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The design, purpose, and effects of voting advice applications



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ABSTRACT

In recent electoral politics, one of the most striking internet-related developments is the increasingly widespread use of Voting Advice Applications (VAAs). In this introduction to the symposium devoted to analysing the design, purpose, and effects of voting advice applications, we briefly discuss the literature on these tools for voters, articulate the aims of the symposium, and summarise the six contributions. These papers represent the leading edge of an emerging subfield of electoral research, which has not only significant practical relevance but also research links with many other fields in political science.

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1. Introduction

In recent electoral politics, one of the most striking internet-related developments is the increasingly widespread use of Voting Advice Applications (VAAs). Online tools such as *Smartvote* in Switzerland, *Wahl-O-Mat* in Germany, or *StemWijzer* in the Netherlands aim to assist citizens in easily and quickly determining which candidate or party provides the ‘best match,’ on the basis of the degree of agreement with a series of issue statements. In most European countries, one or more such devices have become available for the public, and increasing numbers of citizens have made use of them, especially in multi-party systems (Cedroni and Garzia, 2010; Garzia and Marschall, 2012). In the most recent national elections in countries like Switzerland, Finland, and the Netherlands between 30 and 40 per cent of the voters consulted a VAA before they cast their vote. Owing to the short history of these applications, relatively little is yet known about how valid and reliable the results are and how strongly they influence voters’

decisions. This symposium aims at advancing theoretical insights and methodological rigour in research on VAAs. The papers address different issues related to the function, design, and effects of VAAs and jointly provide a comprehensive assessment of their role in the electoral process.

The earliest VAA described in the literature, the Dutch *StemWijzer*, was developed in 1989 as a paper-and-pencil test aimed at high school education (De Graaf, 2010). With the development of an online tool in 1998, its popularity dramatically increased, with the number of vote recommendations rising from 6500 in 1998 to 4.8 million in 2006. Data from the *Dutch Parliamentary Elections Studies* (2006–2012) indicate that in national elections since 2006 about 40 per cent of the voters consulted *StemWijzer* or one of the others Dutch VAAs before casting their ballot. In Finland user figures have grown to similar levels: by 2007 the most popular VAAs (and there were more than twenty available) attracted over a million users. This is quite impressive, given an electorate of 4.2 million citizens (Ruusuvirta, 2010). In Switzerland and Germany, too, millions of users consult one or more VAAs in the run-up to an election (Ladner et al., 2010; Marschall and Schmidt, 2010). Usage rates vary sharply among countries, however, a point which itself raises interesting questions for electoral

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research (see e.g. Cedroni and Garzia, 2010; Garzia and Marschall, 2014).

For electoral researchers, the main interest in VAAs lies in their potential impact on voting behaviour, both one *whether* citizens vote and on *how* they vote (Walgrave et al., 2008). Early German and Swiss studies suggest using VAAs stimulates electoral participation and increases voter turnout (Marschall, 2005; Marschall and Schmidt, 2010; Fivaz and Nadig, 2010; Ladner and Pianzola, 2010). Particularly interesting is the effect of VAAs in mobilising groups of citizens that otherwise would have voted in lower numbers, in particular younger age cohorts (Hirzalla et al., 2010; Marschall and Schultze, 2012; Vassil, 2012). When it comes to candidate or party choice, several studies report effects, albeit usually small (Kleinnijenhuis et al., 2007; Walgrave et al., 2009; Ladner et al., 2010; Dumont and Kies, 2012; Wall et al., 2012). Although it is not uncommon for the majority of users to receive a voting recommendation that differs from their voting intention (Walgrave et al., 2008; Wall et al., 2009).

2. Aims of the symposium

As the title indicates, the aim of this symposium is to advance our understanding of the design, purpose, and effects of Voting Advice Applications.

Effects. The early studies of VAAs have yielded valuable insights into the use of VAAs and their potential effects but also have had their methodological limitations (see Cedroni and Garzia, 2010). The claims about effects – however cautious and circumscribed – have typically been estimated on the basis of voter self-reports about intentions to vote, with no way of confirming the reports. Moreover, comparisons of VAA users and non-users are often confounded by factors such as level of education, political interest, and internet access. And even when robust effects are well documented, as in the case of electoral turnout, the question remains as to the underlying causal mechanisms. One of the central aims of this symposium, then, is to take up these methodological challenges, by presenting more sophisticated statistical techniques for analysing the effects and use-patterns regarding VAAs, and by delving into the mechanisms underlying these phenomena.

