

Electronic Voting in Belgium

Pascal Delwit

Université Libre de Bruxelles, Belgium

Jean-Benoit Pilet

Université Libre de Bruxelles, Belgium

Erol Kulahci

Université Libre de Bruxelles, Belgium

INTRODUCTION

Does representative democracy imply that there is ... representation? What does one mean by *representation*? Looked at very generally, it means that the legislative (parliament and government) and executive (government) bodies represent the opinions of those who are represented.

The primary method for expressing opinions in democracies is by voting: the parliaments are made up of representatives that reflect the different trends of the opinion expressed by the vote (Avril, 1990). Universal suffrage is neither a historical fact nor a clear-cut contemporary feature. There have been, and there still are, individuals who are excluded from voting and universal suffrage (Rémond, 1999). For a long time, several European countries had representational parliamentary systems that were not democracies. We then experienced a *notabilization* of political relations (Deloye, 1997, p. 96). As Max Weber put it, one is not then living from politics but for politics (Weber, 1963). Several restrictions existed and still exist with universal suffrage. For many years, governments either slowed down or restrained access to voting.

Nowadays, the problems arise in new and really reverse terms. The question is more about knowing how to bring citizens back to the ballot boxes and in this manner to perpetuate the legitimacy of the democratic system. Indeed, voter turnout rates have been falling for the past 20 years (Blais & Dobrzynska, 1998; Delwit, 2002). In many European countries, abstention has risen in a straight line since the end of the 1970s right up to the present day. In view of this trend and considering the growing number of election choices for a priori nongovernment parties (Ignazi, 2003), several analysts and political leaders have been wondering about ways to curb this development.

In part, thoughts relating to *electronic voting* (e-voting) lie within this context (Birch & Watt, 2004). A certain number of academics and political leaders have

been examining institutionalised restraints likely to improve the current state of affairs (Bowler, Brockington, & Donovan, 2001). Naturally in this framework, electronic vote is only one element amongst others. In this regard, Arend Lijphart has undoubtedly pursued this the furthest, since in 1997 he suggested (re)introducing compulsory voting in democratic states in order to respond to the sagging voter turnout (Lijphart, 1997, p. 11).

The will to reduce voter abstention was not the only issue at the origin of studies on the possibility of introducing or extending e-voting. The mobilization of new communication methods and technology for voting was also at issue. Particularly as the unfortunate vote counting experience in the state of Florida during the 2000 presidential election highlighted concerns about traditional methods of voting and vote counting (Jarvis, 2001).

This article will briefly discuss the issue of e-voting by looking at the response to the introduction of e-voting by Belgian citizens who used it. We will show the results of a major exit poll survey conducted on the occasion of the May 18, 2003, federal elections on Belgian's opinions with regard to e-voting. Two major issues were examined. To what extent was e-voting as it was used in Belgium considered as easy or difficult to use? Was e-voting commonly accepted or rejected by the voters who used it?

BACKGROUND: THE BELGIANS AND ELECTRONIC VOTING

In 1994, the following provision was inserted in the Belgian Electoral Law, "The King can, by decree deliberated by the Cabinet, decide that, for electoral constituencies, electoral cantons or communes that he designates, an automated voting system should be used."¹ From that moment on, computer voting was introduced in more and more Belgian municipalities. In 2003, 44% of all Belgian voters cast their vote on a computer.

To a certain extent, the use of e-voting in Belgium may look surprising. In Belgium, voting is compulsory. Voters not attending at the polls may be sued. The first time, they risk to pay from 25• to 50• , the second from 50• to 125• . Even if sanctions are scarcely applied (0.0015% in 1985), most Belgians respect the rule and vote. In the last federal elections (2003), the turnout was 91.9% (decreasing of 3.25 percentage points in the last 15 years). In that context, one can hardly conclude that Belgian legislators introduce e-voting to curb a growing abstention. Actually, two reasons justified this choice. First, e-voting was going to avoid a large number of invalid votes. Second, legislators wanted to reduce the length of counting procedures.

Ten years after its introduction, time had come for a first evaluation of e-voting in Belgium. On May 18, 2003, a team of 27 pollsters supervised by seven researchers and professors from the Université libre de Bruxelles (ULB) went to 13 polling stations in the country². In addition, two teams of pollsters went to two municipalities where the so-called "ticketing" method was being tried out, in order to improve confidence and, eventually, recount in case of contest (Kohno, Tubblefield, Rubin, & Wallach, 2003; Maynihan, 2004, pp. 523-524).

