Chapter Eleven

Being a Voting Advice Applications Candidate: Why Do Candidates Use Voting Advice Applications and What Can We Learn From It?

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Introduction[1]

The advent of the internet and its success story have raised questions regarding its potential impact on politics and more specifically brought about a growing literature in political science and communication studies on how this technological change may affect electoral campaigns. The issue at stake is whether web applications have led to a new campaign era – that some coin 'post-modern' (Norris 2000; Vergeer *et al.* 2013) – corresponding to a more interactive, bottom-up, personalised and competitive electoral contest. This hypothesised wide-ranging effect, that has so far mainly been tested for the initial online presence of political parties and candidates through 'traditional' websites, is currently being gauged for the social media (e.g. Facebook, Twitter, and YouTube) that has emerged and become very popular in recent years. In this chapter we consider whether Voting Advice Applications (VAAs) can be seen as belonging to this family of new and widely used online applications that contribute to reducing the political parties' and traditional media's monopoly over the electoral agenda.[2]

While research on the various aspects of VAAs, such as their architecture and methodological choices (Baka *et al.* 2012; Gemenis 2013; Krouwel *et al.* 2012; Walgrave *et al.* 2009), their usage and impact on voting behaviour (Dumont and Kies 2012; Fivaz and Nadig 2008; Ladner *et al.* 2012; Marschall and Schmidt 2010; Walgrave *et al.* 2008), as well as data they generate on party positions or voter–party congruence (Wheatley 2012), is ongoing, the question of the perception and usage of such applications by parties and candidates is still under-explored. Our objective in this chapter is twofold. First, we lay down the rationale for a

1. This article benefitted from the financial support of the Luxembourgish Chair in Legislative Studies and the Luxembourgish National Research Fund.

2. Note that parties and the traditional media are moved by distinct motivations and logics that are so far only imperfectly translated in the online context.

candidate-centred research agenda allowed by the development and popularity of VAAs, by arguing that they open avenues for comparative and longitudinal analyses of candidates' behaviour in an increasingly personalised and connected political world. Second, we provide an exploratory research on the determinants of the acceptance of this medium by candidates when such an instrument is first introduced. What can account for their decision to apply this new instrument as part of their campaign strategy? The analysis of candidates' reaction to the first implementation of VAAs is relevant for two main reasons. The first is that it offers an evaluation of the instrument by the political actors themselves. The existing literature on VAAs has focused on the perception and behaviour of voters and so far largely ignored those of the political agents – parties and/or candidates – involved (*see* however, Ladner *et al.* 2010; Trechsel and Mair 2011). It is however clear that one cannot explain the success of VAAs that in the majority depend on the collaboration of these political agents (*see* Ladner and Fivaz 2012) by referring only to the 'demand' side. Secondly, such a study can improve our understanding of the behaviour and strategies of candidates facing the emergence of any technological innovation in electoral campaigns. In an era where online electoral tools are continually evolving whilst their utility and effects are uncertain, this is a topic that appears to be particularly relevant to understanding how candidates' electoral strategies are evolving through time and especially in recent years.

To this end, and in the absence of dedicated empirical research on candidates' propensity to use VAAs,[3] we build our expectations on the existing literature on candidates' usage of Web 2.0 tools (such as Facebook, Twitter and YouTube) and related theories on Web 2.0 campaigns. The actual hypotheses derived for our empirical analysis also owe to works on incentives to cultivate a personal vote in open-list electoral systems, as our data concern the first implementation of the *smartvote* platform in Switzerland for the federal elections in 2003 and the introduction of a similar instrument for the national elections in Luxembourg in June 2009. The remainder of this chapter is divided into five sections. Section one presents the importance of a candidate-centred analysis of VAAs. Section two refers to the expectations we can derive from theoretical and empirical analyses of candidates' use of other social media for our research question. The following section moves on to the specification of hypotheses, owing to these broad expectations as well as to more general literature on electoral systems and campaign strategies. Finally, sections four and five present and discuss the findings of our explorative empirical analysis.

3. The only known exception is Fiechter and Leuenberger (2009) but in their working paper the authors mainly looked through descriptive statistics at the representativeness of the candidates running for Swiss elections in 2007. Since this second edition of the smartvote VAA already assembled no less than 84 per cent of all candidates, this study is of limited use for our purposes here.

