



Who votes via the Internet?

A scientific approach to polling in Carouge and Meyrin

Analysis of questionnaires on voting via the Internet in the communes of Carouge and Meyrin (Geneva)

Summary of the report made by

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Find all information on the Internet voting project on www.ge.ch/evoting

Foreword

Reforming polling methods is no easy matter: we are dealing with the very heart of our institutions and with what constitutes their legitimacy, namely universal suffrage. Yet it is a fact that the higher voter turnout is and the more representative of society, namely by age and sex, the people exercising their right to vote are, the greater the institutional legitimacy is. There is a less obvious aspect that is also linked to legitimacy, namely confidence in the voting procedure.

The study that you are holding in your hands is encouraging. It shows that voting via the Internet easily clears these two obstacles. On the one hand, it enables the balance to be restored among the different age groups within the active electorate, by giving young people their say, and, on the other hand, it gives its users a very strong confidence boost.

I would add that the convergence of the results from the three polling methods used during the four referendums or popular polls that we have organised to date further strengthens the positive assessment of the contribution made by online voting.

This study is the first of its kind in Europe and in the world. Only a few countries have any experience of voting via the Internet: Switzerland, the United Kingdom, and, to a lesser extent, the Netherlands and France. But to date none has undertaken a scientific study of the profile of users of an online voting system.

We have undertaken such a study precisely because we believed that both the acceptance of this third polling method and its impact on public life needed to be measured.

For the Geneva authorities, just as for the federal authorities with whose support electronic voting has been developed, this additional polling method is not a mere technical innovation. It also has sociological consequences, which deserve to be investigated, known and published.

From the very beginning of the Geneva Internet voting project, the Chancellery has worked in conjunction with the University of Geneva on the legal and sociological aspects of online voting. I would like to thank the Research and Documentation Centre on Direct Democracy (c2d), which puts its signature to this research with the “e-Democracy Centre” (e-DC) of the Geneva alma mater.

This study is revealing not only because it has no equivalent elsewhere, but also because it has investigated dimensions and behaviours that are currently evolving. I would like to point out that the use of new technologies is spreading throughout society, as today's young people grow older.

Statistics relating to the age and sex of the users of our application are not rigidly set data, but constitute signs of promise. The divergences apparent among them are transitory and will dissipate over time. To paraphrase the former French president François Mitterrand, "Let's give time time".

This observation is invigorating in the context of new technologies, often associated with speed, youth and superficiality. Human time dominates technical time, and technical maturation follows human maturation.

I would like to highlight the similarities between the responses given by the inhabitants of Carouge and those given by the inhabitants of Meyrin. This provides evidence of this study's validity and proves that it has reached its goal and measured genuine phenomena. We have kept the presentation by commune, in order to make this aspect stand out clearly.

Another important message emerges from this study: there is a call for more interaction between the authorities and the public services on the one hand, and citizens on the other hand. In this respect, the Chancellery is exploring options within the framework of a bill commissioning it to study the development of a cyberadministration in Geneva.

The extraordinary confidence shown in our online voting application, as well as the general profile of its users, demonstrates that we have succeeded in proposing a service that corresponds to a lifestyle and a daily outlook engendered by the Internet. It is interesting to see how confidence in online voting grows with Internet use. The more one uses the web, the more confident one becomes. It is, therefore, experience rather than faith that drives Internet users to value the system and to trust it, without overlooking the issues involved in regularly updating security procedures.

Our application has found its audience, and may it evolve – not to say age – with it.

Robert Hensler
State Chancellor
Republic and Canton of Geneva

Summary of the study

Internet, the third way of voting, supplements existing methods not only by offering an additional channel for participating in polls, but also by attracting to the polls an electorate which tended not to participate very often. This electorate comprises young people.

Indeed, age is not neutral when it comes to electoral turnout; older people vote more. On the other hand, the study shows that sex does not influence electoral behaviour. Moreover, whereas age greatly influences the voting method chosen, sex counts for little.

Without Internet voting, young people would be under-represented among voters. With the Internet, their weight in the active electorate corresponds to their demographic weight.

From an educational perspective, the sample of online voters reflects the known gap between abstainers and active voters. The former have a lower educational level than the latter. Internet merely reveals a tendency that has already been brought to light by numerous works: participation in civil society depends on having social or intellectual tools at one's disposal.

The percentage of occasional voters and abstainers among the users of electronic voting reached 12% in Carouge and 16% in Meyrin. Among the people who voted via the Internet in Carouge and Meyrin, 96% indicated that they usually voted by post. The Internet has drawn habitual voters towards a new means of expression rather than drastically changing the participation rate, except among young people.

In the vast majority of cases, voting via the Internet took place in the voter's home. Having a personal computer with an Internet connection available either at home or at one's workplace acts as a determining factor in using electronic voting.

More than 90% of the people who voted via the Internet in Carouge and Meyrin stated that they would vote more if online voting came into general use.

The users of the system value being able to send their vote via the Internet, but this transaction is not sufficient for them. They would like political information and opportunities to discuss with politicians, authorities and other political actors to be offered by means of new information and communication technologies.

The inhabitants of Carouge and Meyrin who voted via the Internet in a communal poll favour introducing Internet voting. Tendentiously, the more an individual uses the Internet, the more confidence he or she has in the Internet voting procedure and the more disposed he or she is towards electronic voting being put into general use to supplement the already existing possibilities.

1. Introduction

This report presents an analysis of questionnaires completed by voters in Carouge and Meyrin within the framework of two communal polls organised during the first half of 2004. These two municipalities belong to the canton (State) of Geneva. They are cities in the statistical meaning of the word, since they have more than 10,000 inhabitants: Carouge has 18,500 inhabitants and Meyrin 20,500¹.

In Carouge, online polling lasted from 2 to 17 April 2004 (polling stations opened on 18 April). Citizens had to decide on a referendum challenging the communal decision to purchase the Bio 72 cinema building. A single question was asked, to which the voters replied with a “yes” or a “no”. Turnout reached 44%, in other words 3,978 voters cast a ballot out of a total of 9,049 people forming the Carouge electorate.

In Meyrin, electronic polling was open from 28 May to 12 June 2004 (polling stations opened on 13 June). This poll concerned a development plan known under the name of “Vernes Lake”. A citizens’ initiative was opposed to a counterplan. The population also had to reply to a subsidiary question that would have allowed the two plans to be settled in the event of a double majority. The inhabitants of Meyrin therefore had to reply to three closed questions (of a “yes-no” type). Turnout reached 39.1 %, in other words 3,581 votes cast out of a total of 9,170 registered voters.

These polls were the first electronic polls ever to be organised in Switzerland in cities.

1.1 How were the votes distributed by polling method?

In both cases, the voters were able to choose among three forms of participation: via the ballot box, by post or via the Internet. Table 1 shows the percentages by polling method.

Table 1: Participation methods in polls held in Carouge and Meyrin

Participation method	Carouge		Meyrin	
	%	n	%	n
By post	69.4	2,760	73.4	2,627
Via the Internet	25.7	1,024	22.0	788
At the polling station	4.9	194	4.6	166
Total participant	100.0	3,978	100.0	3,581

Source : <http://www.ge.ch/votations/2004.html>

A majority of participants – 69.4% in Carouge and 73.4% in Meyrin – voted by post. In both cases, approximately a quarter of voters (25.7% in Carouge, 22% in Meyrin) opted to vote via the Internet, an option that was offered to them for the first time.

