doi.org/10.1177/1354068819891048>.
- Wagner, Markus, Ruusuvirta, Outi, 2012. Matching voters to parties: voting advice applications and models of party choice. *Acta Politic.* 47 (4), 400–422. <https://doi.org/10.1057/ap.2011.29>.
- Walgrave, Stefaan, van Aelst, Peter, Nuytemans, Michiel, 2008. 'Do the vote test': the electoral effects of a popular vote advice application at the 2004 Belgian elections. *Acta Politic.* 43 (1), 50–70. <https://doi.org/10.1057/palgrave.ap.5500209>.
- Wall, Matthew, Krouwel, André, Vitiello, Thomas, 2014. Do voters follow the recommendations of voter advice application websites? A study of the effects of Kieskompas.nl on its users' vote choices in the 2010 Dutch legislative elections. *Party Polit.* 20 (3), 416–428. <https://doi.org/10.1177/1354068811436054>.
- Zaller, John, Feldman, Stanley, 1992. A simple theory of the survey response: answering questions versus revealing preferences. *Am. J. Polit. Sci.* 36 (3), 579–616. <https://doi.org/10.2307/2111583>.