The questionnaire submitted at the polling station exit on May 18, 2003, was in three parts³. The first had a series of questions that enabled defining the socio-demographic profile of the individuals interviewed. This information has a twofold use. On the one hand, it enabled assessment of the value of the sampling in terms of representativeness. On the other hand, this data also permitted us to determine whether certain socioeconomic groups or certain age categories showed any specific association with e-voting problems.

The second part of the questionnaire contributed a second round of objective data on the profile of the persons polled. Its purpose was to provide the resources

needed to assess whether familiarity with computers and the information received beforehand about this new voting system tended to influence the way voters felt about e-voting.

Finally, the last part of the exit-poll questionnaire contained questions asking Belgian voters if they were satisfied with e-voting. Four questions served as indicators of this global satisfaction. First, those polled were asked to evaluate how easy they found e-voting. Second, they were asked to express the social acceptance of the new voting procedure. The third item concerned trust in e-voting. Finally, their overall feeling regarding e-voting was asked.

MAIN THRUST OF ARTICLE: ACCEPTANCE OF E-VOTING IN BELGIUM

The User Friendliness of Electronic Voting

First of all, those polled were asked the user friendliness of e-voting. Before going into the answers, one should briefly state how Belgian voters have to proceed to cast their vote electronically.⁴ In the poll station, each voter receives a magnetic card. The voter enters the polling booth, inserts his or her magnetic card, and starts the process. Using an electronic pencil, the voter chooses a party first, and then a candidate. Afterward, the voter has to confirm his or her vote. At the end, the voter gives back his or her magnetic card and his or her vote is recorded.

Knowing the details of e-voting in Belgium, we can move on to the analysis of the user friendliness of e-voting. Those polled were asked to evaluate the ease/

Figure 1. Ease/difficulty in using electronic voting

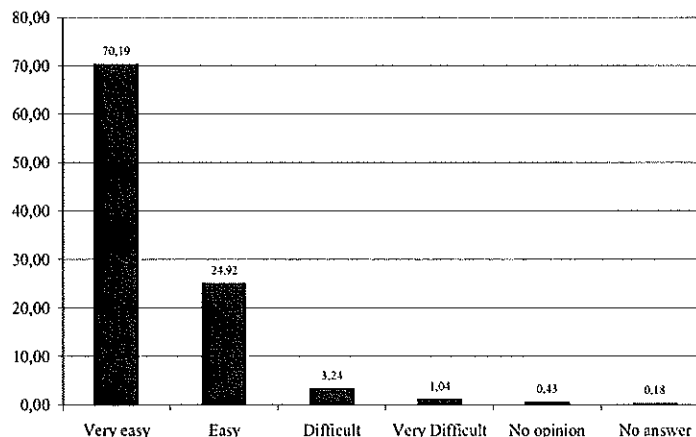
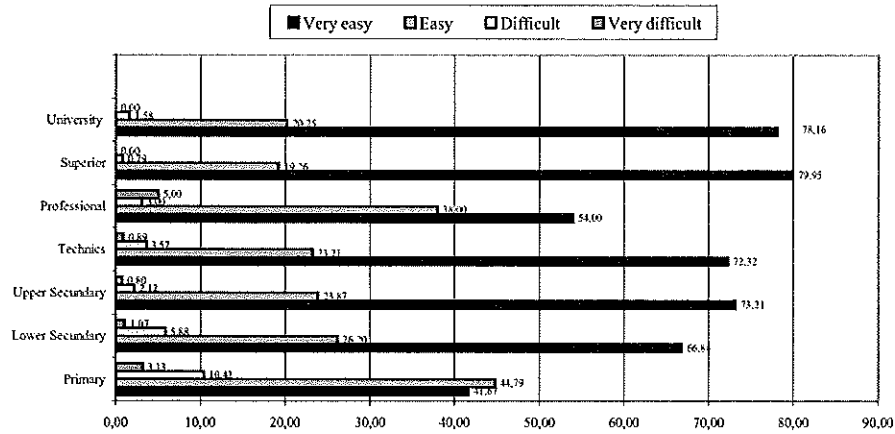


Figure 2. Degree of ease depends on educational capital



difficulty of use of e-voting by stating that e-voting as “very easy,” “easy,” “difficult,” or “very difficult” to use. Looking at the figures, it seemed clear that if there was any criticism voiced by the interviewees about e-voting, the reproaches had nothing to do with the user friendliness of this method of voting.

Indeed, just under three fourths of respondents stated “very easy” for computerized voting. The positive comments relating to the actual operation of the e-voting mechanism even reached 95.11% if one adds the 24.92% of persons who noted “easy” to vote with computer. Except for a very small minority of 3.28%, a favorable opinion was given about the user friendliness of e-voting.