Design. Electoral research on VAAs has also been investigating the implications of pivotal choices that are made in designing VAAs. The resulting “vote advice” can vary significantly, depending on the methods adopted for selecting issue statements, determining a party’s (or candidate’s) actual position on an issue, and calculating the match between users and parties. Given the potential influence of VAAs, particularly in close elections, it is vitally important to identify potential distortions that design choices could introduce. For example, one Belgian study has shown, on the basis of computer simulations, that the combination of VAA-statements selected from the initial “long list” of possible statements can have a significant impact on the resulting recommendation to VAA users (Walgrave et al., 2009). Similarly, two Dutch studies have shown, on the basis of VAA log files, that the majority of users would have received a different “best match” if it had been calculated on the basis of the method employed by a

competing VAA but using the identical issue statements (Kleinnijenhuis and Krouwel, 2008; Louwerse and Rosema, 2014). Similar issues can be raised about the choice of whether to rely on the proximity model of issue voting (Wagner and Ruusuvirta, 2012).

Purpose. These observations bring to the foreground questions about what precisely the function of VAAs is supposed to be. Should they merely inform citizens about their proximity to the positions taken by parties and candidates on the issues – on the assumption that citizens do indeed have meaningful issue positions (Ramonaitė, 2010) – or should their design be guided by the goal of facilitating a process of democratic deliberation? Although some design choices can be decided on the basis of insights into the relative accuracy of different methods, other choices appear to be deeply political in character, further underscoring the importance of clarity about what aspects of democratic politics VAAs are striving to improve.

In addition to addressing these aims, the contributions to this symposium also shed new light on a range of fundamental issues in political science, particularly in the area of electoral research. Discussions about the potential benefits of VAAs, for example, build on classic questions about the essence of democracy and citizen competence, the function of elections, and policy representation (Delli Carpini and Keeter, 1996; Lupia and McCubbins, 1998; Powell, 2000). Research on the design of VAAs is closely related to questions about the structure of party competition (Kriesi et al., 2008; Costa Lobo et al., 2010), the positioning of parties or candidates in political space in theories of issue voting (Enelow and Hinich, 1984; Rabinowitz and Macdonald, 1989; Wagner and Ruusuvirta, 2012), as well as the most suitable sources to determine party positions (Benoit and Laver, 2007; Volkens, 2007; Trechsel and Mair, 2011; Gemenis, 2012). Studies on the effects of VAAs can be positioned in the context of long-term versus short-term factors influencing the vote and the role of policy issues in voter decision-making (Campbell et al., 1960; Key, 1966). Furthermore, research about VAAs poses several methodological challenges that also play a role in other studies on voting, such as the reliability of self-report measures and sample biases and self-selection biases (Voogt and Van Kempen, 2002; Vavreck, 2007; Vassil, 2011). In these regards and more, the papers collected here contribute not only to our understanding of the important new phenomenon of VAAs but also to ongoing research in various domains of electoral studies.

3. Overview of symposium articles

The first contribution to this symposium focuses on a fundamental, yet large neglected issue, namely the function of VAAs in democratic politics. The paper by Fossen and Anderson (2014) is the first in the literature to situate VAAs within debates in political theory about the democratic process and citizen competence. Fossen and Anderson distinguish three alternative conceptions of the contribution that VAAs could make to democracy, highlighting (and ultimately challenging) the current dominance of “matching” models relative to “deliberative” or “contestatory” models.

The next two papers are concerned with the design of VAAs and analyse the reliability and validity of the advice provided to voters. Lefevere and Walgrave (2014) focus on the selection of statements and show that this has a strong effect on the outcome at the individual as well as aggregate level. They employ Belgian data to demonstrate that parties benefit and suffer significantly from the way in which the statement selection proceeds. Next, Otjes and Louwerse (2014) discuss the spatial models that VAAs use to translate voters' answers into voting advice. Using data from several national VAAs, they demonstrate that these tools have two shortcomings, namely the application of the same spatial framework in different incommensurable contexts, and the limited reliability of scales used to determine parties' and voters' spatial positions.

The final three papers focus on the effects of the use of VAAs on electoral behaviour. The paper by Pianzola (2014) identifies important methodological problems in research on VAA effects. Pianzola analyses various approaches for handling selection biases, on the basis of both representative and non-representative data from Switzerland. The final two papers address the impact of VAAs on voting behaviour, focussing in particular on electoral turnout. Gemenis and Rosema (2014) improve on past research on the mobilisation effect of VAAs in two ways. First, unlike previous studies that rely on self-reports of mobilisation effects among users, this paper utilizes election survey data from a random sample, the *Dutch Parliamentary Election Study*, and compares turnout among users and non-users. Furthermore, the potential problem of self-selection bias is circumvented by the use of a statistical technique known as matching analysis. Dinas et al. (2014) also deal with the impact of VAA usage on turnout, but their contribution focuses on the mechanisms underlying (de)mobilisation effects. They develop and test several hypotheses about such effects using data from a survey conducted among users of the pan-European VAA called *EU Profiler*.

