



UvA-DARE (Digital Academic Repository)

Voting wiser

The effect of Voting Advice Applications on political understanding

van de Pol, J.

[Link to publication](#)

Creative Commons License (see <https://creativecommons.org/use-remix/cc-licenses/>):

Other

Citation for published version (APA):

van de Pol, J. (2016). *Voting wiser: The effect of Voting Advice Applications on political understanding.*

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Chapter 1

Introduction

A well-informed, engaged, and participating electorate is essential for representative democracies. In order to carry out the 'will of the people', the parliament should be a reflection of the citizenry as a whole. Therefore, it is necessary that citizens take the effort to voice their interests and preferences through voting, and that their votes reflect these interests and preferences. Hence, at least in most mainstream conceptions of western democracy, citizens need to participate politically and they need to have a certain level of political knowledge in order to be able to judge which politician or which party represents them best. It is, however, a normative question what level of political knowledge and what level of participation is required for a 'healthy' democracy (Strömbäck, 2005). Even though there has been a lot of debate on this subject, there are widely shared concerns among scholars about the level of engagement and knowledge among citizens in Western democracies (Delli Carpini & Keeter, 1996; Lau & Redlawsk, 2007; Lupia, 1994; Somin, 1998) and the ease with which citizens' opinions are influenced by elite manipulation and the framing of information (Druckman, 2001; Sniderman & Theriault, 2004; Zaller, 1992).

The question how to engage citizens more with politics, and to harness them against attempts of public opinion manipulation by elites, is a central theme both to political communication science and political science (Dalton, 2014; McQuail, 2010). The (news) media have a crucial role here, as these are the most important channels through which citizens inform themselves about politics. When the internet became available to ordinary consumers in the 1990's, observers had high expectations of its potential for democratization and citizen engagement. After all, the internet circumvents the one-way, top-down communication model of traditional media like newspapers, TV and radio. It allows for direct interaction between citizens and politicians, without the interference of communication professionals and journalists (Blumler & Gurevitch, 2001). It offers almost unlimited information to anybody, greatly improving means to inform oneself on societal and political issues. And it facilitates political debate and exchange of ideas between citizens, without them having to leave their homes – especially since the introduction of social media (Chadwick, 2012; McQuail, 2010, p. 151).

According to this optimistic view, the internet can contribute greatly to political engagement, information exchange and public debate, and hence mobilize citizens to become more politically sophisticated. There is some evidence for this proposition: for example, Boulianne (2011) found that political internet use can lead to more interest in politics among Americans. At the same time, she found that TV news is only consumed by those who are already interested in politics, and does not engage the uninterested. There is, however, no agreement among political communication scholars whether the internet has the capacity to mobilize citizens where traditional media fail to do this. According to a more pessimistic view, the people who use the internet

for political information and deliberation are mostly the same people who were politically active before the availability of the internet (Norris, 2001). As Bentivegna (2006, p. 335) noted,

“The desire to be a ‘good citizen’ precedes and accompanies the wish to be an informed citizen. It is thus illusory to attribute to ICTs the power to transform distracted and uninformed citizens into well-informed participants. It is, rather, more realistic to attribute to ICTs the power to destabilize the control of the production and circulation of information held by the traditional media.”

In other words, while the internet does have the capacity to change the information context and interactions between politicians and citizens, it is incapable of bridging the gap between uninterested and interested citizens. For citizens to use the internet to learn about politics and develop their political views, the same personal resources (education, time) and motivations (interest and political efficacy) are required as for offline political media use. This latter view is referred to as the normalization hypothesis: availability of the internet does not automatically lead to more political efficacy, more participation and better-informed citizens, but rather reinforces traditional boundaries. This view is also supported by empirical evidence (Boulianne, 2009; Scheufele & Nisbet, 2002). The literature is inconclusive as to what is the contribution of the internet in general.

Voting Advice Applications serve as an interesting case in this academic debate. They are a good example of ICT that changes the information context and the interaction between citizens and politicians. Or, in Bentivegna’s words (2006, p. 335), they have the “power to destabilize the control of the production and circulation of information held by the traditional media” as they ignore the news cycle and the traditional dynamics of election campaigns, and instead provide a helicopter view on the key issues during the elections and each party’s positions on these issues. However, do they also have the power to “transform distracted and uninformed citizens into well-informed participants”, by increasing their understanding of politics?

VAA offers an approach of presenting political information that would not have been possible without the internet: they work as a freely available online quiz, appealing to large groups of voters, offering them the necessary information to make an issue-based voting decision, and tailoring this information to the individual user (Fossen & Anderson, 2014; Garzia, 2010). For this reason, they might succeed where other media and platforms fail to engage uninterested citizens. As Lau and Redlawsk (2006, p. 262) write about this new type of information source, “this level of control over the flow of information in a campaign is unprecedented and has the potential to change the way voters learn about their choices”. VAA builders have similar expectations and

aim to contribute to democracy by engaging more voters with politics, increasing political understanding and turnout and helping people to make better informed voting decisions (J. De Graaf, 2010; Marschall & Schmidt, 2010; Nuytemans, Walgrave, & Deschouwer, 2010). The study of the capabilities and effects of VAAs thus feeds into the wider mobilization / normalization controversy, serving as an interesting case of the potential of the internet.

This dissertation investigates to what extent VAAs live up to the promise of raising citizen competence. More specifically, it focuses on the contribution of Voting Advice Applications to citizens' understanding of politics. The central question of this dissertation is: *How do VAAs affect understanding of politics and political issues, and how does this interact with resources and motivations of citizens?* This subject is tackled from different perspectives, using a multitude of data sources and research methods. From a media use perspective, I study types of VAA users and their motivations to use VAAs – both in first- and second-order elections. This has implications for the capacity of VAAs to inform: if VAAs are only used by those who are informed already, they will not have a mobilizing influence. From a language use perspective, I test if the framing of policy issues affects the understanding people have of politics, and whether this affects their opinions. Lastly, I investigate whether VAA use results in an increase in factual political knowledge and in a feeling of knowledge, or internal political efficacy.

In the remainder of this chapter, I will introduce the dissertation and its chapters, situate this research effort in the broader context of political communication and VAA research, and discuss the theoretical, practical and methodological contributions of this dissertation. But first, I will give a more elaborate introduction into the phenomenon of Voting Advice Applications.