If one cross-checks ease of use with the educational background, one can analyse to what extent e-voting

would be more accessible to the better educated. The data obtained in our research were able to confirm this hypothesis to a certain degree. Indeed, it was with respondents having greater educational capital (university and college qualifications) that the percentages of people who stated “very easy” for e-voting were the highest. In the two cases, it was close to 80% (78.16% for university graduates and 79.95% for those who graduated from colleges). Conversely, individuals with less educational capital gave fewer favorable answers. For example, it was only 41.67% with people whose final diploma was the one they obtained at the end of their primary school education (age 12).

Figure 3. The matter of principle

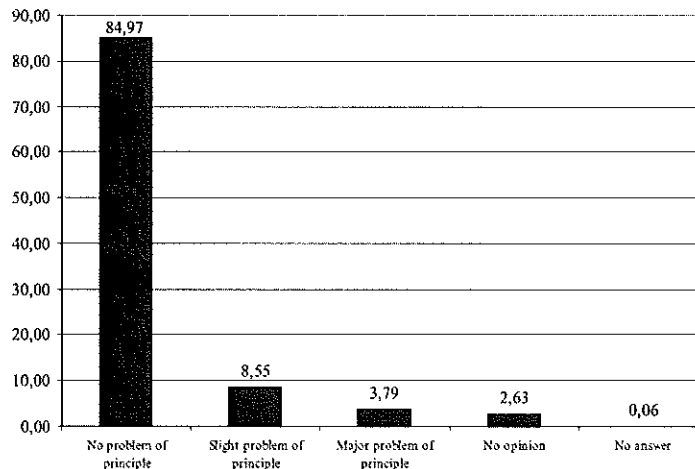
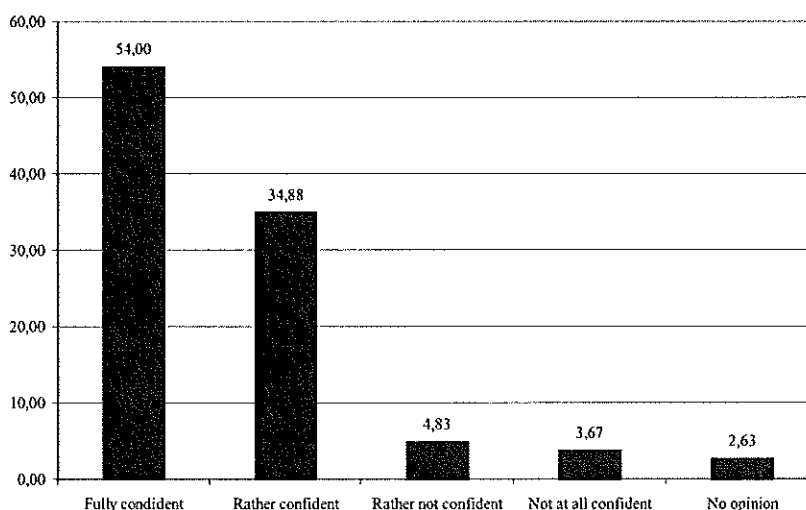


Figure 4. Trust/mistrust in electronic voting



Societal Acceptance of Electronic Voting

The second variable tested was societal acceptance of e-voting. Here, it dealt with assessing within our sampling if e-voting posed any philosophical problems.

In order to assess if people interviewed had any complaints to make in this realm, an ad hoc question was put to them. It asked them to state if for them, e-voting was “a major problem of principle,” “a slight problem of principle,” or “not a problem of principle.”

The figures are clear for the matter of societal acceptance of e-voting. By a very substantial majority (84.97%), the respondents stated that for them, the new voting method was not a problem of principle. The two other replies were only given by 12.34% of those questioned.

Therefore it clearly emerged that societal acceptance of e-voting was not a disputed issue within our sampling taken on May 18, 2003, at polling station exits.

The Issue of Trust/Mistrust in E-Voting

The third and final question was about citizens’ confidence in e-voting. The last variable is vital for establishing the legitimacy of computerised voting. As several authors have repeated, without this legitimacy, any wide-scale application of this method could be problematic.

Over the sampling as a whole, there was a majority feeling of trust toward e-voting. The favorable responses (“full confidence” and “rather confident”) were mentioned in 88.88% of cases. Only 8.5% of those surveyed expressed mistrust (“rather not very confident” and “not at all confident”) toward computerized voting.