Candidate-centred analysis of VAAs

To date, the majority of existing VAAs are party-centred, that is they provide exclusively a matching between positions of voters and parties. There are VAAs designed for presidential elections (such as in France and the US) but to our knowledge for legislative elections only Switzerland, Luxembourg, Finland, Lithuania and Denmark offer online platforms that allow candidates to make their personal positions known.[4] This comes as no surprise. In countries using an electoral system where preferential voting is allowed and even facilitated, the 'objects of electoral choice' can be either parties or candidates (Carey and Shugart 1995; Marsh 2007). Preferential votes can still reflect primarily a partisan motivation, not least because candidates are expected to be committed to party policy in order to be on a given party list (*see* Müller 2000; van Holsteyn and Andeweg 2011), but it is also well-known that other factors more or less aloof from policy proximity, such as the oft-mentioned charisma of candidates, or their socio-demographic characteristics (*see* McDermott 1997; Cutler 2002; Shugart *et al.* 2005), may also guide voting choices. Nevertheless, even in the case of lower-stakes elections (compared to presidential ones), it is a reasonable expectation owing to the Downsian proximity model that when deciding to vote for one or several candidate(s) voters will be more likely to choose candidates who appear to share their own views than those who do not. In electoral systems with preferential votes, information on the policy positions of candidates should therefore matter in voters' choices.[5] This is obviously the case when the electoral system provides candidates with incentives to cultivate a personal vote, as in Switzerland and Luxembourg. In these two countries, preferential votes (which can be cast for candidates of different lists – what is termed 'inter-party panachage' – and cumulated up to two votes per candidate) and list votes are first pooled at the level of the party in the constituency to determine the number of seats devolved to each list, and then the candidates' personal scores decide on who will fill those party mandates. In countries using multi-member constituencies, incentives to cultivate a personal reputation exist as long as the ballot allows for preferential votes – i.e. the electoral system is not of a closed-list type – and increases in size the number of MPs to be elected or rather the number of co-partisans on the list (Carey and

4. A transnational project (mypolitiq.eu) run in Poland, Lithuania and Latvia for the 2009 European elections also allowed candidates to register, but the proportions of those who did, probably due to the lower stakes of the election and electoral systems in use, were disappointing, ranging from 11 per cent in Poland to 33 per cent in Lithuania, which had already experienced a VAA for its national elections (Dziewulska 2010; Ramonaité 2010). Note that some VAAs in Germany also provide a matching with the candidates (for first vote in the German mixed electoral system), like *www.abgeordnetenwatch.de*, but prove much less successful than the party-based one(s).

5. For instance, an interview in the media may reveal a candidate's personal preference on a specific issue that does not match with that officially taken by their party, making their rate of preferential votes rise or fall according to how this distance from the official party position is received by the electorate at large, that is both voters who traditionally vote for that party of the candidate and those who do not.

Shugart 1995). This is obviously the case for open-list and Single Transferable Vote systems, but even for the more widespread flexible-list systems, where the ordering of candidates made by party leaders can hardly be overturned by voters, the possibility offered to express preferential votes makes for a personal popularity contest among candidates of the same list that may be consequential for the latter's political career.[6] In a variety of electoral systems, therefore, the availability of information regarding candidates is an important issue for the crucial democratic exercise of making an informed electoral choice, and candidate-centred VAAs can be seen as contributing to this goal. They may even be 'the only systematic way to gain knowledge about individual candidates' policy positions' (Hansen and Rasmussen 2013: 191) for the media, interest groups and of course voters. As, in addition, a trend of electoral reforms in Europe leading towards a greater scope and weight for preferential votes has been observed especially since the 2000s (Renwick 2011), we can expect that the personalisation of politics will make candidates even more eager to publicise their opinions and make voters and media interested in knowing them in an increasing number of electoral contexts, leading to a corresponding expansion of candidate-centred VAAs.