1.1 A Brief History of VAAs

As a way to provide insight into politics to high school students, during the 1989 Dutch elections the Citizenship Foundation (Stichting Bugerschapskunde) developed a package with a list of statements from party manifestos, about which students could give their opinions (J. De Graaf, 2010). This *Stemwijzer* package also contained a floppy disk so that students could use the school computer to calculate which party they agreed most with. While only 50 packages were sold to high schools during these elections, five years later some thousand *Stemwijzer* floppy disks were sold to schools and individuals through bookshops and kiosks. In 1996 *Stemwijzer* was first available online, and by 2012 about 50% of the Dutch electorate consulted *Stemwijzer* before casting a vote in the national elections (Marschall, 2014). Meanwhile, *Stemwijzer* spin-offs have appeared in other countries (like the German *Wahl-O-Mat*, attracting more than 13 million visitors in 2013) and alternatives have been developed, like the

Dutch *Kieskompas*. VAAs are now available throughout Europe, and are making their appearances in other democracies worldwide as well (Liao, Chen, Jensen, & Pritchard, 2015). In 2009, the first supranational VAA EU Profiler was developed for the European elections and in some countries, like Germany, Belgium, Switzerland and the Netherlands, the first regional-level VAAs have appeared (Schultze, 2014; Sudulich, Garzia, Trechsel, & Vassil, 2014)

Several explanations have been put forward for the remarkable rise of the popularity of VAAs throughout Europe. In many western European countries, the traditional relations between parties and voters have faded. A few decades ago, most voters were loyal to one party: the party of the class or social group they belonged to (Lijphart, 1975). In current times of eroded class boundaries and advanced mediatization, this traditional voter-party relation has become less relevant (N. D. De Graaf, Heath, & Need, 2001; Garzia, 2010; Mair, 2008). Other considerations have become more important in the voting decision process, such as evaluation of past performance, issue agreement, party identification, politician's performance in the media, or strategic considerations (Dalton, McAllister, & Wattenberg, 2002; Garzia, 2012; Lau & Redlawsk, 2006; Shanks & Miller, 1990). Voters also switch more often and make their voting decisions later in time (Dalton et al., 2002; Fournier, Nadeau, Blais, Gidengil, & Nevitte, 2004; Irwin & Van Holsteyn, 2008) – indicating they are less certain about their vote decision than some decades ago.

In the Netherlands this change was very profound: within one decade, this country changed from being a relatively politically stable nation to having one of the highest volatility rates in Europe (Mair, 2008). This resulted in an increasing fragmentation in Dutch politics: more and more parties are being considered by large groups of voters (Van der Brug & Pelikaan, 2003). In the latest national elections, 21 parties competed for seats in parliament, and 11 parties ended up with at least one seat. In this context of increased choice and lack of habits and tradition, voters seem to be looking for cues to rely on, and VAAs offer an easy and appealing way to find out which party fits one's preferences and interests (Garzia, 2010).

There is a wide variety of VAAs (see Garzia & Marschall, 2012, for an overview of differences), but they all share a couple of features. Users indicate their opinions towards a number of statements about political issues, and on each of these issues the VAA compares the user's opinion to the positions of each party. Based on this comparison, the VAA produces a voting advice (see Figure 1 and 2). This advice can either be in the form of a list of parties ranging from best to worst matching (Figure 1), or a graph depicting the political spectrum with the positions of all parties and that of the user (Figure 2). Most VAAs also offer functionalities like comparing one's opinion to the positions of all parties for each statement separately, and providing the arguments that parties put forward for their positions. Voting Advice Applications

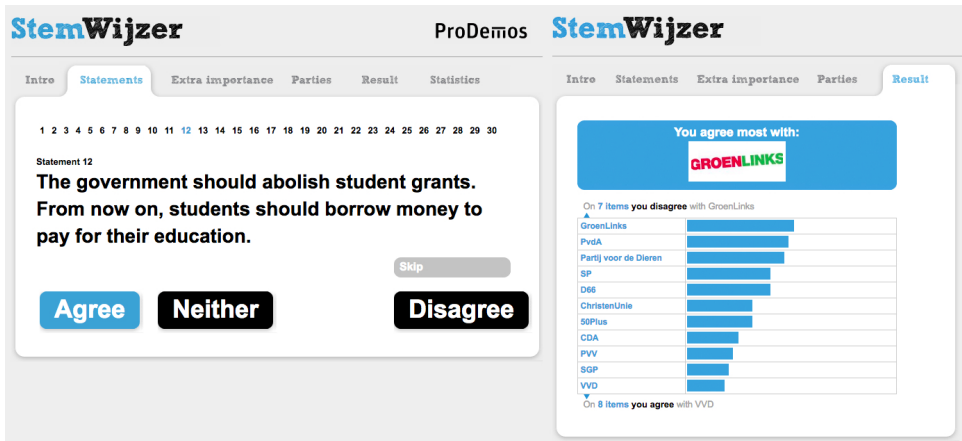


Figure 1.1: A statement in the *Stemwijzer* application (left) and the results page with the bar chart showing the match with every party (right)



Figure 1.2: A statement in the *Kieskompas* application (“There should be cuts on culture and the arts” - left) and the results page with the two-dimensional political spectrum showing the user’s position in relation to the positions of the political parties (right)

could therefore also be seen as tools that offer a very concise summary of all party manifestos on a selection of issues that are important in the election campaign. They enable voters to obtain, in 10 to 20 minutes, a rough overview of the political spectrum for a particular election.

The popularity of VAAs spurred a vivid debate on their function in politics – both public and academic. Research on VAAs can broadly be divided in two interrelated

lines: first, who are the users, what effects do VAAs have on their users and do they contribute to citizen competence? Second, what are the design effects, biases and assumptions of VAAs, do they offer a good representation of the political spectrum, and how can they be improved?

This dissertation contributes to these lines of research in multiple ways. It broadens the scope of the study of VAA users in earlier research by looking beyond socio-demographic characteristics. I distinguish different types of users by their cognitive characteristics and their motivations to turn to VAAs. Additionally, different contexts of VAA use are taken into account by comparing the role of VAAs in first- and second-order elections. The dissertation further contributes to the study of VAA effects on users by making a distinction between factual and perceived knowledge gains and offering a strict test of both. It contributes to the study of design effects by looking at different ways of framing political issues. Lastly, it contributes by using a number of methods that are innovative to the field of VAA research and help us to answer more questions about the use and effects of Voting Advice Applications. This dissertation is part of a comprehensive research project on the effects of VAAs on political attitudes, political literacy and understanding, and political behavior¹.

In the following sections, I will discuss the insights research on VAAs brought us so far, and how this dissertation is situated within the two lines of VAA research I discussed above: how VAAs matter for citizen competence and the biases and design effects in VAAs.

1.2 Democratic Contribution of VAAs?

The astronomical increase in VAA use, the formal way of matching voters to parties, and the persuasive influence this might have in the decision process of voters make VAAs an important actor in election campaigns. VAA developers often strongly emphasize that their tools are not intended to provide a voting advice, but rather to inform voters by offering a personalized summary of important issues and the party positions on these. One of the overarching questions in the debate about VAAs is on the exact role VAAs play in modern democracies, and whether this is a beneficial role. A couple of studies have empirically studied this role, and there has also been some reflection contesting the assumptions underlying VAAs, which I will discuss later.

¹ This dissertation was supported by a grant as part of the “Understandable Language” program by the Netherlands Organization for Scientific Research, grant number 321-89-003

1.2.1 Empirical findings

As mentioned previously, VAA builders aim to contribute to democracy by increasing political interest and knowledge, motivating citizens to vote and to help them make informed voting decisions (J. De Graaf, 2010; Nuytemans et al., 2010). Ideally, VAAs help people to be more aware of their preferences, vote accordingly, and to go out and vote if they otherwise would not. This will lead to better representation of the interest and preferences of citizens in the government. Hence, to answer the question whether and how VAAs contribute to democracy and democratic representation, scholars have looked at VAA users, gains in knowledge and interest, effects on turnout and effects on vote choice.