The difference in online voting percentage is not in itself significant. It reflects different contexts in the two communes, contexts characterised by more active campaigning, more

¹ Source: Cantonal Statistics, www.ge.ch/statistique/statistiques/communes/welcome.html.

immediate and easily grasped issues and a younger electorate in Carouge than in Meyrin (c.f. point 3.2.1).

2. Survey methodology

Once they had completed the voting procedure, the voters who voted online were asked to fill in an electronic questionnaire presented to them on their computer's screen. The response rate was excellent: 57% in Carouge and 69% in Meyrin.

The sample comprised all the people who replied to the questionnaire. As shown in point 3.2, this method gave good results and the sample accurately reflects the composition of the subgroup of voters who voted online.

The questionnaires, which differed slightly in Carouge and Meyrin, were designed by the "e-Democracy Centre" (e-DC) of the University of Geneva, in co-operation with the cantonal Chancellery. They were hosted on the State of Geneva's website, which is distinct from the actual voting site.

The analysis of the results was undertaken by Thomas Christin from the Institute of Political Science of St. Gallen University, "research associate" of the e-DC, and Alexander H. Trechsel, Vice-Director of the Research and Documentation Centre on Direct Democracy (c2d) of the University of Geneva and Director of the e-DC. The analysis of the data from Carouge was also able to benefit from the assistance of Richard Warren, from the Political Science department of the University of Geneva and "research associate" of the e-DC.

The non-response rate to a given question, when a voter has no opinion, does not know or does not wish to reply, is below 10%. A number of more delicate questions register higher rates. There is, for example, a non-response rate of 22% in Carouge and 27% in Meyrin to the question on the respondent's household income. This is not at all unusual in surveys undertaken by means of questionnaires in Switzerland.

Most of the comments made in this report only take the valid responses into account and exclude those individuals who did not reply.

2.1 Margin of error

The margin of error of the results presented is +/- 4.1% for Carouge and +/-4.3% for Meyrin, for a value of 50% with a probability level of 95%. In other words, when 50% of the sample chooses the same response, the "true" percentage in Carouge may range from a minimum of 45.9% to a maximum of 54.1%. In Meyrin, these extremes are 45.7% and 54.3%. The probability that the value of 50% is correct is 95%.

When 30% (or conversely 70%) of the sample gives the same response, the margin of error falls to +/-3.8% for Carouge and +/- 3.9% for Meyrin. The confidence interval is unchanged at 95%.

The difference in the margin of error between the two communes can essentially be explained by the difference in sample size (Carouge n=588; Meyrin n=544).

In general, the respondents do not differ widely in their responses, resulting in little uncertainty about the conclusions that may be drawn. This applies to the two surveys in Carouge and Meyrin.

3. Who voted? By which method? Sociodemographic profile of the citizens in the two communes

Summary: Age is not neutral in relation to electoral turnout (elderly people vote more), but sex exerts no influence. Age strongly influences the voting method chosen, whereas sex has little influence.

The youngest age groups (but up to age 50) are over-represented among the users of online voting. Proportionally fewer women vote via the Internet, but this difference should automatically dissipate in time.

Without Internet voting, young people would be under-represented in the electorate. With the Internet their weight in the active electorate corresponds to their demographic weight.

In this chapter, we are only interested in the people who voted remotely, namely by post or via the Internet. Those who voted at polling stations are not taken into account, since the file used does not allow us to distinguish them from people who did not vote. The people who voted at the ballot box represented only 4.9% of the votes cast in Carouge and 4.6% in Meyrin (c.f. table 1).

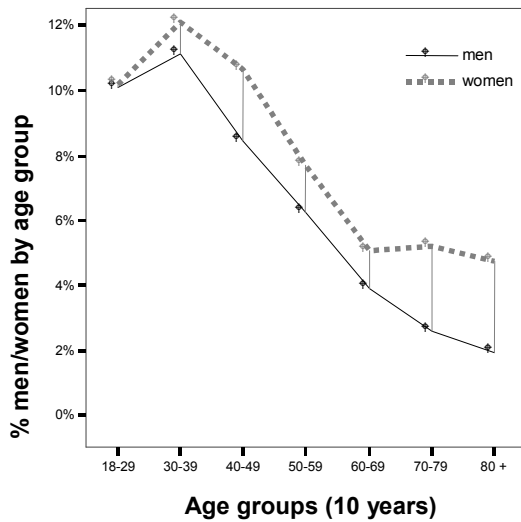
Let us examine the age and sex profile of the electorate in the two communes.

3.1. Age and gender of voters by polling method

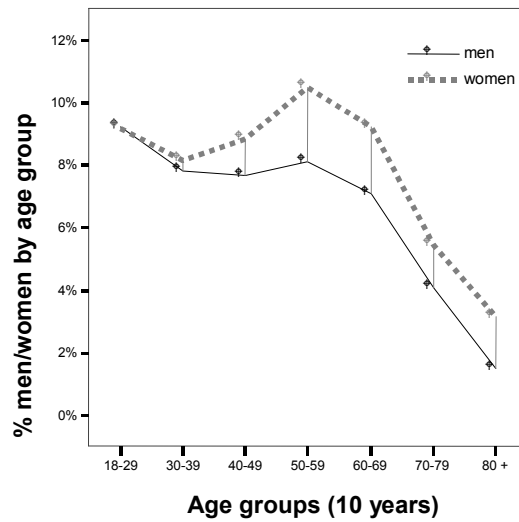
Diagrams 1 to 4 present the distribution by gender and age of the four groups of people:

- The entire electorate (diagrams 1a and 1b),
- Voters who voted by post (diagrams 2a and 2b),
- Voters who voted via the Internet (diagrams 3a and 3b),
- The entire sample for this study, in other words the people who replied to the questionnaire (diagrams 4a and 4b).

Diagrams 1a and 1b: Distribution of voters by age and gender (Carouge, n=9,049/Meyrin, n=9,170)



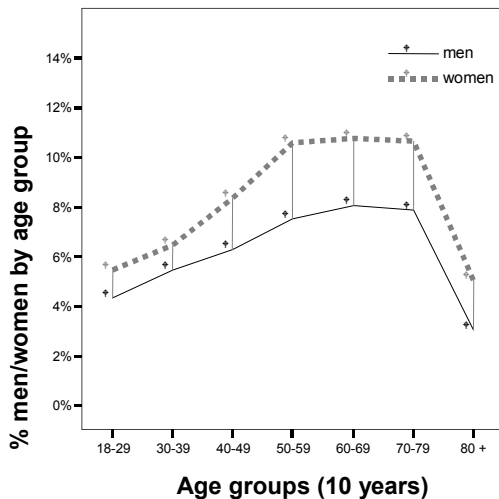
Carouge



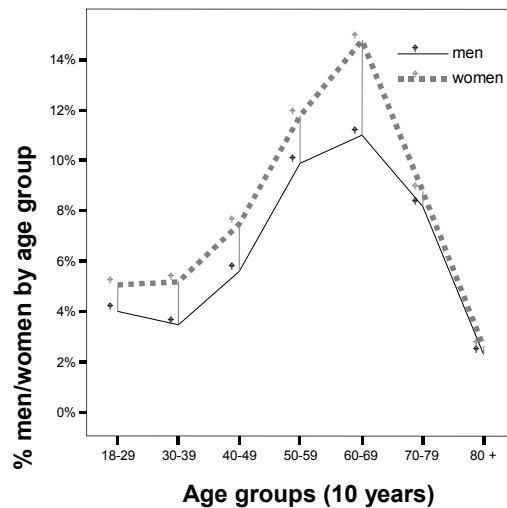
Meyrin

Diagrams 1a and 1b constitute the yardstick by which to measure the distribution of individuals by age and gender for the various voting methods. Women are slightly more numerous than men; they represent 55% of the electorate, compared with 45% for men.