From an academic perspective, such a development is very welcome, as the analysis of the usage of VAAs by candidates offers important innovative avenues of research. First, their adoption is relevant to further explore to what extent 2.0 techniques can favour a greater personalisation of politics. The decision to be visible on a VAA and the nature of the information they provide on the website is indicative of the types of personalisation candidates want to promote. Research on VAAs allows, for instance, to gauge whether candidates focus their campaign on their competencies and political views (professional sphere) rather than on their personal life and preferences (intimate sphere).[7] Second, it permits to improve our understanding of vote-choice models in an era of growing personalisation of electoral choices (Garzia 2014) by studying voter–candidate policy congruence. Third, research combining VAAs and an analysis of the legislative behaviour of elected candidates also allows for evaluating to what extent MPs commit to their individual preelectoral positions and therefore the accountability of the political personnel (Schwarz *et al.* 2010; Schädel 2011; Fivaz *et al.* in this volume). Fourth, VAAs can give indications regarding the political competencies of candidates, for instance when candidates copy-paste the official positions and justifications of their party on all items. Alternatively, such behaviour could be a sign of candidates' subordination to their party, and it is indeed probably in the field of intra-party politics, and in particular issues regarding party discipline and policy cohesion (*see* Hansen and Rasmussen 2013), that candidate-centred analyses of VAAs can be of greatest use for political science scholars. On all these questions the VAAs provide new and powerful data that could hardly be measured with

6. Crisp (2013) show that in Slovakia parties reward their preference-vote-earning candidates with better positions on their lists at future election.

7. Gulati and Williams (2010) performed such an analysis of personal candidate websites.

Table 11.1: Hurdles and incentives for using VAAs and Web 2.0 tools, respectively

	Hurdles		Incentives	
	Knowledge accessibility	Undesired exposure	Electoral gain	Civic potential
Facebook	+	+	?	+
Twitter	+	+	?	+
YouTube	+	+	?	+
VAA	++	++	++	++

traditional research instruments. In particular, VAAs can become a research tool complementary to candidate surveys that typically suffer from low response rates, as these new instruments provide candidates with electoral incentives to deliver their personal views and therefore can be expected at some point – once the system has been experimented with at least once and proved to be both reliable and popular – to cover most of the individuals running for an election.

Finally, as we will see in the following section, a candidate-centred analysis of VAAs can also enlighten us on the strategies of candidates in a 2.0 electoral campaign era.

Attractiveness of VAAs compared to other 2.0 technologies

The appearance of the new social media gave e-campaigning a significant boost. Vergeer (2009) describes the transformation from Web 1.0 to Web 2.0 as the passage from the web as a mass medium to the web as a networked community medium. In the context of elections Web 2.0 applications allow politicians to develop personalised and individualized campaigns, more or less detached from their party's, in comparison to the early days of web campaigning.

Indeed, with the large diffusion of the new social media, candidates nowadays have a larger array of offline and online instruments at their disposal than ever before. Facing successive technological innovations and constrained by a limited amount of time, resources, competencies and knowledge about the electoral potentialities of each of these novel techniques, they have to go through a process of selection in order to determine which one(s) could be the most useful for their personal campaign. This selection is based on the characteristics of the technology and the personal advantages and disadvantages of its adoption. Table 11.1 that follows identifies four factors that are likely to influence this choice and that can help us understand the attractiveness of VAAs compared to the most popular 2.0 applications currently used in electoral campaigns: Facebook, Twitter and YouTube.

VAAs share many similarities with 2.0 techniques, but strongly differ on the definition of the electoral agenda. While 2.0 applications allow candidates to freely choose and discuss any issue (political or personal), VAAs constrain them to take a more-or-less blunt position (from binary to five-point-scale answer categories)

on a fixed menu of political issues selected and formulated in statements by an external actor (the VAA designers). This very outsourcing of the electoral agenda may dissuade some candidates from participating in VAAs. This is likely to be the case for inexperienced candidates who do not have an opinion on all the matters. Some of these candidates may just renounce to publicise their personal views in order to avoid giving uninformed answers, while others could privilege heuristic shortcuts such as copy-pasting the answers and justifications of their colleagues or the official answers of their party.[8] Depending on the comprehensiveness (broad coverage of issues), length and complexity of the questionnaire, the effects of the instrument's level of knowledge accessibility may be more or less strong. The other categories of candidates that could be reluctant to use a VAA are those who feel confident of being (re)elected, since participating imposes upon them to take a position on a wide array of issues, including sensitive ones that could lower their personal appeal. Top candidates who planned to focus their campaign on specific issues (by carefully avoiding others, in accordance with the saliency theory of political competition) and those who would prefer to capitalise on their personality and private life rather than on issues are the ones who most likely are affected by this hurdle.[9]