With respect to the users, the question is to what extent VAAs are used by those who are less well represented in government – those who are less inclined to inform themselves and turn out to vote in elections. Early research concluded that users are on average male, higher educated and more than average interested in politics (Boogers & Voerman, 2003; Hirzalla, Van Zoonen, & De Ridder, 2010; Hooghe & Teepe, 2007; Marschall & Schmidt, 2010; Ruusuvirta & Rosema, 2009). In a recent study on users of the German *Wahl-O-Mat*, Marschall and Schultze (2015) looked at motivations and political behavior of VAA users and observed that typical VAA users are young people who are politically engaged already, and accustomed to using the internet for their political information needs.

These conclusions support the normalization thesis: VAA users very much resemble the typical kind of people who inform themselves about politics anyway – and if that is the only type of citizens using VAAs, these tools will not be able to bridge the divide between politically uninterested and interested citizens. Chapters two and three in this dissertation, however, argue that a focus on the average user obscures the variability among users, and ignores the possibility that there is a minority of users who were not already engaged before. Additionally, in Chapter 3, I will investigate to what extent VAA use differs between types of elections. In some elections VAAs might attract more uninterested and uncertain voters than in others.

In case VAAs are used by less informed and less interested citizens, this might have mobilizing effects in terms of electoral participation. After all, those who are interested and informed already will go out and vote anyway (Verba, Scholzman, & Brady, 1995). The effect of VAA use on electoral turnout was tested in a couple of studies throughout Europe (Dinas, Trechsel, & Vassil, 2014; Enyedi, 2015; Fivaz & Nadig, 2010; Gemenis & Rosema, 2014; Ladner, Felder, & Fivaz, 2010; Marschall & Schultze, 2012). While all of these studies established positive relations between VAA use and turnout², not all of them could make causal inferences about this relation.

² Dinas, Trechsel and Vassil (2014), however, found that this relation is dependent on the extent to

Two studies deserve particular interest. Gemenis and Rosema (2014) use matching techniques to simulate an experiment and find that VAA use increases turnout with a little over 4%. Enyedi (2015) carried out an experiment, but could not find evidence for any contribution of VAAs to turnout. It seems that, if there is any effect, it will be modest.

How about political knowledge? Walgrave, Van Aelst, and Nuytemans (2008) argue that the rising participation in VAAs may lead to more debate on issues and positions of parties, rather than on “secondary aspects” of campaigns (p. 680), and this would be healthy for democracy. There has not been much academic attention yet, however, to the question whether VAAs actually contribute to factual knowledge about politics and positions of parties on issues. A couple of studies asked respondents to indicate what they felt was the effect of using VAAs. For example, about half of Finnish voters think that VAAs are an important source for political information (Ruusuvirta, 2010); 60% of German *Wahl-O-Mat* users indicate that this VAA had motivated them to collect more political information (Marschall & Schmidt, 2010); and 65% of Swiss *Smartvote* users claim that using *Smartvote* motivated them to discuss politics with others.

Only recently, VAA researchers began studying factual political knowledge, and the effect of VAAs on them. Schultze (2014) and Westle, Begemann, and Rütter (2014) operationalized political knowledge as the ability to correctly identify positions of parties on political issues. VAAs would have a positive effect on political knowledge if, for example, people are more often able to associate the conservatives with reducing unemployment benefits after using a VAA. They found this to be the case: in both studies, a moderate increase in political knowledge was found after using a VAA.

However, it should be remarked that, since Schultze (2014) compares users to non-users, his findings may be affected by selection bias. Westle and colleagues (2014) do not compare users against a control group but measure knowledge before and after using the VAA, with the risk of measuring test effects. In Chapter 5 I take another important step towards measuring the causal effect, by comparing political knowledge between users and non-users in a quasi-experiment. Additionally, this study also assesses whether VAAs contribute to a feeling of knowledge, or political internal efficacy. Efficacy is an important factor in the motivation of voters to go out and vote, and to be interested in politics and political campaigns (Kaid, McKinney, & Tedesco, 2007; Kenski & Stroud, 2006).

VAA researchers lastly also investigated the effects on voting decisions, and whether VAAs – as has been claimed – helps voters to make an informed choice. Assuming that not all voters vote for the party that represents their interests and preferences best,

which voters' positions are represented by parties. If the VAA shows that no party represents someone's preferences, they will demotivate users to vote.

then, if VAAs would help voters to make more informed vote choices, this should result in vote switching after using a VAA. The impact on voting decision was investigated in a series of studies (Alvarez, Levin, Trechsel, & Vassil, 2014; Andreadis & Wall, 2014; Dumont & Kies, 2012; Pianzola, 2014; Walgrave et al., 2008; Wall, Krouwel, & Vitiello, 2012). Using different sources of data – log data from VAA users, national election studies, experiments – they could all establish a (modest) effect on the vote choice of users, especially among lower educated citizens (Dumont & Kies, 2012).

To be sure, this impact of VAA advice on vote choice does not necessarily imply that VAAs contribute to democratic representation by helping people to make better-informed vote choices (i.e., pick parties that represent them better). But at least these studies established that there is a real-world effect that might matter for election outcomes. Whether voters now make ‘better’ or more ‘correct’ decisions is open for discussion and depends on many factors and views. For instance, is the VAA advice a proper reflection of the preferences and interests of users? And do these recommendations take into account everything that is relevant when making one’s mind up about which party to vote for?

In sum, research on VAA effects established a modest increase in turnout after VAA use, and found some indications that VAA use contributes to political knowledge. More robust evidence has been found that VAAs also affect the voting decisions of users. In the next section I discuss the normative model of democracy VAAs implicitly adhere to, and later in this chapter I will return to the question whether it is possible to build a neutral VAA.

1.2.2 Normative perspectives and assumptions underlying VAAs

A common trait of VAAs is that they ask users to specify their own issue positions and receive an overview of parties, ranked according to the extent to which they agree with the user. The issues included in VAAs are usually issues that are contested in the election campaign. This means that VAAs choose to assist voters in their decision process by focusing on policy measures that are proposed by parties for the upcoming period of office. This approach is less obvious than it may look at first glance. With this design VAA builders make some implicit choices, while other approaches would also have been possible (Fossen & Anderson, 2014).

First, VAAs assume voters should – or will – vote for the party that they agree most with on relevant issues, adhering to the issue voting model (see Downs, 1957). After all, that is what they help voters figuring out. In doing this, they ignore other considerations to vote for a party such as the performances of parties and politicians in the past period, ideological principles or the qualities of specific politicians like party leaders (Ladner, 2016; Rosema, 2012; Wagner & Ruusuvirta, 2011). More specifically,

within the framework of issue voting, some VAAs use a proximity model of voting: matching voters to parties they agree most with overall and taking all issues into account equally. Other VAAs have more attention for how strong people's opinions are (by distinguishing between "agree" and "completely agree"), adhering to a directional model. And some VAAs use the salience model, by taking account what issues users think are most important (Wagner & Ruusuvirta, 2011).

Second, the idea that voters choose the party that best represents their opinions adheres to a view of politicians as 'delegates' whose task is to represent the interests and opinions of their constituents. In an alternative view, politicians are 'trustees' who receive a mandate to act according to what they think is best for the common good (Anderson & Fossen, 2014; Ladner, 2016).