The feeling of trust appeared to dominate to a large extent, although it was not without reservations. Indeed, a majority of respondents (54%) expressed complete confidence, but nearly a quarter of the sampling expressed qualified trust (34.88%). Thus there was now a different configuration than the one for the question on ease of use. For the latter variable, the proportion of qualified responses was much lower.

Just as with ease of use, it was interesting to cross-check this data on trust with several independent variables. The first run dealt again with educational capital. The first lesson learned was that no matter what the final diploma was, trust was expressed by the wide majority. In all cases, over 80% of respondents expressed complete or reasonable confidence in computerized voting.

Even so, some differences were noticed between the different levels of educational capital. Full confidence was highest in respondents with the lowest level of academic assets (“no diploma” [61.22%] and “primary school diploma” [60.22%]), as well as by individuals who took technical education (62.73%). Yet, the total for positive responses (“fully confident” and “rather confident”) remained at around 80 to 90%, regardless of the educational capital.

The age category that least expressed “full confidence” (46.73%), the 30–39 year olds, was also the one in which the total number of confident respondents (“full confidence” or “rather confident”) was the highest (91.9%). This clearly strange revelation reflected a broader trend in which it turned out that as the age of respondents increased, there was more “full confidence” but also more mistrust. The skeptical responses (“rather no confidence”



and “no confidence at all”) were largely in the minority no matter what the age of the respondents. On average, we had rates of mistrust between 5 and 13%.

The age category expressing the least mistrust was the 30–39 year olds with 5.3%. At the other end, we found the 60–69 year olds for whom computerized voting raised a feeling of mistrust in 13.24% of cases. For the latter, as well as with the 70+ category, the answers “not at all confident” even reached 6.85%.

It seemed, therefore, that the oldest individuals, who were also those who had the least contact with computers and information technology, expressed comparatively more caution with regard to the new way of voting. The relationship between age and mistrust was not in a straight line, however. Indeed, the 30–39 year olds and those aged 50–59 were the categories in which mistrust was the lowest. In both cases, the mistrust rates remained below 8%.

Finally, what about the experimental tests with ticketing? The experiment conducted at the Waarschot and Verlaine polling stations increased confidence a bit but it especially altered its fundamental nature. Seventy percent of voters in these polling stations actually confirmed they had complete confidence in computerized voting compared to 52% of voters in other stations. On the contrary, the number of citizens expressing some kind of mistrust was reduced to its most simple expression, 3%, compared to 9% amongst citizens voting in a different station. It did indeed seem that ticketing had a valued-added effect.

The preceding data showed that computerized voting gave rise to relatively few negative reactions on the subject of user friendliness, societal acceptance, and trust. Nonetheless, it was certainly advisable to wonder if the relationship to the new voting method was better or not as good

as Belgian ties to the paper ballot. For this purpose, the questionnaire submitted at the poll exits included a question about confidence in voting with paper ballots.

A majority of respondents expressed their confidence in the paper ballot. Almost one third of them (32.19%) declared to have “full confidence” and 44.59% said they were “rather confident,” which meant 76.78% positive responses. Negative responses were made by 17.26% of those polled (10.93% “relatively little confidence” and 6.29% “no confidence at all”). Finally, there were 5.93% with no opinion. Amongst the latter, one undoubtedly will find voters who have never voted with paper ballot.

Just as for e-voting, the confidence of those questioned was largely positive. Even so, it was expressed in a more nuanced manner than it was for the new voting method. The paper ballot received more “reasonably confident” than “fully confident.” Conversely, 54% marked “full confidence” for e-voting compared to 34.88% “reasonably confident.” Nonetheless, this comparison must be made with caution because it compared real circumstances—the e-voting done on May 18, 2003—with a past situation—voting with paper ballot—or virtual, notably in the case of the under 30s who may have never voted with paper ballot.

In short, the two voting methods inspired respondents’ trust. Nevertheless, the confidence grades were more moderate for voting with paper ballot.