4. Conclusion

The papers in this symposium represent the leading edge of an emerging subfield of electoral research, one that engages a wide range of fascinating issues and that has linkages with many other fields in political science. Taken together, the papers show that VAAs are an intriguing phenomenon of clear relevance for political science. This is all the more the case as political scientists often are the ones responsible for building VAAs or providing the necessary knowledge and methodology for others to build such systems. This may be one of those rare occasions where political science can make a significant contribution to how politics is actually done.

References

Benoit, K., Laver, M., 2007. Estimating party policy positions: comparing expert surveys and hand-coded content analysis. *Elect. Stud.* 26, 90–107.

- Campbell, A., Converse, P.E., Miller, W.E., Stokes, D.E., 1960. *The American Voter*. John Wiley & Sons, New York.
- Cedroni, L., Garzia, D. (Eds.), 2010. *Voting Advice Applications in Europe: the State of the Art*. Scriptaweb, Napoli.
- Costa Lobo, M., Vink, M., Lisi, M., 2010. Mapping the political landscape: a vote advice application in Portugal. In: Cedroni, L., Garzia, D. (Eds.), *Voting Advice Applications in Europe: the State of the Art*. Scriptaweb, Napoli, pp. 143–185.
- De Graaf, J., 2010. The irresistible rise of the Stembijzer. In: Cedroni, L., Garzia, D. (Eds.), *Voting Advice Applications in Europe: the State of the Art*. Scriptaweb, Napoli, pp. 35–46.
- Delli Carpini, M.X., Keeter, S., 1996. *What Americans Know about Politics and Why it Matters*. Yale University Press, New Haven.
- Dinas, E., Trechsel, A.H., Vassil, K., 2014. A look into the mirror: preferences, representation and electoral participation. *Elect. Stud.* 36, 290–297.
- Dumont, P., Kies, R., 2012. Smartvote.lu: usage and impact of the first VAA in Luxembourg. *Int. J. Electron. Gov.* 5 (3–4), 388–410.
- Enelow, J.M., Hinich, M.J., 1984. *The Spatial Theory of Voting: an Introduction*. Cambridge University Press, Cambridge.
- Fivaz, J., Nadig, G., 2010. Impact of voting advice applications (VAAs) on voter turnout and their potential use for civic education. *Policy & Internet* 2, 167–200.
- Fossen, T., Anderson, J., 2014. What's the point of voting advice applications? Competing perspectives on democracy and citizenship. *Elect. Stud.* 36, 244–251.
- Garzia, D., Marschall, S., 2012. Voting advice applications under review: the state of research. *Int. J. Electron. Gov.* 5, 203–222.
- Garzia, D., Marschall, S. (Eds.), 2014. *Matching Voters with Parties and Candidates: Voting Advice Applications in Comparative Perspective*. Colchester: ECPR Press.
- Gemenis, K., 2012. Estimating parties' policy positions through voting advice applications: some methodological considerations. *Acta Polit.* 48, 268–295.
- Gemenis, L., Rosema, M., 2014. Voting advice applications and electoral turnout. *Elect. Stud.* 36, 281–289.
- Hirzalla, F., Van Zoonen, L., de Ridder, J., 2010. Internet use and political participation: reflections on the mobilization/normalization controversy. *Information Soc.* 27, 1–15.
- Key Jr., V.O., 1966. *The Responsible Electorate: Rationality in Presidential Voting 1936–1960*. The Belknap Press of Harvard University Press, Cambridge, MA.
- Kleinnijenhuis, J., Krouwel, A., 2008. Simulation of decision rules for party advice websites. Paper presented at the Annual Meeting of the American Political Science Association, Boston.
- Kleinnijenhuis, J., Scholten, O., Van Atteveldt, W., Van Hoof, A., Krouwel, A., Oegema, D., De Ridder, J.A., Ruigrok, P.C., Takens, J.H., 2007. *Nederland Vijfstromenland: De Rol van de Media en Stembijzers bij de Verkiezingen van 2006*. Bert Bakker, Amsterdam.
- Kriesi, H., Grande, E., Lachat, R., Dolezal, M., Bornschier, S., Frey, T., 2008. *West European Politics in the Age of Globalization*. Cambridge University Press, Cambridge.
- Ladner, A., Felder, G., Fivaz, J., 2010. More than toys? A first assessment of voting advice applications in Switzerland. In: Cedroni, L., Garzia, D. (Eds.), *Voting Advice Applications in Europe: the State of the Art*. Scriptaweb, Napoli, pp. 91–124.
- Ladner, A., Pianzola, J., 2010. Do voting advice applications have an effect on electoral participation and voter turnout? Evidence from the 2007 Swiss federal elections. In: Tambouris, E., Macintosh, A., Glassey, O. (Eds.), *Electronic Participation*. Springer, Berlin, pp. 211–224.
- Lefevere, J., Walgrave, S., 2014. A perfect match? the impact of statement selection on voting advice applications' ability to match voters and parties. *Elect. Stud.* 36, 252–262.
- Louwerse, T., Rosema, M., 2014. The design effects of voting advice applications: comparing methods of calculating matches. *Acta Polit.* (in press).
- Lupia, A., McCubbins, M.D., 1998. *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* Cambridge University Press, New York.
- Marschall, S., 2005. Idee und Wirkung des Wahl-O-Mat. *Aus Polit. Zeitgesch.* 51/52, 41–46.
- Marschall, S., Schmidt, C.K., 2010. The impact of voting indicators: the case of the German Wahl-O-Mat. In: Cedroni, L., Garzia, D. (Eds.), *Voting Advice Applications in Europe: the State of the Art*. Scriptaweb, Napoli, pp. 65–90.
- Marschall, S., Schultze, M., 2012. Voting advice applications and their effect on voter turnout: the case of the German Wahl-O-Mat. *Int. J. Electron. Gov.* 5, 349–366.
- Otjes, S., Louwerse, T., 2014. Spatial models in voting advice applications. *Elect. Stud.* 36, 263–271.