Third, the assumption that voters have fixed opinions on a set of political issues and need to know which party agrees most with them, fits well with a social choice model of democracy. This model emphasizes the need for the best possible match between one's political preferences and the party she or he voters for. Another possible model of democracy, for example, would be a deliberative model, assuming that voters are in need of arguments and are looking to find out what their preferences are instead of which party best matches these preferences (Anderson & Fossen, 2014; Fossen & Anderson, 2014; Fossen & Van den Brink, 2015; Strömbäck, 2005).

The assumption that voters have fixed opinions is also contested in the field of public opinion research. The absence of stable opinions grounded in arguments and principles is a well-established finding (Converse, 1964; Sniderman & Theriault, 2004; Tourangeau, Rips, & Rasinski, 2000; Zaller, 1992). Framing effects, encountered in a large number of studies in political communication, could on the one hand be regarded as an indication that many people do not have fixed opinions on many issues and adjust their opinions in response to different framings of an issue (Druckman, 2001; Zaller, 1992). On the other hand, effects of issue framing could also be the result of people having considerations and arguments both in favor and against a course of action. They just take into account the considerations relevant to the frame (Druckman, 2001; Sniderman, Tetlock, & Elms, 2001). I will return to the discussion of framing later. The point here is that while VAAs assume users have fixed and readily available opinions on political issues, it is more likely that users have some considerations about issues, in favor of and against the statement, or no opinion at all.

In conclusion, even though most VAAs share the same view on voting decisions, assumptions about democratic representation, and about engagement of voters, alternative views are possible and would result in VAAs with different approaches. A deliberative VAA, for instance, would not regard political opinions as fixed and would invite its users to engage in political discussions with each other, offering information and arguments in favor of or against certain positions. A less issue-based VAA would

include questions to find out about ideologies and principles users adhere to, or about how they value performances of candidates. In the Netherlands, the developers of *Stemwijzer* also offer the *Stemmentracker* (<http://www.stemmentracker.nl/>), a VAA that compares users' positions to how parties voted on bills in the past. And sociologists from Maastricht University developed the "Politieke Weegschaal" (Political Balance Scale), a VAA addressing the issue that in VAAs users can at the same time agree with tax cuts and also agree with more government spending. They force users to make a trade-off between alternative policies, and hence offer a 'more realistic' voting advice (Korthals & Levels, 2016). The challenge is to make them as easy and appealing as the VAAs that attract millions of users today.

In any way, regardless whether the voting advice reflects one's 'correct' voting decision and regardless whether the underlying assumptions of VAAs are contested or not, their 'voting advice' does affect real-world voting decisions. Hence, it is very relevant to study what function VAAs have in the way voters inform themselves about politics in modern election campaigns, and how design aspects affect the voting recommendations people receive.

1.3 The Impossibility of a Neutral VAA

There are a number of decisions VAA developers need to make about the design of their VAA. For example, which issues to include; how to formulate the questions and which order to put them in; which method to use to determine how much users agree with parties; how to present the results and so forth. Most of these decisions are political in nature, since there are no unambiguous principles that could guide developers in making them (Rosema, Anderson, & Walgrave, 2014). And these decisions all affect the voting advice and the likelihood for each party to be recommended to users. It is hence impossible to build a VAA that is entirely neutral and free from biases.

To start with, VAAs make use of a range of survey questions to assess the positions of users on political issues ("Immigration into the Netherlands should be made more restrictive"). These survey questions, or statements, are the same as those often employed in traditional surveys. They are therefore subject to the same wording and design effects. – identified in a large body of survey methodology literature.

For example, it matters whether statements are formulated positively ("... should be allowed") or negatively ("... should be forbidden") (Holleman, 1999; Schuman & Presser, 1981). For a test of this so-called valence framing effect in VAAs, see Holleman, Kamoen, Van de Pol, Krouwel, and De Vreese (2014). It also matters how many response categories are used and how they are labeled (Schwarz, Knauper, Hippler, Noelle-Neumann, & Clark, 1991) – *Stemwijzer*, *Wahl-O-Mat* and other VAAs use 3-point scales, plus the option to "skip this question" while *Kieskompas*, *Smartvote* and

yet other VAAs use 5-point (Likert) scales, plus the “don’t know” option. According to Gemenis (2012) the advantage of the 5-point scale is that more choice is offered, but the drawback is that two dimensions are conflated: both direction (agree / disagree) and intensity (tend to / completely). Additionally, there is some controversy over whether people use the middle option (“neither agree nor disagree”) and the “don’t know” option as intended, or perhaps also use the middle option to express a lack of opinion (Baka, Figgou, & Triga, 2012; Van Outersterp, Kamoen, & Holleman, 2016). It might even matter in what order the statements are presented to the user (Tourangeau & Rasinski, 1988). There could be contrast- or assimilation effects when respondents take the previous question into account when interpreting the question that follows. For example, respondents could be primed by the specific question to answer the more general question.

The literature on issue framing also offers insights about statement wording effects. VAA builders have to decide how to summarize a political issue concisely and accurately in one or two lines, and this can affect how users understand the issue. Before, I discussed how the framing of an issue often affects the opinions people express on the issue. Framing effects can already take place in the formulation of a single survey question. Sniderman and Theriault (2004) demonstrate that a majority of Americans favors a “big increase in government spending to increase opportunities for poor people” if the statement follows, “...so they can have a better chance of getting ahead in life”. However, if the statement instead says, “...even if it means higher taxes” only a majority still is in favor. The classic ‘Asian disease’ experiment by Kahneman and Tversky (1979) is another example of the potential power of framing (see Chapter 4). Zaller (1992, p. 95) summarizes the findings on the instability of public opinion as follows:

“What gets measured as public opinion is always and unavoidably dependent on the way questions have been framed and ordered. If different frames or different question orders produce different results, it is not because one or the other has distorted the public’s true feelings; it is, rather, because the public, having no fixed true opinion, implicitly relies on the particular question it has been asked to determine what exactly the issue is and what considerations are relevant to settling it.”

Will we encounter the same kind of framing effects in VAAs? After all, VAAs are a particular type of opinion surveys. Rather than indicating fixed opinions to the statements, many VAA users will probably form opinions on many issues on the spot. This means that effects of statement formulations are potentially large. On the other hand, formulation effects in VAAs might also be relatively small because VAA users have

different motivations for answering VAA statements, compared to respondents in regular opinion surveys. VAA users know that the quality of the voting advice depends on the effort they take in answering the statements. Chapter 4 in this dissertation will provide a first test of framing effects in measuring opinions in VAAs, by studying to what extent VAA users adjust their political attitudes in the face of different framings of the same political issue.

In addition to statement wording issues, VAA developers need to decide about the selection of issues. VAAs typically feature between 30 and 40 statements on political issues. Any selection of statements affects the likelihood for each party to be recommended to its users. For example, in the *Kieskompas* and in the *EUvox* for the 2014 European elections, the only party agreeing with the statement “The Netherlands should exit the EU” was the PVV. Including this statement is beneficial for the PVV since it will make it more likely that the PVV will be recommended to anyone who agree with this statement. Each statement in this way will be favorable or unfavorable to some parties, and the selection therefore has important consequences. Walgrave, Nuytemans, and Pepermans (2009) and Lefevere and Walgrave (2014) indeed found that the voting advice provided by VAAs differs hugely if another set of statements was included.