Diagrams 2a and 2b: Distribution of postal voters by age and gender (Carouge, n=2,760/Meyrin, n=2,627)



Carouge

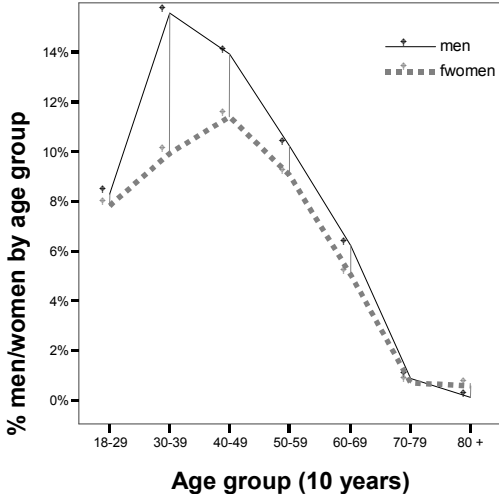


Meyrin

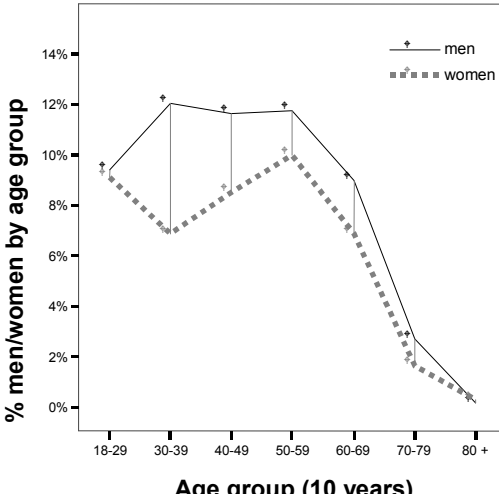
The proportion of men to women among users of postal votes is the same as that of the electorate as a whole. However, diagrams 2a and 2b show, that the distribution by age does not follow that of the electorate as a whole. People aged less than forty are under-represented. On the other hand, the proportion of voters over the age of forty is the same as in the electorate as a whole.

This is an expression both of younger age groups' preference for the Internet and of their lower turnout in the polls.

Diagrams 3a and 3b: Distribution of Internet voters by age and sex (Carouge, n=1,024/Meyrin n=788)



Carouge



Meyrin

Diagrams 3a and 3b show an over-representation of men among Internet voters. The gap is particularly large among people aged from 30 to 50. The differences are less pronounced for the youngest and oldest age groups (18-29 years old and over 60 years old).

Diagrams 4a and 4b summarise the preceding diagrams. They have been standardised according to the electorate as a whole (point 0.0) and highlight various divergences from this reference group with regard to gender, age and the method used for remote voting (post or Internet):

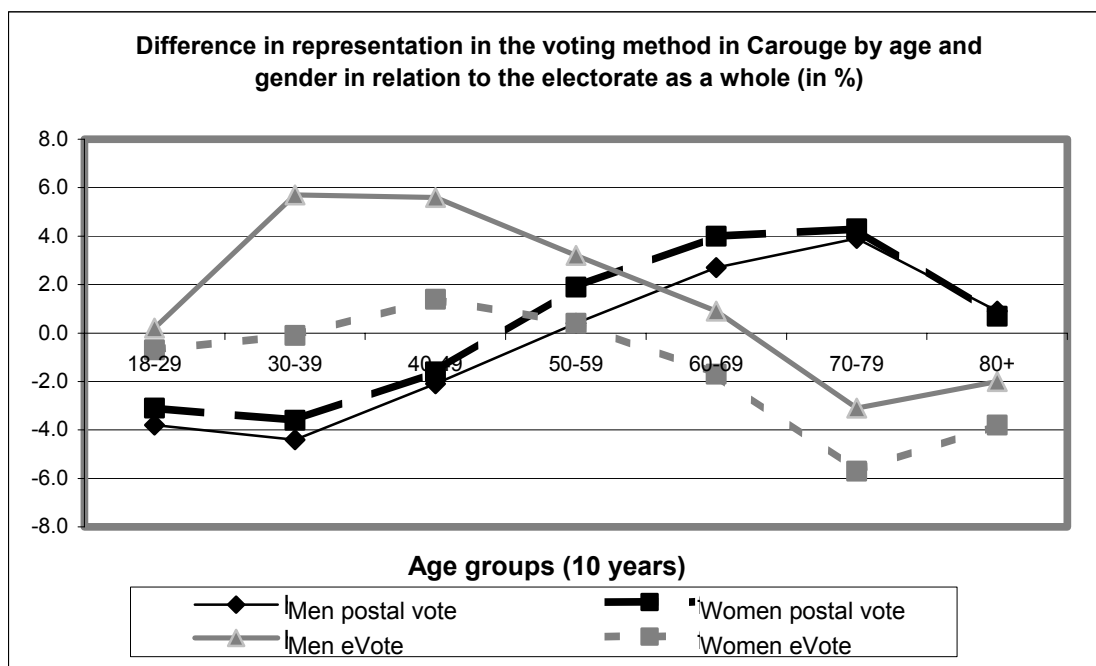
- The proportion of women aged 18 to 59 among the users of online voting and in the population is almost identical (slight under-representation of female eVoters).
- The proportion of men aged 18 to 29 is the same among Internet voters and in the electorate.
- On the other hand, men aged 30 to 49 are over-represented among online voters. This bias then gradually decreases with age.
- People aged over 60 represent 9% of the electorate in Carouge and 13% in Meyrin, but 20% of the voters in Carouge and 32% in Meyrin, polling stations excluded.
- The inversion of the over- and under-representation curves for postal voting and Internet voting signals that the latter tends to attract young people (but not the youngest, who are not over-represented), whereas postal voting seduces the oldest.