Counterbalancing the negative effect of these hurdles, the instrument's perceived potential of electoral impact may act as an important incentive for candidates to adopt it, even in the context of a first implementation of a VAA. It is useful here to refer to research carried out on the '1.0 phase' of web campaigning, which was generally characterised by political websites offering top-down information. In these earlier days of the internet, the environment was characterised by a high level of uncertainty regarding their electoral impact but also confined to smaller proportions of connected voters seeking political information, and mostly larger parties could afford dedicating some of their resources to the building of websites. Research on the electoral effects of campaign websites therefore often indicated a 'normalisation' of the aggregate in terms of the existing balance of power among parties, and also pointed at a 'reinforcement' at the individual level in the sense of a confirmation of voting preferences for self-selected politically interested website visitors (who had made their voting choice before consulting their preferred party's online material; *see* Margolis and Resnik 2000; Dumont *et al.* 2006; Jankowski *et al.* 2005; Kluver *et al.* 2007). Other research showed a positive relation between online presence and electoral results, but authors remained sceptical of any direct

8. Note that among our two cases this can only happen, strictly speaking, in Luxembourg where the official position of the party is asked to the top party officials on behalf of their organisation. In the case of Switzerland the official position of a party corresponds to the average of the answers of all the party's candidates on the different items. Less-experienced candidates can nevertheless copy-paste the answers and justifications of their fellow party candidates.

9. These characteristics extend to the parties the candidates belong to. Candidates of policy-seeking parties that concentrate on a limited number of issues (e.g. single-issue, niche parties) and candidates of vote- and office-seeking parties (e.g. contemporary cadre parties and populist ones that capitalisze on the charisma of their personnel and/or leader) would be less likely to take part into a VAA.

effects occurring and the potential for 1.0-type instruments to reach and convince undecided voters (Ward 2012). These results challenged the expectations of an 'equalisation' of political competition through, and a direct net electoral impact of, web campaigning. In turn, this may have changed with the advent of Web 2.0 tools. Such applications are easier to implement for individual candidates and appear to be efficient to create a network and, in certain cases, to foster a larger involvement of users supporting candidates in the political campaign. Short of attracting a significant amount of undecided voters, personal Web 2.0 applications are not expected to have a large direct effect on voting behaviour (*see* however, Spierings and Jacobs 2013). But these tools reach activists who can easily relay candidates' messages to their own online social networks (Hermans and Vergeer 2013). The extent of this indirect effect would then largely depend on how capable small and homogeneous networks of followers are to persuade new people to vote for specific candidates (Verger *et al.* 2013: 497). In addition, what candidates decide to share with their 'friends' or 'followers' on the social media, through short messages, pictures or videos, may also lead to a negative evaluation of their political competencies: the echo given outside of their core supporters' networks by interested observers monitoring candidates' online activity may actually turn out to be detrimental to the latter's electoral performance.[10]

The electoral cost–benefit calculus of participating in a VAA appears different in several respects. First, the scope of consequential campaigning 'gaffes' is more limited as the repertoire is limited to personal views on a fixed list of political issues. Second, VAAs directly appeal to a wider audience as these are instruments undecided voters may find useful to express an informed electoral choice.[11] Third, contrary to Twitter for instance, where candidates' networks are largely disconnected and the vast majority of users only follow one candidate (Verger *et al.* 2013: 497), VAAs allow – on the very same platform – for a simultaneous comparison of candidates' positions on a wide variety of issues (that can further be disaggregated by users themselves to offer advices on the issues they are most interested in). Participating in a VAA therefore makes it possible for candidates to show personal views distinct from these fellow party candidates in the hope of getting more preferential votes. Finally, VAAs provide voters with a ranking of the parties and candidates present in the system and that match their own political positions. The results returned to them often invite them to consider, on the basis

10. The success and viral quality of Web 2.0 applications has indeed also widened traditional media sources of information. Journalists can therefore contribute to the indirect effect on voting behaviour by relaying candidates' centred information through their own social media networks and, more importantly, by their professional offline reporting.