A third way in which design aspects matters for the party recommendations people receive is the way the agreement between users’ opinions and party positions is calculated and presented to the user. If we take the Dutch *Stemwijzer* and *Kieskompas* as an example: these two VAAs might provide different voting recommendations even if they would have the exact same selection of statements and these are formulated in the exact same way. *Stemwijzer* (and their equivalents in other countries like *Wahl-O-Mat* in Germany and *Doe De Stemtest* in Belgium) simply count the number of times users agree with each party and then show the parties in order from most to least agreement. *Kieskompas* (and its international equivalences), in contrast, distributes all issues on two political dimensions: economic left-right issues, and an ethical dimension ranging from progressive (Green, Alternative and Libertarian) to conservative (Traditional, Authoritarian and Nationalistic³). It then calculates the positions of users and parties in the two-dimensional political spectrum (see Figure 2). Because of these different approaches, the advice they produce is likely to be different even if two persons with the same opinions on the same issues use them.

While some scholars emphasize the advantages of the latter approach (the two-dimensional space) for providing more information about the political landscape than just a list of parties ranging from best to worst matching (Krouwel, Vitiello, & Wall, 2012, p. 235), others point to the fact that it is almost impossible to find two dimensions that accurately and reliably summarize the complete political space, and that

³ Taken from the work by Marks, Hooghe, Nelson, and Edwards (2006)

this structuring of issues should be based on empirical analyses (Germann & Mendez, 2016; Otjes & Louwerse, 2014). And then there is the question whether all issues are evenly important and should be assigned the same weight in the agreement calculation (Kleinnijenhuis & Krouwel, 2008; Wagner & Ruusuvirta, 2011)

Concluding, it is impossible to build one single objective, neutral and bias-free voting advice tool. Developers have to make one selection of statements, have to choose one order of statements, one formulation, choose one reporting scale and one agreement calculation method over another⁴. These choices all affect the VAA results and hence the likelihood of parties to be recommended to users. However, the vivid debate about possible biases in VAA design will hopefully increase awareness of the fact that VAAs cannot be neutral, that different VAAs will provide different voting recommendations, and hence these results should not be followed blindly. Rather, VAAs should be used as a starting point to inform oneself about politics.

1.4 Outline of the Dissertation

This dissertation will take the current state of affairs in VAA research as the point of departure, and put some of the claims about its reach and effects to a robust test. Chapters 2 and 3 take the users of VAAs as their focus, and provide more insight into the question what types of voters consult VAAs and for what purpose. Chapter 2 establishes a typology of VAA users based on the motivations and interests of VAA users. This study utilizes user data from the popular Dutch VAA *Kieskompas* and a latent class analysis to identify different user types.

Recently, VAAs are also being developed for supranational elections (the European elections of 2009 and 2014) and subnational elections (e.g., in Belgium, Germany, the Netherlands and Switzerland). The third chapter replicates the typology developed in Chapter 2 for these second-order elections, and investigates how VAA use differs across elections. I test the hypothesis that in second-order elections, voters feel less efficacious (politically self-confident) about the elections and about their voting decision, which results in a more ‘serious’ use of VAAs (i.e., people use it more often to inform themselves as opposed to entertainment purposes).

In the fourth and fifth chapter, I study the way VAAs affect political understanding, and how this differs for more and less politically literate citizens. In Chapter 4, I report on a field experiment that investigates to what extent political attitudes of VAA users depend on issue framing. If the framing matters for opinions of users, also the voting

⁴ This is perhaps a reason for VAAs to make a set of alternative choices (e.g., different sets of statements, formulations and orders) and offer the different versions of the VAA randomly to users. This is basically what has been done in a real-world VAA to test the framing effects reported in Chapter 4, but it requires significantly more effort to develop VAAs this way

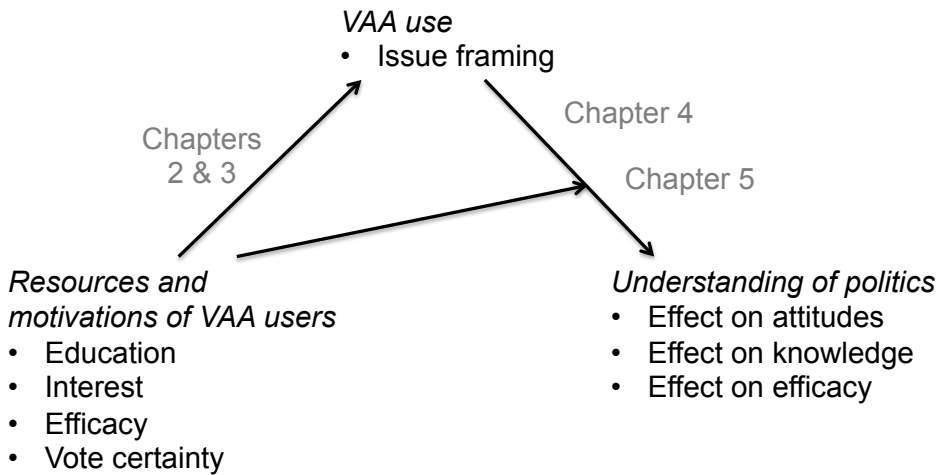


Figure 1.3: Conceptual overview of the dissertation

advice could be affected which could have consequences for political behavior of VAA users.

Chapters 2 and 3 reveal that interested, efficacious voters who are solely looking for entertainment or confirmation of their party preference are not the only users of VAAs. Since there is a sizeable group of users that is looking for more information, there is an opportunity for VAAs to actually contribute to understanding of politics. Up to date only a few pioneering studies have looked into the effects of VAAs on factual political knowledge, and provide correlational evidence at best, or did not compare users and non-users. Additionally, no research has yet been done to the effect of VAAs on internal political efficacy, which in addition to knowledge is an important prerequisite for political participation. Chapter 5 discusses a quasi-experiment carried out during Dutch municipality elections, offering a more robust test of the causal effect of VAAs on knowledge and political efficacy.

Together, these studies offer a comprehensive picture of the role VAAs have in informing and educating citizens. While chapters 2 and 3 investigate the functions VAAs fulfill in the information supply of citizens during election campaigns, chapters 4 and 5 focus on how this information supply affects political understanding. Chapter 4 investigates how issue framing affects people's understanding of particular issues and people's opinions on these issues. Chapter 5 studies how VAAs contribute to understanding of politics generally, and the feeling of understanding, or political efficacy. Both chapters 4 and 5 investigate how these effects differ for different groups identified in the first two chapters. The conceptual overview is shown in Figure 3.