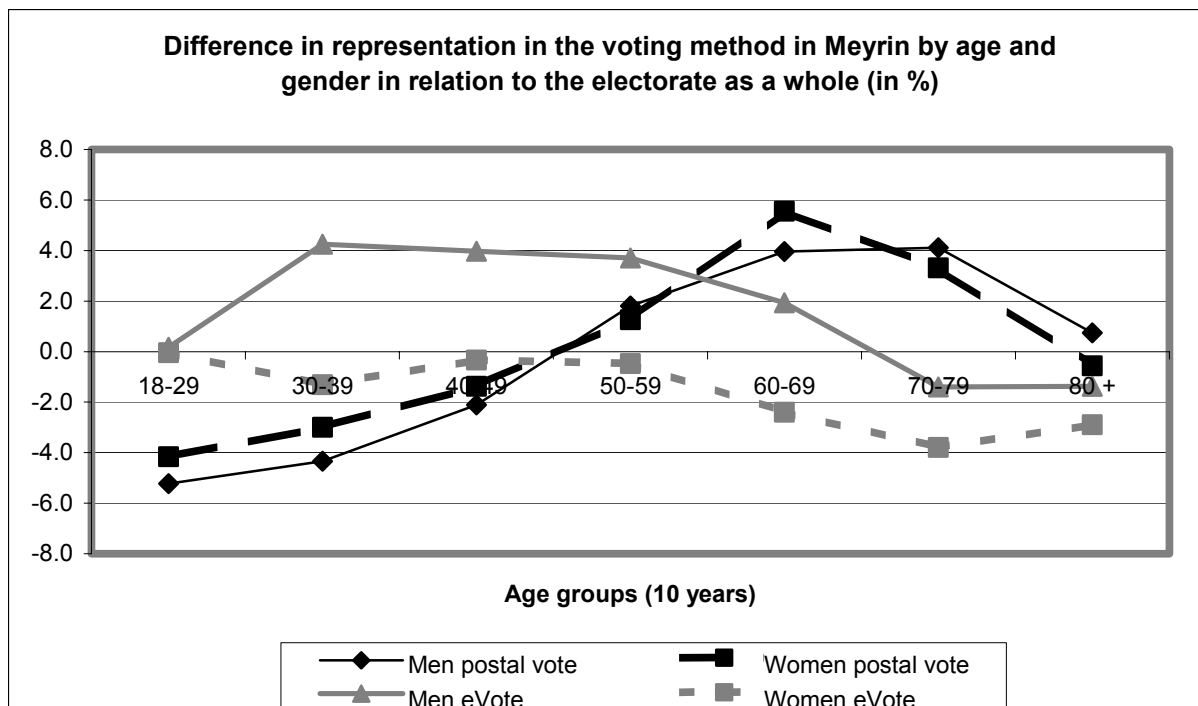
- The line of the curves for each polling method is extremely similar between the genders, which indicates that the choice of voting method is relatively independent of it.
- For Internet voting, there are similar trends with regard to age for men and women. However, a divergence linked to gender can be observed. It is similar to the general numerical divide between the genders. Men, particularly aged between 30 and 49, are more inclined to vote online than women. Beyond the age of 60-70, the age factor prevails over the gender factor and this difference becomes insignificant.

The male/female difference with regard to the Internet should decline. In the 18-29 age range, men and women are equal when it comes to online voting. Studies confirm that this difference is being eliminated over time.

The fact that the youngest generations are not over-represented can be explained by their higher abstention rate. But it is important to note that without Internet voting, young people would be under-represented among voters, whereas with the Internet their weight in the active electorate corresponds to their demographic weight.

Diagrams 4a and 4b: Over- or underrepresentation of the electorate by voting method in relation to the electorate as a whole, by age and gender in Carouge and Meyrin





3.2 How representative is the sample?

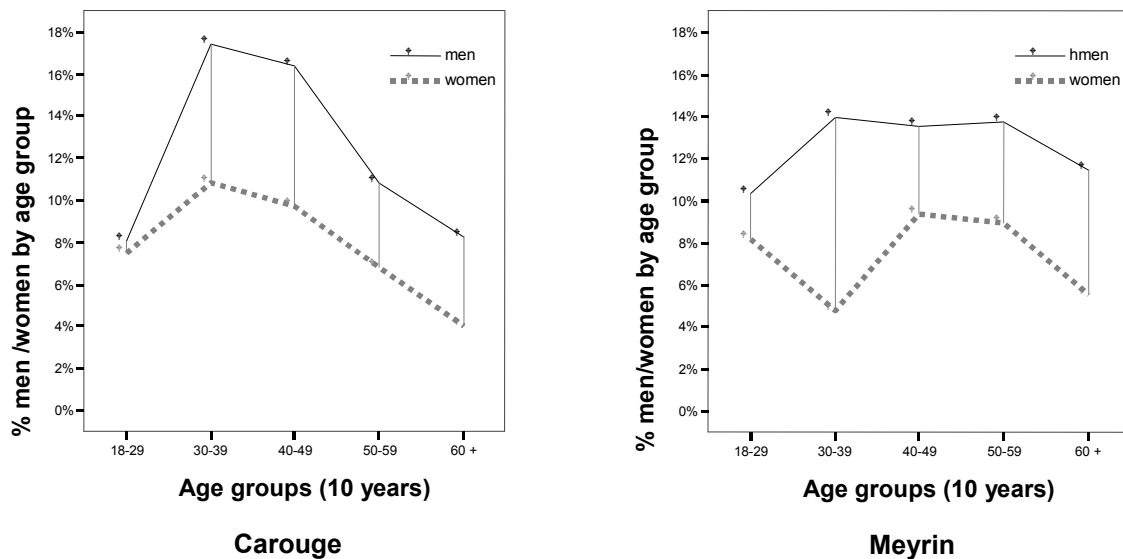
3.2.1 Age and gender

Summary: With regard to age, gender and marital status, the distribution of the sample corresponds to that of the population residing in the canton of Geneva, aged 20 and over. This is the same with regard to marital status, except for widows and widowers who are under-represented in the sample.

From an educational perspective, on the other hand, the sample reflects the gap between abstainers and active voters. The former have a lower educational level than the latter. This bias is not specific to the Internet but mainly depends on other factors.

By comparing diagrams 3a and 3b above with diagrams 5a and 5b below, one can see that the distribution by age and gender of all the Internet voters (diagrams 3a and b) and the people who replied to the questionnaire (diagrams 5a and b) is similar. In general, men aged 30 to 49 are slightly over-represented in the sample and women aged 30 to 59 are slightly under-represented. There are fewer differences between the sexes and divergences between the sample and the population among the youngest and oldest age groups

Diagrams 5a and 5b: Distribution of the sample by age and gender (Carouge, n=588/Meyrin, n=544)

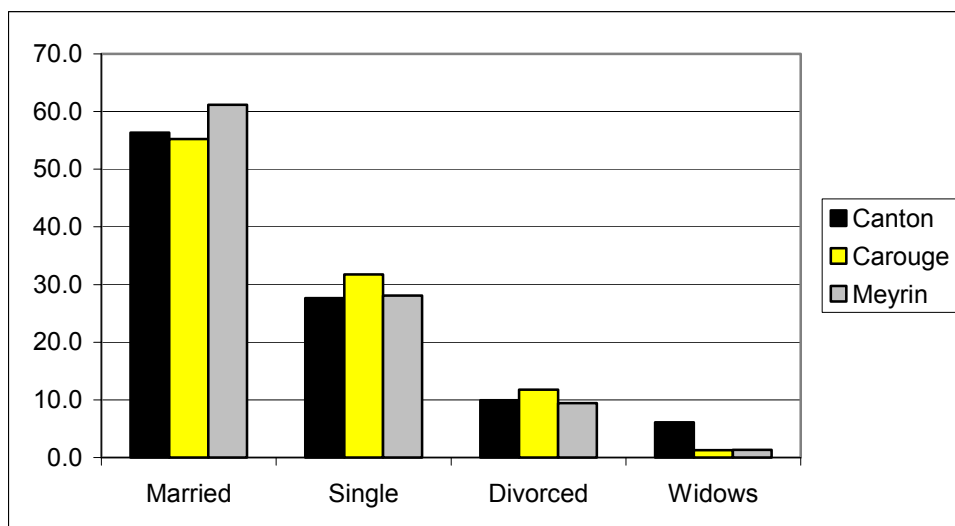


The main differences are, however, too slight to necessitate balancing weighting the data collected from the questionnaire. Weighting the sample was tested for Carouge, in order to ensure that the distribution by age and sex corresponded exactly to the Internet electorate as a whole. The weighted and unweighted results were so close that we didn't use the balancing in this study.

3.2.2 Marital status

Diagram 6 shows that the citizens who voted via the Internet in Carouge and Meyrin cannot be distinguished by their marital status from the population of the canton. With one exception: widows and widowers are under-represented in the sample. This can be explained by the relatively high number of widows among the most elderly in the population, coupled with the low number of Internet voters aged 70.