The positions with regard to paper balloting and e-voting could be cross-checked. The goal was to see if the positions vis-à-vis the former method were the same as for computerized voting. The figure below can be read in the following manner. The people who were completely confident about computerized voting are represented on the

Figure 5. Trust or mistrust in the paper ballot

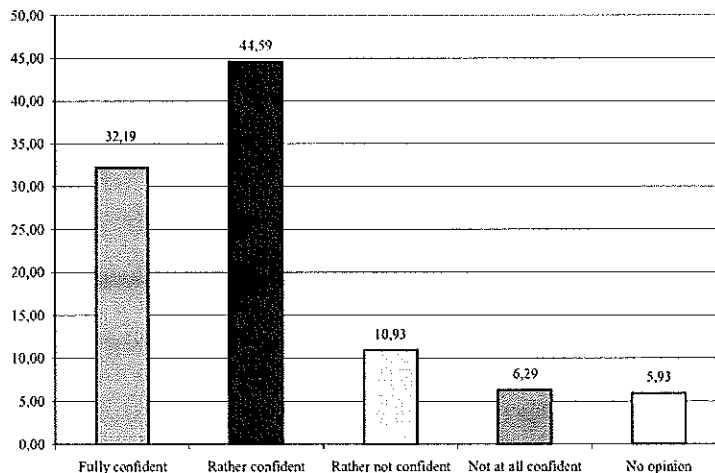


Figure 6. Cross-checking of confidence in electronic voting and paper (colors for confidence in e-voting and columns for confidence in paper ballot)

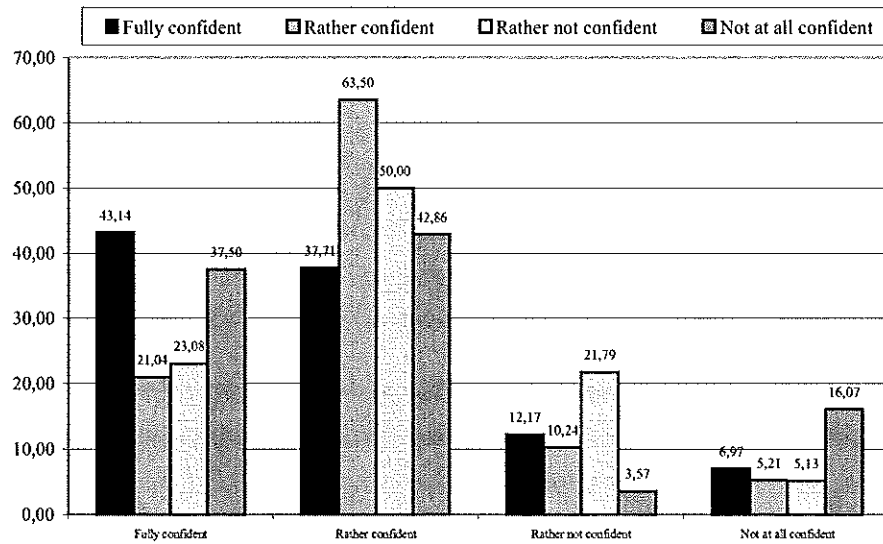
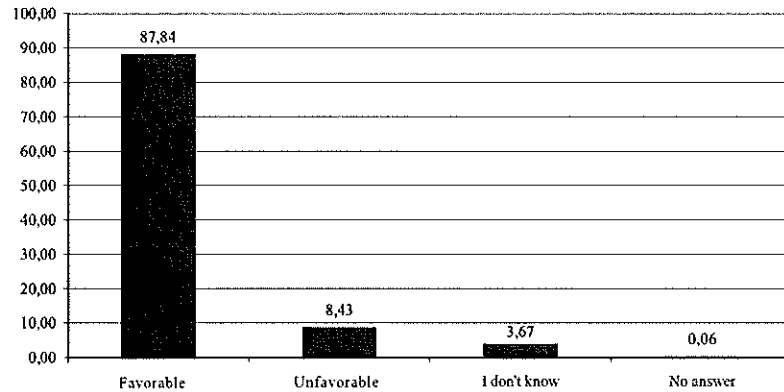


Figure 7. Overall feeling regarding electronic voting



black columns. These respondents were subdivided between the four answers on paper ballots and according to the percentages that are above the lines. The same logic applies for the other three colours (three shades of grey).

The people who placed full confidence in e-voting most often gave the response “fully confident” for the other voting method (43.14%). The response that was in second place was “rather confident” (37.71%). Mistrust was expressed moderately in 12.71% of cases and decidedly in 6.97%. Overall, the respondents who had complete confidence in e-voting also placed much confidence in paper ballots. Even so, less than half declared full confidence in both cases.

Amongst those surveyed who said they had “reasonable confidence” in e-voting, 63.5% were also “reasonably confident” in voting with paper ballots. The second case was “full confidence” with 21.04%. Then came “relatively little confidence” with 10.24% and “no confidence at all” for 5.21% of cases.

Three quarters (73.08%) of those interviewed who noted relative mistrust in e-voting were more disposed toward the former method. With the latter, the paper ballot obtained 50% of “reasonably confident” and 23.08% of “full confidence.” Finally, 5.13% had less confidence in the paper ballot.