1.5 Contribution and Conclusion

This dissertation incorporates a number of innovations in the research on VAAs, and an innovation to the field of framing and wording effects. First, with respect to the study of VAA users I argue that it is more informative to look at different groups of users instead of focusing on averages. This could also lead to a different picture of the function of VAAs in the political process. If users of VAAs on average are highly educated and interested in politics, as observed by extant research (Boogers & Voerman, 2003; Hirzalla et al., 2010; Hooghe & Teepe, 2007; Marschall, 2014), this suggests that VAAs will probably not manage to close the knowledge gap, as they set out to do. After all, to close the knowledge gap, less interested and lower educated citizens need to catch up in terms of political knowledge, and it is that group of people who needs to benefit from using Voting Advice Applications. However, if the users of VAAs are studied from a perspective of types of users, a different picture emerges, as is seen in Chapter 2 and 3. In these chapters, latent class analysis is employed to find out which types of VAA users can be distinguished. Chapter 2 shows that users can be subdivided into three types, only one of them resembling the picture of interested and efficacious voters as drawn by previous studies – labeled checkers. Chapter 3 shows furthermore that in second-order elections, this group of checkers is even in the minority.

This dissertation contributes methodologically by offering a test of the causality of effects of VAAs on understanding of politics. Early studies of VAAs had a very explorative character and often relied on estimations of VAA effects that were reported by users themselves (e.g., Fivaz & Nadig, 2010; Ladner & Pianzola, 2010), as measured with questions like “Did the *Smartvote* recommendation influence which parties or which candidates you voted for?” (Ladner et al., 2010, p. 114). As Pianzola (2014) notes, self-reported measures like these have reliability issues (cf. Walgrave et al., 2008), and because only VAA users are investigated, no comparisons can be made with non-users, and therefore not much could be said about the actual difference VAAs make.

More recent studies have taken important methodological steps in identifying the effects of VAAs. For example, to measure the extent to which people learn about party positions, Schultze (2014) uses a set of factual questions to accurately measure political knowledge, and compares users to non-users to see how VAAs contribute to knowledge. That study, however, still draws on non-experimental data, and respondents hence self-selected into treatment. Because of this reason, causal inferences are not possible. In an effort to test the effect of VAA use on electoral participation, Gemenis and Rosema (2014) therefore use matching techniques to mimic a field experiment. While this approach already greatly diminishes selection bias, it does not allow for the same sort of inferences that a randomized experiment would. In Chapter 5 I take an-

other step towards this golden standard, by carrying out a quasi-experiment in which VAA availability is unrelated to individual predispositions. I will further use the same matching techniques to further reduce selection biases. In Chapter 4 I report on a field experiment that meets the highest standards and allows us to draw causal conclusions about the effect of statement framing on political opinions.

Finally, this dissertation also contributes to the issue framing and survey literature by testing the effect of question wording – or framing – in the new context of Voting Advice Applications. As noted before, VAAs can be regarded as a special type of surveys. Effects may differ, however, because in VAAs respondents (users) have different motivations to answer the survey questions, compared to regular surveys. After all, they hope to receive a valuable voting recommendation, so they might spend more effort considering what their opinions are before answering the questions, compared to regular surveys. In the case of issue framing, this might lead to weaker wording effects. Another way in which this dissertation contributes to issue framing research is the clean design in which I use a narrow operationalization of issue framing, resembling equivalence framing.

In the following four empirical chapters, this dissertation studies the role VAAs have in modern election campaigns, and how they contribute to an understanding of politics for different (types of) citizens. VAAs serve as an interesting case in the normalization / mobilization debate, since they have the purpose of informing voters and are very widely used in election times, both in first- and second-order elections. This dissertation both looks at the extent to which VAAs are able to attract different groups of citizens, and to what extent they inform and contribute to political efficacy for different groups of citizens. Additionally, they also serve as an interesting case in the research on framing effects, as they offer a context in which subtle wording variations can have important real-world implications. By running different versions of one VAA, these subtle variations in framing are tested with high accuracy on a complete population of VAA users at once. In short, the dissertation provides more insight into the different ways in which VAAs affect understanding of politics for different groups of citizens.

1.6 References

- Alvarez, R. M., Levin, I., Trechsel, A. H., & Vassil, K. (2014). Voting Advice Applications: How useful and for whom? *Journal of Information Technology & Politics*, 11(1), 82–101. doi: 10.1080/19331681.2013.873361
- Anderson, J., & Fossen, T. (2014). Voting Advice Applications and Political Theory: Citizenship, Participation, and Representation. In D. Garzia & S. Marschall (Eds.), *Matching voters with parties and candidates. Voting Advice Applications in Comparative Perspective* (pp. 217–226). Colchester, UK: ECPR Press.
- Andreadis, I., & Wall, M. (2014). The impact of Voting Advice Applications on vote choice. In *Matching voters with parties and candidates. Voting Advice Applications in comparative perspective* (pp. 115–128). Colchester, UK: ECPR Press.
- Baka, A., Figgou, L., & Triga, V. (2012). ‘Neither agree, nor disagree’: A critical analysis of the middle answer category in Voting Advice Applications. *International Journal of Electronic Governance*, 5(3), 244–263.
- Bentivegna, S. (2006). Rethinking politics in the world of ICTs. *European Journal of Communication*, 21(3), 331–344. doi: 10.1177/0267323106066638
- Blumler, J. G., & Gurevitch, M. (2001). The new media and our political communication discontents: Democratizing cyberspace. *Information, Communication and Society*, 4(1), 1–13. doi: 10.1080/13691180110035704
- Boogers, M., & Voerman, G. (2003). Surfing citizens and floating voters: Results of an online survey of visitors to political web sites during the Dutch 2002 General Elections. *Information Polity*, 8(1), 17–27.
- Boulianne, S. (2009). Does internet use affect engagement? A meta-analysis of research. *Political Communication*, 26(2), 193–211. doi: 10.1080/10584600902854363
- Boulianne, S. (2011). Stimulating or reinforcing political interest: Using panel data to examine reciprocal effects between news media and political interest. *Political Communication*, 28(2), 147–162. doi: 10.1080/10584609.2010.540305
- Chadwick, A. (2012). Recent shifts in the relationship between the Internet and democratic engagement in Britain and the United States. In E. Anduiza, M. J. Jensen, & L. Jorba (Eds.), *Digital media and political engagement worldwide: A comparative study* (pp. 39–55). Cambridge, UK: Cambridge University Press.
- Converse, P. (1964). The nature of belief systems in mass publics. In D. Apter (Ed.), *Ideology and discontent*. New York: Free Press.
- Dalton, R. J. (2014). *Citizen Politics: Public Opinion and Political Parties in Advanced Industrial Democracies*. Washington, US: CQ Press.
- Dalton, R. J., McAllister, I., & Wattenberg, M. P. (2002). The Consequences of Partisan Dealignment. In R. J. Dalton & M. P. Wattenberg (Eds.), *Parties without parti-*