Diagram 6: Sample distribution by marital status (Carouge, n=588/Meyrin, n=544)

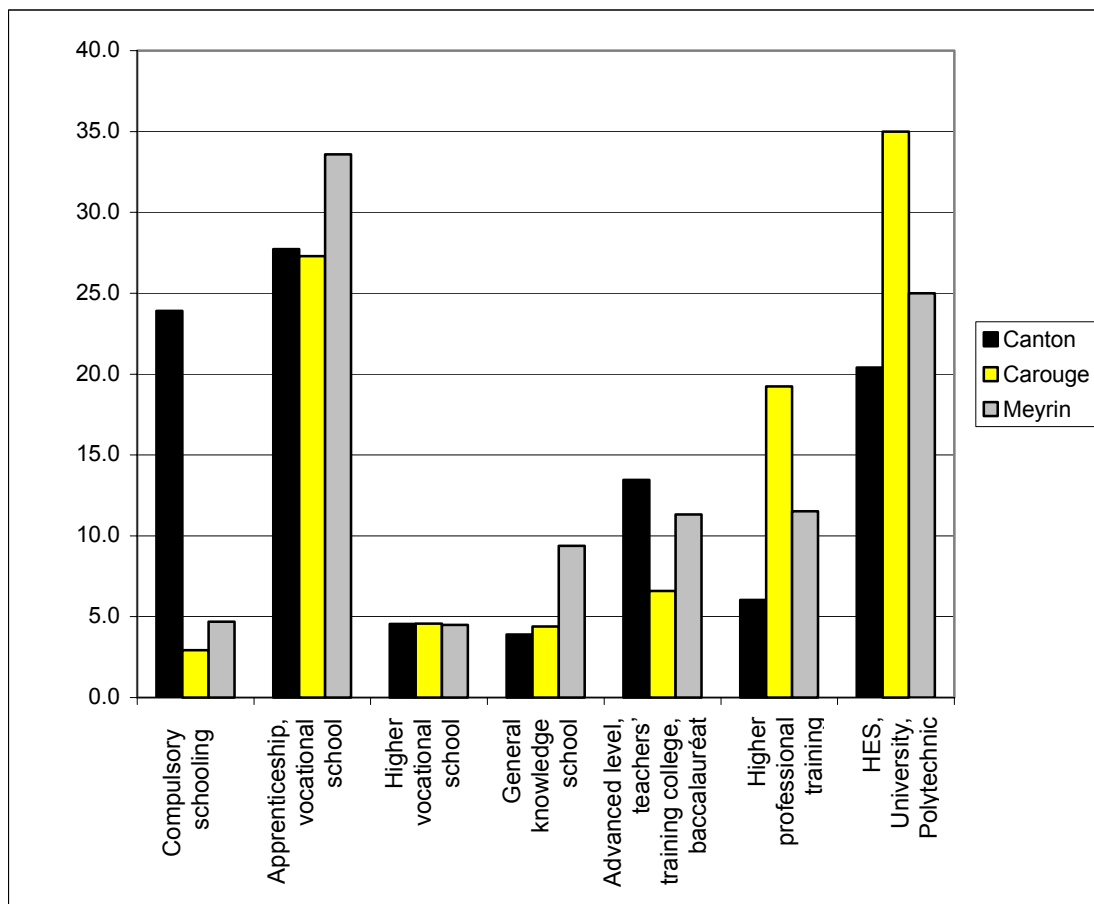


3.2.3 Education

In order to measure the educational level of online voters, they were asked the following question: “What is the highest educational level that you have completed?»

Diagram 7 shows the differences between the educational level of Internet voters and that of the population domiciled in the canton.

Diagram 7: Distribution of the sample by educational level (Carouge, n=588/Meyrin, n=544)



People who have only completed compulsory schooling are under-represented among the users of electronic voting. On the contrary, the proportion of those who have completed higher education (Advanced levels, university degree, etc.) is higher among Internet voters than in the population domiciled in the canton.

There are three possible explanations for this divergence:

- Beyond the oversimplified explanation that university students are more into the Internet than workers are, it should be emphasised that the two groups under comparison, Swiss citizens living in Carouge and Meyrin, on the one hand, and the population of all the various nationalities domiciled in the canton on the other hand, are not completely juxtaposed. This difference at least partly explains the divergence

between the percentage of people who have only completed compulsory schooling within the population and among the users of online voting.

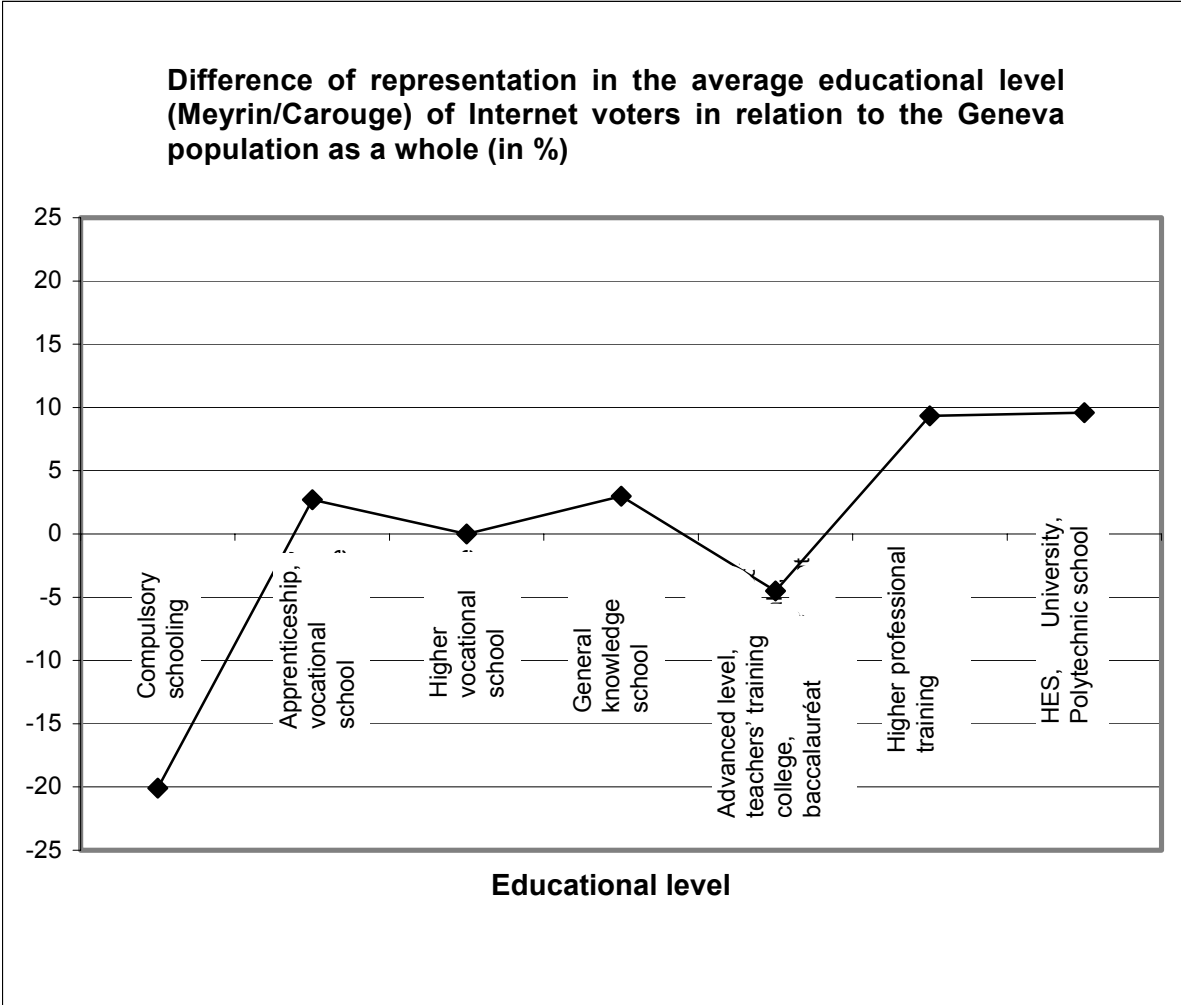
- Over a period of several years, sociological and political studies undertaken in Switzerland have clearly shown a difference in political participation according to political and civic competence, which is itself directly linked to educational level. Numerous works have highlighted the fact that voters generally have a higher level of political and civic competence, compared with non-voters. Our results confirm these works.
- Internet users have an even higher average level of education than non-Internet users. This should change as the Internet grows and web access becomes even more widespread.