11. There is indeed a marked difference between users of VAAs and those of Web 2.0 applications. Previous research classified the former amongst 'information-seekers', who represented four times more people than the latter, labelled as 'net activists' in the 2007 national electoral campaign in Denmark. VAAs were the single most popular political facility on the internet for this campaign, and their users were more likely to be politically interested but also undecided voters (*see* also, amongst others, Dumont and Kies 2012 on the characteristics of VAA users).

of their policy proximity, parties and candidates they would have never considered as a potential electoral choice otherwise. Hence, not only undecided or volatile voters who are seeking relevant electoral information can be expected to follow the advice given by the instrument but even party identifiers may reconsider and eventually modify their voting choice due to their unexpected closeness of views with some parties or candidates (*see* Andreadis *et al.* in this volume). This stands in stark contrast to 2.0 applications, which typically only directly reach a circle of convinced voters whose belonging to a candidate's social network can only lead to a reinforcement of original voting choices. These expectations in terms of gains in visibility and electoral rewards indeed figure prominently in the decision of candidates to participate in VAAs (Ladner *et al.* 2010). Overall, owing to the 'equalisation' hypothesis, candidates who may derive the greatest benefit in terms of preferential votes from the usage of VAAs are the lesser-known ones, either competing for the first time or on smaller lists and therefore largely absent from the traditional media. Since in open-list systems even marginal differences in personal appeals can decide who will be elected, candidates who perceive their chances to gain a seat as being fair (neither null nor very high) could be the most interested in participating in such a new and potentially electorally rewarding tool.

But VAAs have much more than a purely strategic appeal for candidates. A well-elaborated VAA offers information on a large variety of electoral issues and allows voters to elaborate a more complex and refined electoral opinion as they are confronted to topics and candidates they may not have considered relevant otherwise. VAA builders generally provide a description of the issues at stake, with references to the current or proposed legislation and sometimes with pros and cons arguments. Candidates may qualify and justify their own positions on the statements. Hence, the civic potential of VAAs may also motivate candidates to participate and thereby contribute to displaying all the diversity and potential richness of one's election political offer to the voters. Candidates calling for a greater openness, transparency and participation in politics are likely to be more sensitive to this feature of VAAs.

In this section we derived a number of broad expectations regarding the candidates' adoption of technological innovations in electoral campaigns, looking at the distinctive incentives (civic potential and expected electoral gain) and hurdles (knowledge accessibility and undesired exposure) that pertain to the use of VAAs and Web 2.0 applications. In the next section we move on to specifying testable hypotheses and describe the operationalisation of relevant variables for an illustrative and exploratory empirical study of candidates' participation in the *smartvote* VAA first implemented for the 2003 federal elections in Switzerland and the 2009 national elections in Luxembourg.

Hypotheses and operationalisation

We draw on our previous discussion of hurdles and incentives for candidates' participation in VAAs and on the more general literature on electoral systems and the personalisation of electoral campaigns to devise four hypotheses to be tested

in a first, exploratory analysis of the determinants of the adoption of information technology innovations. In addition, we spell out two expectations with regard to distinct relationships in the Swiss and Luxembourgish cases, owing to the timing of the first implementation of *smartvote* and differences in the average level of competition facing candidates.

We alluded earlier to the differential incentives of VAA participation across incumbents and non-incumbents. The former, especially when they are almost sure of their re-election, may find adopting the instrument unnecessary or even a risky move as this could cause an undesired exposure of political views that may be detrimental to their personal appeal. These candidates indeed managed to get elected without it in the first place and could even see these tools as dangerous toys. Challengers in general do not benefit from the visibility (and image of competence) of MPs and would, according to the equalisation theory of the internet, be keener on improving it by using all tools at their disposal. However, newcomers and candidates who do not expect to be elected in particular may face the knowledge-accessibility hurdle or would not consider investing in personal campaigns at all. Hence, it is mainly amongst candidates who stand a fair chance of being elected, for instance those who hold a local political mandate and therefore can count on some level of visibility and political legitimacy, therefore that we can find the highest incentives to further cultivate a personal vote that could eventually lead to their election by participating in an instrument such as a VAA.