- sans: Political change in advanced industrial democracies* (pp. 37–63). Oxford, UK: Oxford University Press. doi: 10.1093/0199253099.001.0001
- De Graaf, J. (2010). The irresistible rise of Stemwijzer. In L. Cedroni & D. Garzia (Eds.), *Voting Advice Applications in Europe: The state of the art* (pp. 35–46). Naples, Italy: ScriptaWeb.
- De Graaf, N. D., Heath, A., & Need, A. (2001). Declining cleavages and political choices: The interplay of social and political factors in the Netherlands. *Electoral Studies*, 20(1), 1–15. doi: 10.1177/000169939203500404
- Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven: Yale University Press.
- Dinas, E., Trechsel, A. H., & Vassil, K. (2014). A look into the mirror: Preferences, representation and electoral participation. *Electoral Studies*, 36, 290–297. doi: 10.1016/j.electstud.2014.04.011
- Downs, A. (1957). An economic theory of political action in a democracy. *Journal of Political Economy*, 65(2), 135–150.
- Druckman, J. N. (2001). The implications of framing effects for citizen competence. *Political Behavior*, 23(3), 225–256.
- Dumont, P., & Kies, R. (2012). Smartvote.lu: Usage and impact of the first VAA in Luxembourg. *International Journal of Electronic Governance*, 5(3/4), 388–410.
- Enyedi, Z. (2015). The influence of Voting Advice Applications on preferences, loyalties and turnout: An experimental study. *Political Studies*, 1–16. doi: 10.1111/1467-9248.12213
- Fivaz, J., & Nadig, G. (2010). Impact of Voting Advice Applications (VAAs) on Voter Turnout and Their Potential Use for Civic Education. *Policy & Internet*, 2(4), 167–200. doi: 10.2202/1944-2866.1025
- Fossen, T., & Anderson, J. (2014). What's the point of Voting Advice Applications? Competing perspectives on democracy and citizenship. *Electoral Studies*, 36, 244–251. doi: 10.1016/j.electstud.2014.04.001
- Fossen, T., & Van den Brink, B. (2015). Electoral Dioramas: On the Problem of Representation in Voting Advice Applications. *Representation*, 51(3), 341–358. doi: 10.1080/00344893.2015.1090473
- Fournier, P., Nadeau, R., Blais, A., Gidengil, E., & Nevitte, N. (2004). Time-of-voting decision and susceptibility to campaign effects. *Electoral Studies*, 23(4), 661–681. doi: 10.1016/j.electstud.2003.09.001
- Garzia, D. (2010). The effects of VAAs on user's voting behavior: An overview. In L. Cedroni & D. Garzia (Eds.), *Voting Advice Applications in Europe: The state of the art* (pp. 13–34). Napoli, Italy: ScriptaWeb.
- Garzia, D. (2012). Party and Leader Effects in Parliamentary Elections: Towards a Reassessment. *Politics*, 32(3), 175–185. doi: 10.1111/j.1467-9256.2012.01443.x

- Garzia, D., & Marschall, S. (2012). Voting Advice Applications under review: The state of research. *International Journal of Electronic Governance*, 5(3/4), 203–222. doi: 10.1504/IJEG.2012.051309
- Gemenis, K. (2012). Estimating parties' policy positions through Voting Advice Applications: Some methodological considerations. *Acta Politica*, 48(3), 268–295. doi: 10.1057/ap.2012.36
- Gemenis, K., & Rosema, M. (2014). Voting Advice Applications and electoral turnout. *Electoral Studies*, 36, 281–289. doi: 10.1016/j.electstud.2014.06.010
- Germann, M., & Mendez, F. (2016). Dynamic scale validation reloaded. *Quality & Quantity*, 50(3), 981–1007. doi: 10.1007/s11135-015-0186-0
- Hirzalla, F., Van Zoonen, L., & De Ridder, J. (2010). Internet use and political participation: Reflections on the mobilization/normalization controversy. *The Information Society*, 27(1), 1–15. doi: 10.1080/01972243.2011.534360
- Holleman, B. C. (1999). The Nature of the Forbid/Allow Asymmetry: Two Correlational Studies. *Sociological Methods & Research*, 28(2), 209–244. doi: 10.1177/0049124199028002004
- Holleman, B. C., Kamoen, N., Van de Pol, J., Krouwel, A., & De Vreese, C. H. (2014). *Positive versus negative wordings: A threat to the validity of VAAs*. Retrieved from <http://ecpr.eu/Filestore/PaperProposal/57971ebf-d84e-4ae7-82d6-df72f23e091b.pdf>
- Hooghe, M., & Teepe, W. (2007). Party profiles on the web: An analysis of the logfiles of non-partisan interactive political internet sites in the 2003 and 2004 election campaigns in Belgium. *New Media & Society*, 9(6), 965–985. doi: 10.1177/1461444807082726
- Irwin, G. A., & Van Holsteyn, J. J. M. (2008). What are they waiting for? Strategic information for late deciding voters. *International Journal of Public Opinion Research*, 20(4), 483–493. doi: 10.1093/ijpor/edn040
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–292.
- Kaid, L. L., McKinney, M. S., & Tedesco, J. C. (2007). Introduction: Political Information Efficacy and Young Voters. *American Behavioral Scientist*, 50(9), 1093–1111. doi: 10.1177/0002764207300040
- Kenski, K., & Stroud, N. J. (2006). Connections between Internet use and political efficacy, knowledge, and participation. *Journal of Broadcasting & Electronic Media*, 50(2), 173–192. doi: 10.1207/s15506878jobem5002_1
- Kleinnijenhuis, J., & Krouwel, A. (2008). *Simulation of decision rules for party advice websites*. Retrieved from <http://www.iiis.org/cds2008/cd2008sci/pista2008/paperspdf/p1251t.pdf>
- Korthals, R., & Levels, M. (2016). *Multi-attribute compositional Voting Advice Applica-*

- tions (MacVAAs): A methodology for educating and assisting voters and eliciting their preferences. Retrieved from http://roa.sbe.maastrichtuniversity.nl/roanew/wp-content/uploads/2016/02/ROA_RM_2016_4.pdf
- Krouwel, A., Vitiello, T., & Wall, M. (2012). The practicalities of issuing vote advice: A new methodology for profiling and matching. *International Journal of Electronic Governance*, 5(3/4), 223–243. doi: 10.1504/IJEG.2012.051308
- Ladner, A. (2016). Do VAAs Encourage Issue Voting and Promissory Representation? Evidence From the Swiss Smartvote. *Policy & Internet*. doi: 10.1002/poi3.137
- Ladner, A., Felder, G., & Fivaz, J. (2010). More than toys? A first assessment of Voting Advice Applications in Switzerland. In L. Cedroni & D. Garzia (Eds.), *Voting Advice Applications in Europe: The state of the art* (pp. 91–137). Naples: ScriptaWeb.
- 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 *International conference on electronic participation* (pp. 211–224).
- Lau, R. R., & Redlawsk, D. P. (2006). *How voters decide*. Cambridge, UK: Cambridge University Press.
- Lau, R. R., & Redlawsk, D. P. (2007). Voting correctly. *American Political Science Review*, 91(3), 585–598.
- Lefevere, J., & Walgrave, S. (2014). A perfect match? The impact of statement selection on Voting Advice Applications' ability to match voters and parties. *Electoral Studies*, 36, 252–262. doi: 10.1016/j.electstud.2014.04.002
- Liao, D.-c., Chen, B., Jensen, M. J., & Pritchard, C. W. (2015). *Political Behavior and Technology: Voting Advice Applications in East Asia*. Hampshire: Palgrave Macmillan.
- Lijphart, A. (1975). *Politics of accommodation: Pluralism and democracy in the Netherlands*. Yale, US: Yale University Press.
- Lupia, A. (1994). Shortcuts versus encyclopedias: Information and voting behavior in California insurance reform elections. *The American Political Science Review*, 88(1), 63–76. doi: 10.2307/2944882
- Mair, P. (2008). Electoral volatility and the Dutch party system: A comparative perspective. *Acta Politica*, 43(2), 235–253. doi: 10.1057/ap.2008.1
- Marks, G., Hooghe, L., Nelson, M., & Edwards, E. (2006). Party Competition and European Integration in the East and West: Different Structure, Same Causality. *Comparative Political Studies*, 39(2), 155–175. doi: 10.1177/0010414005281932
- Marschall, S. (2014). Profiling Users. In D. Garzia & S. Marschall (Eds.), *Matching Voters with Parties and Candidates. Voting Advice Applications in Comparative Perspective* (pp. 93–104). Colchester, UK: ECPR Press.
- Marschall, S., & Schmidt, C. K. (2010). The Impact of Voting Indicators: The Case of