It could therefore be considered that the Internet is not in itself a discriminating factor in electoral turnout, but on the contrary that it emphasises underlying factors, studied and known for a long time. The most significant difference between “e-voters” and the rest of the population is likely not to be the fact of voting via the Internet, but merely the fact of voting.

It is also worth noting that – between these two extremes – the distribution of online voters from an educational standpoint is similar to that of the inhabitants of the canton. This strengthens the above-mentioned hypothesis regarding the neutrality of the Internet.

Diagram 8 clarifies this characteristic of the distribution.

Diagram 8: Over- or under-representation of Internet voters (averaged between Carouge and Meyrin) by educational level in relation to the population of the canton of Geneva as a whole (0.0 indicates the weight of each group in the population domiciled in the canton as a whole)



4. Voting habits

Summary: More than 80% of the people who voted online in Carouge and Meyrin vote regularly. The proportion of occasional voters and abstainers among them is 12% and 16% respectively. Internet has drawn habitual voters towards a new means of expression rather than drastically changing the participation rate.

Among the people who voted via the Internet in Carouge and Meyrin, 96% indicated that they usually voted by post.

In a majority of cases, Internet voting took place in the voter's home. Having a personal computer connected to the Internet at home, or at the workplace, is a determining factor in using electronic voting.

More than 90% of the people who voted via the Internet in Carouge and Meyrin affirm that they would vote more if online voting came into general use.

This section describes and studies traditional voting habits as well as voting via the Internet with regard to the voters' participation rate by voting method and to the location where people vote using electronic means.

4.1 Turnout

A large majority of people in Carouge and Meyrin who voted via the Internet state that they vote regularly. This share is 87.5% and 84% respectively. In comparison, the proportion of occasional voters amounts to 10% in Carouge and 15% in Meyrin and that of abstainers to 2% and 1% respectively.

The share of "floating voters", attracted to the polls thanks to the Internet, is not insignificant. In the two polls observed, however, Internet led to a transfer of habitual voters towards a new means of expression rather than drastically changing the participation rate.

It is, however, necessary to take a well-known bias of political analysts into account: overestimating positively connotated behaviour when carrying out self-assessment. It is an established fact that, when asked about their voting behaviour, individuals systematically overestimate their electoral turnout. One is therefore entitled to think that the proportion of regular voters is lower than the above-mentioned figures.

Let us nevertheless point out that overall turnout, as well as turnout via the Internet, had been high² in the two first polls using the Internet in Geneva, in Anières and Cologny. In fact, during the four polls that were carried out using the Internet, a positive correlation was

² Anières, total turnout 64%, of which 43% via the Internet; Cologny, turnout 59%, of which 28,9% via the Internet; Carouge turnout 44%, of which 25,7% via the internet and Meyrin 39%, of which 22% via the Internet.

observed between overall turnout and online turnout. There is, however, insufficient data to establish a relation of cause and effect with the availability of Internet voting. It could, for example, be a “village effect”, characterised by the higher involvement of the inhabitants of small communities in public life.

4.2 Which voting channel did you use before the Internet?

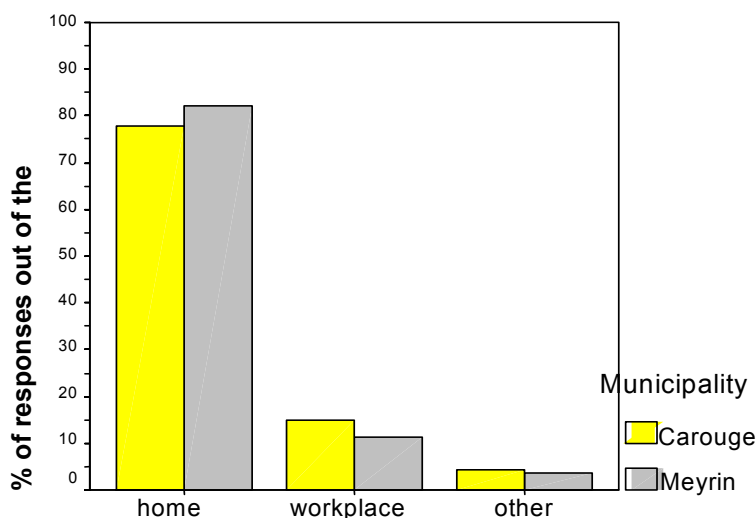
Among the people who voted via the Internet in Carouge and Meyrin, 96% indicate that they usually voted by post. These people had changed their way of remote voting. Once one has sampled remote voting, there seems to be no going back to the polling station.

4.3 From where do you vote via the Internet?

In the great majority of cases, Internet voting took place at the voter’s home (*diagram 9*): 80% of people living in Carouge and 85% of those living in Meyrin voted from their homes, compared with 15% and 11% respectively from their workplace and 4% from another place (cyber café, a friend’s house, etc.).

This clearly implies that having a personal computer with an Internet connection available at one’s home, or workplace, is a determining factor in using electronic voting. In other words, electronic democracy is possible if individuals have easy access to participative tools.

Diagram 9: Internet voting location



Online voting location for this poll

4.4 When does Internet voting occur?³

When do remote voters cast their ballot? The comparison of Internet and postal voting shows two truly distinct voting patterns over time. The distribution of postal voting over the three weeks during which remote voting was available in the framework of the federal ballot

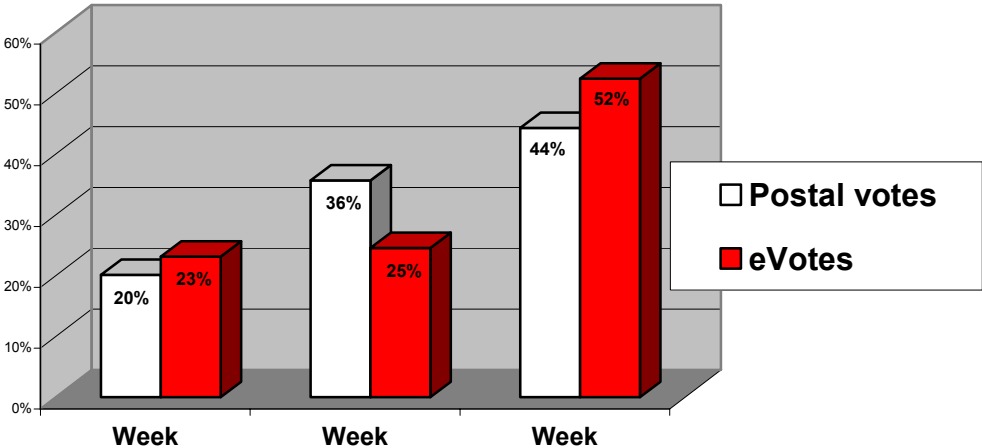
³ This paragraph is not based on the municipal polls organised in Carouge and Meyrin during the first semester of 2004, but on the federal online ballot from September the 26th 2004, where these two cities were involved, together with the municipalities of Anières and Cologny.

of September the 26th 2004, shows a linear progression over time of received ballots: 20% during the first week, 36% during the second one and 44% during the third one.