> H1: Given their *a priori* perceived probabilities of getting elected, candidates with very high (incumbents) and very low visibility (those without any political mandate) are less likely to use a VAA than those with some visibility (candidates with a local mandate)

How competitive candidates feel depends also on the electoral context they face. Both incumbents and challengers develop constituency-level expectations regarding this competition. According to Carey and Shugart (1995), in electoral systems allowing for preferential votes, the incentives to cultivate a personal reputation increase with district magnitude as the number of co-partisans to distinguish from also goes up.[12] Crisp *et al.* (2007) concur with this idea but improve on its operationalisation: in order to tap more closely the 'co-partisan crowdedness' perceived by a candidate, one should take into account both the actual number of co-partisans on the list (C) and the number of seats won by the party in the previous election (P), the latter reflecting the current strength of the party in the constituency and a reasonable expectation of the number of seats the party could win in the present election. For these authors, as the C:P ratio gets

12. We can further hypothesise that a 'reactive' mechanism could be at work in larger constituencies. Just as incumbents' personal campaign spending may rise in majoritarian electoral system races as a response to high levels of spending of challengers, we can expect that the presence of competitors (from the list or from other lists) on a VAA may induce candidates to adopt it as well. The diffusion of this reactive mechanism is likely to be exponential in larger constituencies

larger so does the intra-party competition for the seats the party could hope to secure. According to us, this index offers the advantage of reflecting both the size of the party in the constituency and the degree of competition for preferential votes each candidate faces on their list. However, in systems like Luxembourg and Switzerland where list votes and preferential ones are pooled to determine the number of seats to be allocated to each party, the probability of winning seats also depends on the overall success of the list. Hence, smaller parties in particular are more likely to play the collective-identity card by promoting list voting than bet only on the popularity of their candidates in their campaign to collect enough votes to secure a seat. From a more rational-individualistic perspective, since most of the candidates on these lists consider that they have no chance of being elected, they will also be less likely than candidates from larger parties to participate actively in the electoral competitions by using a VAA.[13] Given this, where the index reaches large numbers – that is, when a party is only expected to win one seat in a large constituency – as well as when it is set as zero – when a party had no seat in the constituency in the previous election – we would expect an average's candidate on the list to have a smaller probability to cultivate a personal vote than in contexts where the C:P index has more moderate values. In other words, we would hypothesise a curvilinear rather than a linear relationship between this index and the propensity of candidates to participate in a VAA.

H2: Candidates facing moderate to high levels of intra-party competition are more likely to participate than those facing extreme (lowest and highest) levels of intra-party competition as measured by C:P

Aside from the strategic considerations that we assume to loom large for candidates seeking election, we also consider other sources of motivations that may account for the variance observed in their responses to the VAA innovation. Personal views on the openness of democratic participation and on the civic potential of VAAs may lead to more or less positive assessments of the instrument. The general orientation of the party they belong to may have the same effect, as party organisations may encourage or, to the contrary, prevent their candidates participating. Instead of assuming a link with broad ideological orientations, such as the left–right or cultural liberalism *vs.* social conservatism, that are only very indirectly related to the issue, we would hypothesise that candidates belonging to parties that favour greater democratic participation would either share this concern or would be more or less explicitly pressured by their organisation to collaborate with this novel source of political information.

H3: Candidates belonging to parties that call for high levels of democratic participation are more likely to respond to a VAA

13. Recall that we here refer to party strength at the constituency level (parties may be comparatively performing better or worse in other constituencies and thus may be a large or small party at the national level).

Among the hurdles to VAA participation, we mentioned the knowledge-accessibility one that may discourage some candidates from adopting the tool. [14] More fundamentally, the digital gap between generations constitutes another barrier for older candidates who have grown, worked and perhaps also fought electoral campaigns in a purely offline environment. For those candidates, the mere lack of personal experience with this technology, which may feed into a persisting image of the unruly nature of the internet and its unpredictability, acts as a disincentive to publicise personal political views on the web. As observed by Zittel (2009) for the setting up of candidates' personal websites, such a generational effect is likely to show for the adoption of VAAs as well, and for other campaigning technological innovations in the future. Note that since Luxembourg implemented its first VAA six years later than Switzerland, we would expect the age category of a candidate to be less of a strong determinant of VAA adoption in Luxembourg than in Switzerland.

H4: Younger candidates are more likely to participate in a VAA

When concentrating on multi-member constituencies only, in Switzerland each candidate faces on average 10 challengers within and across parties, with 6.5 in Luxembourg. In the latter country we find a clear dividing line between the two large (magnitude of 23 and 21) constituencies and the two small ones (9 and 7), whereas in Switzerland the number of multi-member constituencies is 20 and their magnitude varies from 34 to 2. More importantly, the number of candidates fielded by each party in a given constituency can also vary widely. This is not the case in Luxembourg where 7 parties presented full lists (corresponding to the number of MPs to elect) in all constituencies and an eighth party presented lists in only 2 of those, making the number of competitors per seat only vary between 7 and 8 across constituencies. Overall, in 80 per cent of the Swiss constituencies this rate is equal or larger than in any constituency in Luxembourg. Given these differences in the context of competition faced by an average candidate, we would expect variables pertaining to the perceived probability of being elected to perform differently in the two contexts. More specifically, since an incumbent's probability of re-election is on average much smaller in Switzerland than in Luxembourg, the strength or even the direction of the relationship of the incumbency variable could differ in the two contexts.