- Pianzola J., 2014. Selection biases in voting advice application research. *Elect. Stud.* 36, 272–280.
- Powell Jr., G.B., 2000. *Elections as Instruments of Democracy: Majoritarian and Proportional Visions*. Yale University Press, New Haven, CT.
- Rabinowitz, G., Macdonald, S.E., 1989. A directional theory of issue voting. *Am. Polit. Sci. Rev.* 83, 93–121.
- Ramonaitė, A., 2010. Voting advice applications in Lithuania: promoting programmatic competition or breeding populism? *Policy & Internet* 2, 117–147.
- Ruusuvirta, O., 2010. Much ado about nothing? Online voting advice applications in Finland. In: Cedroni, L., Garzia, D. (Eds.), *Voting Advice Applications in Europe: the State of the Art*. Scriptaweb, Napoli, pp. 47–63.
- Trechsel, A.H., Mair, P., 2011. When parties (also) position themselves: an introduction to the EU Profiler. *J. Information Technol. Polit.* 8, 1–20.
- Vassil, K., 2011. Role of Self Selection in Estimating the Effects of Voting Advice Applications: Empirical Evidence on the Basis of Swiss Smartvote Data. Paper presented at the ECPR General Conference, Reykjavik.
- Vassil, K., 2012. *Voting Smarter? The impact of voting advice applications on political behaviour*. PhD thesis. European University Institute, Florence.
- Vavreck, L., 2007. The exaggerated effects of advertising on turnout: the dangers of self-reports. *Q. J. Polit. Sci.* 2, 325–343.
- Volkens, A., 2007. Strengths and weaknesses of approaches to measuring policy positions of parties. *Elect. Stud.* 26, 108–120.
- Voogt, R., Van Kempen, H., 2002. Nonresponse bias and stimulus effects in the Dutch National Election Study. *Qual. Quantity* 36, 325–345.
- Wagner, M., Ruusuvirta, O., 2012. Matching voters to parties: voting advice applications and models of party choice. *Acta Polit.* 47, 400–422.
- Walgrave, S., Nuytemans, M., Pepermans, K., 2009. Voting aid applications and the effect of statement selection. *West Eur. Polit.* 32, 1161–1180.
- Walgrave, S., Van Aelst, P., Nuytemans, M., 2008. 'Do the vote test': the electoral effects of a popular vote advice application at the 2004 Belgian elections. *Acta Polit.* 43, 50–70.
- Wall, M., Krouwel, A., Vitiello, T., 2012. 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.* (forthcoming).
- Wall, M., Sudulich, M.L., Costello, R., Leon, E., 2009. Picking your party online: an investigation of Ireland's first online voting advice application. *Inf. Polity* 14, 203–218.