By comparison, the distribution of the eBallots over time shows an exponential progression. *Diagram 10* shows that 23% of all ballots were received during the first week, 25% during the second and 52% during the third and last week of the ballot.

This difference in voting pattern underlines that Internet voting is not a replica of postal voting, but that it obeys its own laws and correspond to genuinely different behaviour. Voters voting online seem to take more time to reflect on the issues, which could indicate that they are more undecided than postal voters, or maybe that they vote less often and need more time to get acquainted with the issues.

Diagram 10: Distribution in time of remotely cast ballots according to the voting channel



4.5 Future turnout in polls

4.5.1 Impact of putting online voting into general use

Table 2 shows that among the people in Carouge⁴ who indicated that they voted “sometimes” or “never”, almost all of them think that putting Internet voting into general use would encourage them to vote more regularly. This result confirms studies undertaken to date within the framework of the electronic voting project in the canton of Geneva⁵.

⁴ Due to a technical problem with the survey in Meyrin, the data relating to this commune cannot be compared with those from Carouge.

⁵ <http://www.ge.ch/evoting>

Table 2: Relation between the usual voting rate and future turnout thanks to Internet voting (Carouge)

More frequent turnout	Usual voting rate (in %)		
	Sometimes	Never	Total % (n)
Yes	97	92	96 (68)
No	3	8	4 (3)
Total	100 (58)	100 (13)	100 (71)

4.5.2 Future turnout according to ballot types

If the question of future turnout is adjusted according to the type of voting (poll or election, on the one hand, and communal, cantonal and federal level, on the other hand), it is noticeable once again that the results for Carouge and Meyrin are very close.

Potential turnout is higher for polls (more than 90%) than for elections (more than 80%). This reflects a de facto situation, namely higher turnout in polls than in elections, as is currently the case. It may also be judged that the fact that the respondents have already been able to vote via the Internet during polls, but never during elections, influences their answer to this question.

Table 3: Future turnout by voting type (%)

If voting via the Internet could be used for all polls and elections, when would you use it	Carouge	Meyrin
	% mention in relation to total (n)	% mention in relation to total (n)
Communal polls	91 (533)	94 (513)
Cantonal polls	90 (529)	93 (508)
Federal polls	89 (521)	92 (502)
Communal elections	85 (498)	83 (452)
Cantonal elections	84 (496)	83 (452)
Federal elections	83 (486)	83 (486)

5. Habits relating to the Internet and online voting

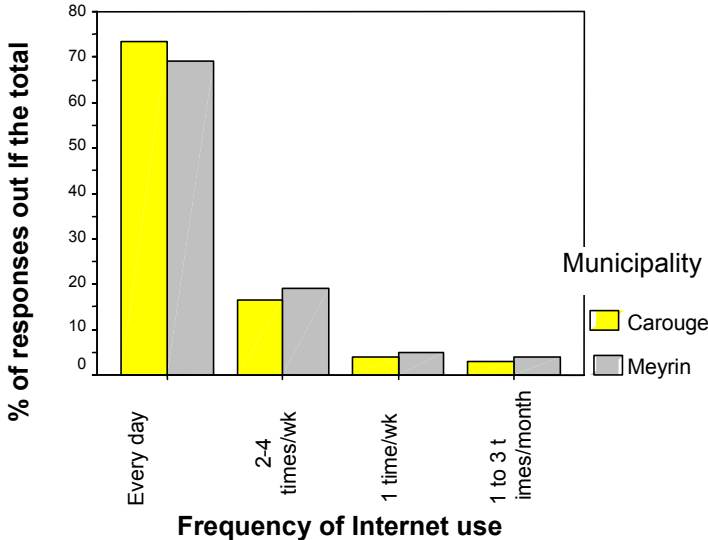
Summary: *The inhabitants of Carouge and Meyrin who voted via the Internet in a communal poll are in favour of introducing Internet voting. Tendentiously, the more often an individual uses the Internet, the more confident he or she is in the Internet voting procedure and the more disposed he or she is to putting electronic voting into general use to supplement the possibilities that already exist.*

This chapter focuses on Internet use in general, as well as in voters’ opinions on the Internet voting systems as proposed.

5.1 How many times a week do you use the Internet?

Analysing the distribution of responses relating to the frequency of Internet use shows that a large majority of Internet voters use the web on a daily basis (diagram 10). More than seven out of ten people, in either commune, use this media every day, and almost one in five consults it two to four times per week. The proportion of Internet voters using this tool several times per week is thus higher than nine out of ten people.

Diagram 11: Frequency of Internet use among e-voters in Carouge and Meyrin



5.2 Would you like Internet voting to be put into general use?

The combination of “very favourable” and “quite favourable” responses towards putting Internet voting into general use gives almost 100%.

Table 4: Opinion on introducing electronic voting to supplement existing voting possibilities

Opinion on introducing Internet voting to supplement existing voting possibilities?	Carouge %	Meyrin %
Very favourable	75	71
Quite favourable	23	27
Rather opposed	2	1
Totally opposed	0.4	0.4
Total % (n)	100 (563)	100 (520)

5.3 How is confidence in the voting system built?

Confidence in the online voting system is directly proportional to the frequency of Internet use. People who surf daily have more confidence in the voting procedure than those who connect less often.

This relation is statistically significant at a level of 5%. In other words, there is a more than 95% probability that this relation is not due to chance. For reasons of sample size, however, this relation is not statistically significant for the commune of Meyrin.

Table 5: Relation between the frequency of Internet use and confidence in the Internet voting procedure

Confidence in the voting procedure	Frequency of Internet use (in %)				Total (n in brackets)
	Daily	Approx. 2-4 times per week	Approx once a week	Approx 1-3 times a month	
Carouge					
Very confident	40	30	19	20	37 (205)
Quite confident	58	67	81	67	61 (339)
Not very confident	2	3	-	13	2 (13)
Total	100 (425)	100 (96)	100 (21)	100 (15)	100 (557)
Meyrin					
Very confident	36	25	30	17	33 (164)
Quite confident	60	75	70	79	64 (323)
Not very confident	3	1	-	6	3 (14)
Not at all confident	1	-	-	-	0.6 (3)
Total	100 (365)	100 (98)	100 (23)	100 (18)	100 (504)

Carouge: $\chi^2 / d.f = 16.44 / 6$; $p=0.012$, Meyrin: $\chi^2 / d.f = 11.27 / 9$; $p=0.258$

The same positive relation between the frequency of Internet use and the intensity of the wish to see it put into general use can be observed.