The logistic regressions performed allow us to study the propensity of candidates to participate in *smartvote*. More than 2,800 candidates in Switzerland ran for the 200 seats in the National Council in 2003, whereas in Luxembourg there were 452 candidates for 60 seats in the Chamber of Deputies in 2009. On the occasion of the first implementation of *smartvote* in both countries, about 50 per cent of candidates running for elections decided to participate and entered their policy profile. Note that owing to potential gender differences in the uses of the internet for political information and for the evident under-representation of female candidates in elections, we control for gender in all of our analyses.

14. Data on the education level of the candidates could serve as a proxy to study this issue.

Results

Table 11.2 displays results of three models ran on the 2003 Swiss and 2009 Luxembourg first experiences with VAAs. Hypothesis 1 is verified in Luxembourg by the fact that model 2 candidates holding a high-level political mandate (minister, MP or MEP) were actually less likely to participate in *smartvote* (but the effect is not significant) than those who do not, whereas those who hold a local mandate only were twice as likely to use it than those who either had a more visible political mandate or none at all in model 3. This clearly follows our argument regarding the perceived chances of being elected influencing the decision to wage a personalised campaign. Results for Switzerland, however, contradict Hypothesis 1 as incumbent MPs were much more likely (with a substantive and significant effect) to use the VAA than other candidates. We alluded earlier to the fact that competition for parliamentary seats is fiercer in Switzerland than in Luxembourg. In such a context, a much wider pool of candidates have no real expectations (nor even motivations, as a fair number of candidates are known as 'list-fillers' who only accept the invitation made by their party to be part of a list in order to present full plates) of being elected and are therefore less likely to invest time and effort in their campaign, whereas incumbents perceive a lower probability of re-election than in environments where they face less inter- and intra-party competition. Therefore this result does not fundamentally alter our expectation that the subjective probability of being elected has an impact on the decision of candidates to use new technologies to increase their personal visibility in electoral campaigns.

All models also show results in line with Hypothesis 2, in that the direction of the effects for the C:P index reflecting intra-party competition and its squared term both have the expected sign. The propensity of candidates to use *smartvote* therefore rises with intra-party competition up to a point where this index reflects the situation of parties holding a single seat in a large constituency, for which we expected – as in the case of parties that did not hold any seat in a constituency – a partisan rather than a personalised campaign to be favoured. These effects reflecting the strategic context in which candidates are embedded are significant in Switzerland, further confirming the importance of the level of competition in this context, as well as in Luxembourg in model 2 when the first version of the incumbency (high-level mandates) variable is used.

The direction of the variable reflecting the position of candidates' parties regarding democratic participation is positive as expected by Hypothesis 3 but only significant in Luxembourg. This could be due to the greater weight of strategic motivations in Switzerland, but may also account for the fact that the operationalisation of the respective positions of parties was here inferred from the average position of their candidates present on the VAA. This could cause bias given that these candidates would probably be those among their parties who would be more open to further democratic participation. However, as this would arguably be the same for all parties, that these positions matched national expert expectations, and that we restricted the dataset to parties large enough to have

Table 11.2: Binary logistic regression models explaining SV usage by candidates – (exp(B)), robust standard errors by clustering on constituencies in parentheses

	Model 1: Switzerland	Model 2: Luxembourg	Model 3: Luxembourg
Age (ref: 18–29)	1.004	1.231	1.104
30–39	(0.330)	(0 .351)	(0 .315)
40–49	0.994	0.781	0.690
	(0.298)	(0.318)	(0.288)
50–59	0.726	0.591**	0.490***
	(0.166)	(0.155)	(0.136)
60 +	0.247***	0.591***	0.565***
	(0.054)	(0.106)	(0.118)
Sex (ref: female)	1.001	1.701***	1.638***
	(0.163)	(0.207)	(0.215)
Incumbency (ref: challenger)	2.002***	0.860	
	(0.505)	(0.125)	
Local mandate (ref: no local mandate)			2.012***
			(0.201)
C:P index	1.036**	1.079*	1.020
	(0.019)	(0.047)	(0.041)
C:P index squared	0.999***	0.996**	0.999
	(0.000)	(0.002)	(0.002)
Democratic participation	1.144	1.701***	1.715***
	(0.287)	(0.166)	(0.193)
Pseudo-R^2 (Nagelkerke)	0.11	0.05	0.07
N included	2,001	420	420