With the voters approached at the polling station exits who declared they had “no confidence at all” in computerized voting, they also found a certain preference for the old system. Thirty-seven-and-a-half percent had complete confidence in the paper ballot and 42.86% were “reasonably confident.” Next, 16.07% had “no confidence at all” in either of the two methods of voting. Finally 3.75% of respondents in this category had “relatively little confidence” in the paper ballot.

In brief, two trends appeared. A majority of those who had confidence in e-voting also had confidence in the paper ballot, but in a more moderate fashion. On the other hand, with those who mistrusted the new method, it was generally through preference to the former technique.

The respondents’ positioning toward e-voting was analyzed in detail according to three variables: societal acceptance, user friendliness, and trust. A fourth and more encompassing question was added to the questionnaire. It asked the respondents to state if in the end, they were or were not favorable to computerized voting.

A vast majority (87.84%) answered yes to this question. Less than 10% gave an unfavorable answer (8.43%). The percentage of nonanswers was 3.67%. As with the totality of questions, the opinions were positive with regard to e-voting. But one should keep in mind the nuances that surfaced with socio-demographics and voter familiarity with computers.

If we differentiate between voters from polling stations with ticketing system and the others, we once again observe a high level of acceptance. Nearly 92% of voters in Verlaine and Waarschot declared themselves in favor of computerized voting compared to 87% of surveyed voters from other polling stations. And only 6.6% had a differing opinion compared to 8.7% in the second category.

FUTURE TRENDS

Considering the low level of mistrust in e-voting among Belgian voters in 2003, one can assume that the legislator would not restrain his or her desire to go farther in the application of this new voting procedure.

In previous years, politicians from several parties declared that they want to generalize computer voting in all Belgian municipalities. Only the *Parti socialiste* does not want implement e-voting in more areas. The first goal of the promoters was to have computer voting in all municipalities for the 2006 general elections. As it was not practically possible, they will try to do it for the 2007 federal elections or for the 2009 regional and European elections.

Actually, some even want to go one step farther by introducing Internet voting in Belgium. The current Flem-

ish State Secretary Peter Vanvelthoven (SP.A) announced his project in October 2005. No decision has been made, but no one can say that it is never going to happen.

CONCLUSION

In every representative democracy, the act of voting is without a doubt a stumbling block. Through it, citizens exercise their sovereignty; through it, they choose representatives, they exercise control over those in power, decide on societal projects. This multitude of functions fully demonstrates the importance of voting. Under these conditions, when the ballot box verdict loses representativeness, legitimacy, or credibility, it is the entire democratic system that grinds to a halt.

In the fight against abstentionism, institutional imposition is at the top of the list. This approach can lead to rather radical suggestions: the world-renown political science expert Arend Lijphart (1997) suggested (re)turning to compulsory voting. However, “more moderate” proposals are being examined. One of the key approaches aims at making voting easier.

This approach would involve making voting easier through a variety of improvements. In this way, voting would become simpler, which would have the knock-on effect of bring voters (back) to the polling stations, even if in reality abstentionists can be considered as being “in remission” from the voting system.

A few nuances should be added to this diagnosis. Some studies have well and truly shown that an evolution in voting methods can increase voter participation. Thus, Jean Blondel, Richard Sinnott, and Palle Svensson (1997) in particular plotted a higher rate of abstention in the countries where voting took place on a weekday than in countries where it took place on Sunday the 8th. Gimpel and Schuknecht (2003) have pointed out the importance of the ballot boxes’ accessibility. But the main cause of the drop in voter participation did not stem from these secondary elements and basically reflected the significance of the election (see, for example, Reif, 1980).

Be that as it may, technical solutions to abstention were certainly the ones that gave rise to most of the legislative initiatives. At various levels, numerous countries experimented with technical innovations aiming at making voting *easier*. Among them, one, the electronic or computer voting is at the moment experienced at a large-scale level in Belgium, as it is in the Netherlands, Great Britain, the United States, and Brazil (Bourgaux, 2001). In Belgium, the first use of e-voting was made in 1991 in the villages of Waarschot and Verlaine. The trial was considered conclusive enough for the procedure to be expanded. At the last elections on May 18, 2003, around 44% of voters used the new method.

Nevertheless, such evolution in the process of voting is certainly not only technical. It can have several impacts on the reliability of the counting, on the secrecy of the vote, and also in terms of societal cohesion. Knowing that, the *Centre d'étude de la vie politique* of the ULB became involved in very extensive field research in 2003 (Delwit, Kulahci, & Pilet). Studies have included an "exit poll" conducted on May 18, 2003 (N = 1637).