Table 6: Relation between the frequency of Internet use and the opinion on introducing electronic voting to supplement the existing voting possibilities

Introduction of Internet voting	Frequency of Internet use (in %)				Total (n in brackets)	
	Daily	Approx. 2-4 times a week	Approx. Once a week	Approx. 1-3 times a month		
Carouge						
Very favourable	80	63	59	43	75	(422)
Quite favourable	18	35	36	50	23	(126)
Rather opposed	2	2	5	7	2	(11)
Totally opposed	0	-	-	-	0	2
Total	100 (425)	100 (96)	100 (22)	100 (14)	100	(561)
Meyrin						
Very favourable	77	58	54	50	72	100 (371)
Quite favourable	21	41	46	45	27	(139)
Rather opposed	1	1	-	5	1	(7)
Totally opposed	0.5	-	-	-	0.4	(2)
Total	100 (372)	100 (103)	100 (24)	100 (20)	100	(526)

Carouge: $\chi^2 / \text{d.f} = 27.26 / 9$; $p=0.001$; Meyrin: $\chi^2 / \text{d.f} = 28.26 / 9$; $p=0.001$

6. How do you see the future?

Summary: The citizens who voted online would like to see the voting system develop the provision of information and exchanges not only in relation to polls and the voting process but also of a more general political nature. They value being able to transmit their vote via the Internet, but this transaction is not sufficient for them. They would like political information and opportunities for discussing with politicians, authorities and other political actors to be provided by means of new information and communication technologies.

One of the questions in the survey related to improvements that online voters would like to see made to the system.

In Carouge, respondents could choose from among four categories for each response: “much more”, “a little more”, “a little less” and “much less”. This formulation puzzled some respondents⁶ and did not allow clear conclusions to be drawn. In Meyrin, the possibility of giving a “yes-no” response was introduced. In order to compare responses, those from Carouge were regrouped into two categories: “more” and “less”.

The main requirement that users of the system have is for information on the subjects put to vote to be made available online. This point obtains more than 95% of positive votes. Note that for communal polls, the State does not put any information online. Certain communes do so on their own website. For cantonal polls, on the other hand, the State makes an electronic version of the official information booklet available online. The Confederation does the same for federal polls.

Other information that online voters would like to see on the voting site relates to security (more than 80% in favour), the voting procedure (80%) and technical matters (more than 60%).

It should, however, be noted that this information, like the official booklets, is available either online or in the introductory booklet to voting via the Internet which is sent with the voting kit. How then should these responses be interpreted? In one of two ways:

- The respondents may be indicating that they would like this information to be integrated better into the voting site;
- The respondents may simply have looked at the selection of possible responses and put a tick next to the keywords that seemed important to them in connection with electronic voting.

⁶ The way in which the questions were formulated in Carouge resulted in a higher non-response rate than in Meyrin.

This question also revealed a strong desire among the public to be able to contact the authorities and discuss issues with them by means of new technologies (Carouge 89%; Meyrin 73%), and to have web links to the sites of political parties (78% and 57% respectively) and the public authorities (76% and 64%).

In general, e-voters would like the system to develop the provision of information and exchanges not only in relation to polls and voting processes but also of a more general political nature. They value being able to cast their vote via the Internet, but this transaction is not sufficient for them. A large proportion of the electorate would like political information and opportunities for discussion with politicians, authorities and other actors to be provided using new information and communication technologies.

Table 7: Desired improvements to the Internet voting procedure (in %)

Desired improvements on the Internet...	Carouge		Total % (n)	Meyrin		Total % (n)
	Plus	Less		Yes	No	
...information on the voting process?	80	20	100 (141)	80	20	100 (324)
...technical information?	65	35	100 (140)	63	37	100 (291)
...security information?	86	14	100 (199)	82	19	100 (330)
...information on the topics put to vote?	96	4	100 (258)	95	5	100 (390)
...links to political parties?	78	22	100 (198)	57	43	100 (299)
...links to public authorities?	76	24	100 (174)	64	36	100 (295)
...links to other actors and political web pages?	67	33	100 (156)	44	56	100 (264)
...links to media?	71	29	100 (159)	47	53	100 (277)
...discussion forums for citizens?	82	18	100 (193)	53	47	100 (305)
...'chats' on the Web?	49	51	100 (118)	21	79	100 (257)
...possibility of contact/dialogue with the authorities (email)?	89	11	100 (206)	73	27	100 (318)

7. Link between e-government and e-voting: voters' opinions of the State of Geneva website

Among the tools offered on the State of Geneva's website, which ones are considered important by online voters? The distribution of responses relating to opinions of the various tools is presented in *table 12*.

It appears once more that the possibility of communicating electronically with the public services, as well as the possibility of downloading documents, is deemed important. On the contrary, less concrete or less targeted tools, such as general information or links to other websites are not considered very important.

The ideal State of Geneva website is one which provides elements for obtaining information and interacting with the authorities as well as the possibility of voting via the Internet.

Table 8: Importance of electronic voting and e-governement

Importance of the Sate of GVA website ...	Very important	Quite important	Not very important	Not at all important	Total (n)
Carouge					
...general information?	26	55	17	2	100 (526)
...practical information to download?	52	41	5	2	100 (523)
...communication with the administration?	49	40	9	2	100 (522)
...links to other websites?	19	52	24	5	100 (517)
...vote via the Internet?	50	39	10	1	100 (535)
Meyrin					
...general information?	27	58	14	1	100 (364)
...practical information to download?	49	43	6	2	100 (362)
... communication with the administration?	49	37	13	1	100 (359)
...links to other websites?	21	48	29	3	100 (360)
...vote via the Internet?	53	39	7	1	100 (364)

8. How did you get informed about the subject of the poll?

Summary: Voting via the Internet does not mean getting informed via the Internet. The users of online voting obtained information through newspapers, the official booklet, party political stands and by word of mouth.

How do the users of online voting get informed? The first observation is that the Internet is not their main source of information. Is this due to a lack of awareness that information is available online, as mentioned in point 6, to a lack of such information in the case of the two polls under consideration, or by choice? The question remains unanswered. It is, however, true that in French-speaking Switzerland, the Internet does not yet play a central role in electoral campaigns. Moreover, the two polls under examination concerned very local issues, to which the cantonal and regional media gave very little coverage.

The results relating to radio and television are very weak due to the local character of the two communal polls. The Internet score is high in comparison and augurs well for its future development.

Table 9: Information sources used for communal polls

How did you get informed about the subject of this communal poll?	Carouge	Meyrin
	% mentioned (n= 588)	% mentioned (n= 544)
...through newspapers and magazines	67	61
...via the Internet	9	11
...through discussion with family members, colleagues and friends	43	38
...through information provided by the public services or political parties	56	66
...via the radio	8	8
...via the television	8	11

9. Conclusion:

The results of the four official polls organised in Geneva from January 2003 to June 2004 using Internet support converged, regardless of the channel used by the voters for voting: Internet, postal voting or the polling booth. In other words, the same majority emerged from the three polling methods. Only the percentages of “yes” and “no” votes varied, with Internet recording the highest percentage going along the lines of the majority.

This observation confirms the lessons of this report, namely that voting via the Internet can contribute towards consolidating institutions, by producing majorities based on a high turnout.

In the future, there will admittedly be some divergence among the results from the three polling methods. This is inevitable, especially since, as shown by this report, the users of the two remote polling methods diverge at least as far as their age and their regular turnout at the polls is concerned.

Finally, the lessons of this report, although they only relate to two of the four online polls that Geneva organised from January 2003 to June 2004, are valid for all four. The empirical lessons that had been drawn from the polls in Anières, in January 2003, and Cologny, in November of the same year, are confirmed by the scientific analysis of the questionnaires completed in Carouge and Meyrin.

Impact on turnout, confidence in the system and absence of bias in the educational background of the online electorate, all constitute encouraging data for this new polling method.