- the German Wahl-O-Mat. In L. Cedroni & D. Garzia (Eds.), *Voting Advice Applications in Europe: The state of the art* (pp. 65–90). Napoli, Italy: ScriptaWeb.
- Marschall, S., & Schultze, M. (2012). Voting Advice Applications and their effect on voter turnout: The case of the German Wahl–O–Mat. *International Journal of Electronic Governance*, 5(3/4), 349–366.
- McQuail, D. (2010). *Mass Communication Theory*. London, UK: SAGE.
- Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide*. Cambridge, UK: The Cambridge University Press.
- Nuytemans, M., Walgrave, S., & Deschouwer, K. (2010). Do the Vote Test: The Belgian Voting Aid Application. In *Voting Advice Applications in Europe: The state of the art*. Naples, Italy: ScriptaWeb.
- Otjes, S., & Louwerse, T. (2014). Spatial models in Voting Advice Applications. *Electoral Studies*, 36, 1–9. doi: 10.1016/j.electstud.2014.04.004
- Pianzola, J. (2014). Selection biases in Voting Advice Application research. *Electoral Studies*, 36, 272–280. doi: 10.1016/j.electstud.2014.04.012
- Rosema, M. (2012, aug 18). Dat advies is blind. *NRC Handelsblad*, 13.
- Rosema, M., Anderson, J., & Walgrave, S. (2014). The design, purpose, and effects of Voting Advice Applications. *Electoral Studies*, 36, 240–243. doi: 10.1016/j.electstud.2014.04.003
- Ruusuvirta, O. (2010). Much Ado About Nothing? Online Voting Advice Applications in Finland. In *Voting Advice Applications in Europe: The state of the art*. Naples, Italy: ScriptaWeb.
- Ruusuvirta, O., & Rosema, M. (2009). *Do online vote selectors influence electoral participation and the direction of the vote?* working paper. Retrieved from http://www.utwente.nl/mb/pa/staff/rosema/publications/working_papers/paper_ruusuvirta_and_rosema_ec.pdf
- Scheufele, D. A., & Nisbet, M. C. (2002). Being a Citizen Online: New Opportunities and Dead Ends. *The Harvard International Journal of Press/Politics*, 7(3), 55–75. doi: 10.1177/1081180X0200700304
- Schultze, M. (2014). Effects of Voting Advice Applications (VAAs) on political knowledge about party positions. *Policy & Internet*, 6(1), 46–68. doi: 10.1002/1944-2866.POI352
- Schuman, H. W., & Presser, S. (1981). *Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording, and Context*. Thousand Oaks, CA: Sage Publications.
- Schwarz, N., Knauper, B., Hippler, H.-J., Noelle-Neumann, E., & Clark, L. (1991). Rating Scales: Numeric Values May Change the Meaning of Scale Labels. *Public Opinion Quarterly*, 55(4), 570. doi: 10.1086/269282
- Shanks, J. M., & Miller, W. E. (1990). Policy Direction and Performance Evaluation:

- Complementary Explanations of the Reagan Elections. *British Journal of Political Science*, 20(2), 143–235.
- Sniderman, P. M., Tetlock, P. E., & Elms, L. (2001). Public opinion and democratic politics: The problem of nonattitudes and the social construction of political judgment. In J. H. Kuklinski (Ed.), *Citizens and politics: Perspectives from political psychology*. Cambridge, UK: Cambridge University Press.
- Sniderman, P. M., & Theriault, S. M. (2004). The Structure of Political Argument and the Logic of Issue Framing. In W. E. Saris & P. Sniderman (Eds.), *Studies in public opinion: Attitudes, nonattitudes, measurement error, and change* (Vol. 3, pp. 133–65). Princeton, US: Princeton University Press.
- Somin, I. (1998). Voter ignorance and the democratic ideal. *Critical Review*, 12(4), 413–458. doi: 10.1080/08913819808443511
- Strömbäck, J. (2005). In Search of a Standard: Four models of democracy and their normative implications for journalism. *Journalism Studies*, 6(3), 331–345. doi: 10.1080/14616700500131950
- Sudulich, M. L., Garzia, D., Trechsel, A. H., & Vassil, K. (2014). Matching voters with parties in supranational elections: The case of the EU Profiler. In D. Garzia & S. Marschall (Eds.), *Matching voters with parties and candidates. Voting Advice Applications in Comparative Perspective* (pp. 175–182). Colchester, UK: ECPR Press.
- Tourangeau, R., & Rasinski, K. A. (1988). Cognitive Processes Underlying Context Effects in Attitude Measurement. *Psychological Bulletin*, 103(3), 299–314.
- Tourangeau, R., Rips, L. J., & Rasinski, K. (2000). *The Psychology of Survey Response*. New York, US: Cambridge University Press.
- Van der Brug, W., & Pellikaan, H. (2003). Preface. *Acta Politica*, 38(1), 1–4.
- Van Outersterp, R., Kamoen, N., & Holleman, B. (2016). Inwisselbaar of niet? *Tijdschrift voor Taalbeheersing*, 38(1), 27–55. doi: 10.5117/TVT2016.1.OUTE
- Verba, S., Schlozman, K. L., & Brady, H. E. (1995). *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge, US: Harvard University Press.
- Wagner, M., & Ruusuvirta, O. (2011). Matching voters to parties: Voting Advice Applications and models of party choice. *Acta Politica*, 47(4), 400–422. doi: 10.1057/ap.2011.29
- Walgrave, S., Nuytemans, M., & Pepermans, K. (2009). Voting Aid Applications and the Effect of Statement Selection. *West European Politics*, 32(6), 1161–1180. doi: 10.1080/01402380903230637
- 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 Politica*, 43(1), 50–70. doi: 10.1057/palgrave.ap.5500209
- 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 Politics*, 30(3), 416–428. doi: 10.1177/1354068811436054

Westle, B., Begemann, C., & Rütter, A. (2014). The “Wahl-O-Mat” in the course of the German Federal Election 2013 – Effects of a German VAA on users' election-relevant political knowledge. *Zeitschrift für Politikwissenschaft*, 24(4), 389–426. doi: 10.5771/1430-6387-2014-4-389

Zaller, J. R. (1992). *The Nature and Origins of Mass Opinion*. New York, US: Cambridge University Press.