The goal of this research was to analyze the social legitimacy of computer voting in Belgium by questioning Belgian voters. The hypotheses were that this new voting technology could affect the equal access to the right to vote. Four categories of polarization were presumed:

1. Between rich and poor
2. Between those who pursued higher academic studies and those who have minimum qualifications in academic terms
3. Between young and old
4. Between Flanders, Wallonia, and Brussels

In this concise contribution, we have given a brief presentation of the results of this survey. Looking at the figures, it seemed clear that if any criticism was made with regard to e-voting, the main concern of these reproofs had no connection with the user friendliness of this voting method. Indeed, a bit less than three quarters of respondents felt that they had used computerized voting "with the greatest of ease."

Generally speaking, the fact to have already voted by computer, but also the respondent's familiarity with IT, tended to promote to a great extent the convenience of e-voting. Apropos, modest elements of a *digital divide* were noted: there was an underlying trend for people with the lowest level of academic assets to encounter the most difficulties. These reservations only involved a minority of respondents, but the observation was verified by our exit poll and likewise for three target publics that we analyzed in a postelection survey.

At societal acceptance level, the exit poll results showed the absence of any major problems. By a very large majority (84.97%), respondents confirmed that the new method of voting did not pose any problems in principle. Societal acceptance of e-voting appeared to be contested just a little and not very strongly within the scope of our sampling taken on May 18, 2003, at the polling station exits.

The third dependent variable assessed was confidence in the new method of voting amongst Belgian voters. The favorable responses ("full confidence" and "reasonably confident") were expressed in 88.88% of the cases.

Looking at the cross-checking of certain socio-demographic data with levels of confidence in e-voting, some

nuances can be established. Thus we could detect differences in terms of levels of educational capital. Full confidence was highest in respondents with the lowest one. Thus it was the opposite of the observation established for ease of use.

The second cross-checking carried out on the matter of trust/mistrust was the influence of age on the responses. Here, too, the great majority expressed confidence. In all age categories, more than 80% of respondents reported "full confidence" or "reasonably confident." However, it was noted that when the age of respondents increased, the attitudes with the most opposition increased as well: *those with complete self-confidence* and *those with deep-seated mistrust*.

The aforementioned figures show that computerized voting gave little rise to negative reactions in the realms of user friendliness, societal acceptance, and confidence. Moreover, we observed that in the Verlaine and Waarschot polling stations, where the ticketing experiment was introduced, societal acceptance and confidence in computer voting were higher than the average.

Without a doubt, and based on the data from this research using questionnaires, it is shown that the relationship of Belgian voters with e-voting is largely positive. Both in terms of ease of use as well as of societal acceptance, the surveys conducted recorded large rates of support in the new method of voting. The sole nuances to be added are expressed by senior citizens and youngest ones who expressed a more moderate level of confidence. Nonetheless, in no example did the negative opinions have the most replies. Societal legitimacy of the new voting method within the sampling of Belgian voters that this analysis is based on did not seem to pose any insurmountable problems for the interpretation of these results.

Naturally, these findings are at a *representation* level. They express the feeling of voters toward a (relatively) new method of voting. As such, they do not prove the absence or the presence of potential problems. But in the eyes of a clear majority of voters, e-voting on site at the polling station did not cause any particular difficulty with use and no specific concerns as to the tallying and announcement of the results.

REFERENCES

- Avril, P. (1990). *Essais sur les partis politiques*. Paris: Payot.
- Birch, S., & Watt, B. (2004). Remote electronic voting: Free, fair and secret. *The Political Quarterly*, 75(1), 60-72.
- Blais, A., & Dobrzynska, A. (1998). Turnout in electoral democracies. *European Journal of Political Research*, 33(2), 239-261.



Blondel J., Sinnott R., & Svensson P. (1997). Representation and voter participation. *European Journal of Political Research*, 32(2), 243-272.

Bourgaux, A.-E. (2001). *Le vote automatisé : du mythe de Prométhée à celui de Frankenstein. Les élections dans tous leurs états. Bilan, enjeux et perspectives du droit électoral*. Centre de droit public de l'ULB. Bruxelles: Bruylant, 157-245.

Bowler, S., Brockington, D., & Donovan T. (2001). Election systems and voter turnout: Experiments in the United States. *The Journal of Politics*, 63(3), 902-915.

Deloye, Y. (1997). *Sociologie historique du politique*. Paris: La découverte.