Notes: in Luxembourg 'incumbency' refers to either being an incumbent MP, incumbent MEP or incumbent government minister; in Switzerland the variable only includes incumbent members of the National Council; in Switzerland the democratic participation value for a party is obtained by averaging the scores of the candidates of this party on five *smartvote* statements and the dataset is restricted to parties that fielded at least 200 candidates (which overall gained about 95 per cent of the seats in 2003); in Luxembourg the score is computed for the official position of the party on five similar *smartvote* statements and the dataset is restricted to the parties that presented lists in all four constituencies (the only 'party' lacking was a newcomer that did not and refused to participate in *smartvote* ; it failed to win any seat in 2009 and disintegrated soon after the elections).

a known opinion on these issues, this risk is somewhat limited. In any case, the effect of this variable in model 1 is weak and non-significant whilst it is large and significant in Luxembourg.

Finally, comparing models 1 and 2 of Table 11.2 reveals a common pattern with regard to the age of candidates that verifies Hypothesis 4. Younger ones were clearly more likely to participate in *smartvote*, with an effect that is already significant when comparing candidates below 30 and those above 50 in Luxembourg. In Switzerland the effect only becomes significant for the comparison with those aged 60 and more, but the substantive effect is much larger, leaving our expectation regarding the differential power of the age variable in the two contexts studied with mixed results. Gender, which was controlled for in each model, however, shows distinct results across country experiences, having no significant effect and a slight tendency towards more feminine participation in Switzerland and a clear and significant positive male effect in Luxembourg.

Discussion

This chapter explored the resemblances and differences between VAAs and Web 2.0 applications used by candidates in contemporary electoral campaigns. A number of hypotheses were generated to account for VAA adoption as electoral technological innovation and were tested in an exploratory empirical analysis.

In our analysis we introduced some theoretically relevant party-level variables (position on democratic participation and size in the constituency through the C:P index) and controlled to some extent for the lack of independence between candidates within constituencies through robust standard errors. Multilevel models could further estimate distinct relationships between the factors highlighted in the present chapter and integrate further characteristics at the level of the party (for instance, the degree of party centralisation, that would supposedly decrease the likelihood of personalised campaigns) or the constituency (for instance, the proportion of highly educated citizens among the voting population) the candidate is a member of. However, several explorative analyses indicate that their aptitude to increase the explicative values of our models is limited at best.[15] Indeed, our models include factors that suppose a rational behaviour of candidates based on strategic or civic motivations in a given electoral context but do not include a large number of other factors that could explain candidates' adoption of new electoral applications. Alternative factors for explaining its non-usage could be that candidates were not aware of its existence, that they reject a priori any internet application, or that they consider VAAs as a simple toy with no impact. On the opposite side, alternative factors for explaining its adoption could be that candidates

15. Explorative models indicate that the relationships stand when taking the constituency as a level-2 variable in generalised linear models with a logit link and a random intercept. An empty model also showed that, as could be expected, the variance between constituencies is much greater in Switzerland (up to 32 per cent of the variance to be explained at the level of the individual candidate) than in Luxembourg (only 2 per cent of the variance).

are electronic 'geeks' or, simply, that they found the instrument interesting or 'fun' to use independently of any civic, strategic or contextual motivations. The analysis of the effects of these specific attitudes would require complementing our analysis with data derived from VAA-related questions included in a candidate survey. Such an analysis could, however, not be conducted for our study since no candidate survey was conducted in Switzerland in 2003, while for Luxembourg the candidate electoral survey did not include a sufficient number of candidates who did not use *smartvote*. Further research on the determinants of VAA adoption as an instance of electoral campaign technological innovation is in order, and will be carried on, concentrating on candidates using such instruments for the first time in later implementations in Switzerland and Luxembourg, as well as in any other country where a candidate-centred tool was generated and in which candidate survey material relating to the election is available.