Delwit, P. (2002). Electoral participation and European polls: A limited legitimacy. In G. Grunberg, P. Perrineau, & C. Ysmal (Eds.), *Europe at the polls. The European Elections of 1999* (pp. 207-222). New York: Palgrave-MacMillan.

Delwit, P., Kulahci, E., & Pilet, J.-B. (2004). *Le vote électronique en Belgique: un choix légitime?* Ghent, Belgium: Academia Press.

Gimpel, J. G., & Schuknecht, J. E. (2003). Political participation and the accessibility of the ballot box. *Political Geography*, 22(5), 471-488.

Ignazi, P. (2003). *Extreme Right parties in Western Europe*. Oxford, UK: Oxford University Press.

Jarvis, R. (2001), *Bush vs. Gore. The fight for Florida's vote*. New York: Kluwer.

Kohno, T., Tubblefield, A., Rubin, A., & Wallach, D. (2003). *Analysis of an electronic voting system*. Johns Hopkins University Information Security Institute Technical Report. 19. Baltimore: Johns Hopkins University.

Lijphart, A. (1997). Unequal participation: Democracy's unresolved dilemma. *American Political Science Review*, 91(1), 1-14.

Maynihan, D. (2004). Building secure elections: E-voting, security and systems theory. *Public Administration Review*, 64(5), 515-528.

Reif, K. (1980). Ten second-order national election. In *Ten European Elections* (pp. 1-36). London: Gower.

Rémond, R. (1999). Pour une histoire idéologique du suffrage universel: d'une utopie contestée au consensus relativisé. In *La politique est-elle intelligible?* (pp. 209-224). Brussels: Complexe. Weber, M. (1963). *Le savant et le politique*. Paris: Plon.

KEY TERMS

Abstention: Number of registered electors who do not go to vote on the election day. In all Western European countries (except Denmark), abstention has increased for 20 years.

Digital Divide: Hypothesis whereby the use of IT in the electoral process would put certain categories of voters at a disadvantage. Certain social classes who are less familiar with electronic voting would be deprived of fact of their right to vote.

Electronic Voting: Technique by which electors vote by following the instructions on the screen of a computer installed in a pooling booth, instead of by using a ballot paper. (In this article, used as a synonym of computer voting, automatized voting, e-voting, or computerized voting.)

Internet Voting: Technique by which electors vote by using a computer connected to the Internet. This operation can be take place in a polling booth, via interactive kiosks installed in public places, or from any computer connected to the Web.

Societal Acceptance of Electronic Voting: In order to assess if the persons interviewed had any complaints to make in this realm, an ad hoc question was put to them. It asked them to state if for them, electronic voting was "a major problem of principle," "a slight problem of principle," or "not a problem of principle."

Ticketing: Word commonly used in Belgium for *voter verifiable paper audit trail (VVAT)*.

Trust in Electronic Voting: Voters were asked to declare if they were "fully confident," "rather confident," "rather not confident," or "not at all confident" in electronic voting.

User Friendliness of Electronic Voting: In the survey conducted on the occasion of the 2003 federal elections, Belgian voters were asked to evaluate the ease/difficulty of use of electronic voting by stating that electronic voting as "very easy," "easy," "difficult," or "very difficult" to use.

Voter Verifiable Paper Audit Trail: Experiences where a voting ticket is printed by the computer and collected in a sealed ballot box, in order to improve confidence in electronic voting and, eventually, recount in case of contest.

ENDNOTES

- ¹ Loi du 11 avril 1994 organisant le vote automatisé, article 1^{er}.
- ² Four in rural areas (Lens, Asse, Waarschoot, and Verlaine), two in suburban areas (Seraing and Sart-Tilman) and seven in urban areas (Bruxelles-Ville, Saint Gilles, Jette, Anvers, Borgerhout, Anderlecht, Liège centre). All are municipalities where e-voting is used. In Waarschoot and Verlaine, a system of

- ³ voter verifiable paper audit trail (VVAT) was tested. Finally, the sample is composed of 1.637 voters, 51.93% are men, and 55.07% are professionally active. The age scale is as follows: 18-29 years (21.69%), 30-39 (19.24%), 40-49 (17.03%), 50-59 (14.83%), 60-69 (13.85%), 70+ (13.36%).
- ⁴ http://elections2004.belgium.be/fr/automated_voting.html# In the bilingual regions, the voter must choose a language (Dutch, French, or German) before voting.



Encyclopedia of Digital Government

Ari-Veikko Anttiroiko
University of Tampere, Finland

Matti Mälkiä
The Police College of Finland, Finland

Volume II
E-H



IDEA GROUP REFERENCE
Hershey • London • Melbourne • Singapore